

Measurement and prevalence of sexual harassment in low- and middle-income countries: a systematic review and meta-analysis

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Abstract

Objectives: We synthesise evidence from studies on sexual harassment in LMICs to estimate its prevalence and conduct a meta-analysis of the association between sexual harassment and depressive symptoms

Methods: We searched eight databases. We included peer-reviewed studies published in English from 1990 until April 2020 if they measured sexual harassment prevalence in LMICs, included female or male participants aged 14 and over, and conceptualised sexual harassment as an independent or dependant variable. We appraised the quality of evidence, used a narrative syntheses approach to synthesise data, and conducted a random effects meta-analysis.

Results: From 49 included studies, 38 focussed on workplaces and educational institutions and 11 on public places. Many studies used an unclear definition of sexual harassment and did not deploy a validated measurement tool. Studies either used a direct question or a series of behavioural questions to elicit information on acts considered offensive or defined as sexual harassment. Prevalence was higher in educational institutions than in workplaces although there was high heterogeneity in prevalence estimates across studies with no international comparability. This posed a challenge for calculating an overall estimate or measuring a range. Our meta-analysis showed some evidence of an association between sexual harassment and depressive symptoms (OR: 1.75 (95% CI: 1.11, 2.76; p=0.016) although there were only three studies with a high risk of bias.

Conclusion: To our knowledge, this is the first systematic review to assess measurement approaches and estimate the prevalence of sexual harassment across settings in LMICs. We also contribute a pooled estimate of the association between sexual harassment and depressive symptoms in LMICs. There is limited definitional clarity, and rigorously designed prevalence studies that use validated measures for sexual harassment in LMICs. Improved measurement will enable us to obtain more accurate prevalence estimates across different settings to design effective interventions and policies.

Strengths and Limitations of this study

- This is the first systematic review to assess measurement approaches and estimate the prevalence of sexual harassment across settings (workplace, educational and public places) in LMICs.
- We also contribute the first pooled estimate of the association between sexual harassment and depressive symptoms in LMICs.
- We identified several conceptual and methodological issues in the included studies that limit the conclusions that can be drawn from the review. Further, heterogeneity in prevalence estimates is likely to further reduce the comparability of findings.
- Most studies used non-probability sampling and did not provide information on the representativeness of their samples.
- If sexual harassment did not feature in the abstract and was a secondary objective in studies, this review might have missed it resulting in publication bias.

Introduction

In the last two decades, the pervasiveness and costs of sexual harassment has become a growing concern globally [1]. This has been precipitated by the #MeToo and Times Up movements in the mid-2010s that increased global awareness of offending actions that women and girls experience in their daily personal and working lives. The discussions around these movements, however, have predominantly taken place in high income countries or affluent urban areas in low and middle income countries (LMIC) [2]. Depending on the setting, sexual harassment can encompass a range of behaviours and practices of a sexual nature, such as unwanted sexual comments or advances, sexual jokes, displaying pictures or posters objectifying women, physical contact or sexual assault [3]. Sexual harassment is frequent in occupational and educational settings, with women more likely to experience sexual harassment than men [2].

The World Health Organisation (WHO) defines sexual harassment as ‘any unwelcome sexual advance, unwelcome request for sexual favour, verbal or physical conduct or gesture of a sexual nature, or any other behaviour of a sexual nature that might reasonably be expected or be perceived to cause offence, humiliation or intimidation to the person’ [4]. Further, institutions like the International Labour Organisation (ILO) have used a similar definition with an explicit mention of the workplace and two additional categories: ‘quid pro quo’ or ‘hostile working environment’. Quid pro quo sexual harassment is when a worker is asked for a sexual favour and submitting to or rejecting that request is used to decide about that worker’s employment. Hostile working environment harassment covers conduct that creates an intimidating, hostile or humiliating working environment [5]. Sexual harassment may be perpetrated by different individuals, including teachers, colleagues, supervisors, subordinates and third parties [3]. In line with the ILO definition, the hierarchical and gendered power relations within occupational or educational settings have naturalised a sexual contract in which some male colleagues or academics consider it a right to demand sex with female juniors or students in return for career progression or grades [6].

Some studies, primarily from high income settings, have shown that those who report experiencing sexual harassment in the workplace typically report decreased job satisfaction [7], psychological distress including anxiety, anger, and depression [8], as well as physical distress such as weight loss, fatigue, and even symptoms of post-traumatic stress disorder [9]. Economic hardship due to job loss can occur when victims quit their position or are fired as retaliation for reporting; this, alongside lost opportunities for career advancement are serious economic consequences of sexual harassment. Organisations in which harassment is prevalent suffer from absenteeism, increased staff turnover, lower job performance and productivity, increased legal fees, and negative public image [10]. Sexual harassment on university campuses has been shown to be a factor impeding female participation and satisfaction with their studies [6]. A recent systematic review from studies from the United States of America (USA) showed that exposure to sexual harassment in higher education leads to physical and psychological consequences for individuals, such as irritation, anger, depression, stress, discomfort, feelings of powerlessness and degradation [11], physical pain [12], unwanted pregnancies and sexually transmitted diseases [13] and increased alcohol use [14].

Early scientific research on sexual harassment has focused on high income countries (e.g., USA) [15], [16]. For example, the 1992 U.S. National Health and Social Life Survey found a prevalence of workplace sexual harassment of 41% in women and 32% in men [17]. Similarly, a recent meta-analytic review using probability samples from the US found that approximately 58% of women had experienced sexual harassment in the workplace [15]. The measurement tools for estimating the prevalence of sexual harassment have mainly been developed and tested in high income countries— with uncertain relevance for women in the Global South. Relatedly, the ILO and the WHO measurement tools to measure abuses globally are applicable only for specific spheres of life, e.g. work, or education [18]. There has been less research on sexual harassment prevalence in other countries and spheres of lives. An epidemiological survey in China found that 12.5% of all women in a general population sample had experienced sexual harassment within the past year [19]. Conversely, a study of college employees in Ethiopia found a much higher prevalence of sexual harassment, with 47% of women faculty and staff reporting they experienced sexual harassment in the workplace [9]. Differences in

prevalence rates of sexual harassment across cultures likely reflect cultural differences in the frequency of harassment, as well as differences in the likelihood of labelling specific behaviours as harassment, particularly among studies that do not use behaviourally specific descriptions of sexual harassment.

Further, methodological differences across studies make direct comparisons in prevalence measures challenging, including different definitions of harassment, different survey methods and measures, the use of convenience versus representative samples, and studies of employees in different types of organisations [11], [15]. The consequence of these challenges is that prevalence measures for sexual harassment may vary widely. In order to estimate the true percentage of women experiencing sexual harassment in different settings and countries across the Global South there is a need to systematically synthesise the current published evidence, comparing across contexts with a view to providing insights to improve measurement practices for future studies. To date, no study has systematically reviewed prevalence estimates in peer-reviewed research on sexual harassment across different settings (workplace, education, public spaces) in LMICs. The purpose of this study is to address this gap through the review and synthesis of prevalence studies on sexual harassment published from January 1990 to April 2020 to highlight evidence gaps for measurement studies.

Methods

Search strategy and selection criteria

Our systematic review protocol was registered on the PROSPERO international prospective register of systematic reviews, with the record number CRD42020176881. We searched key public health, health sciences and health economics databases – MEDLINE, EMBASE, Global Health, PsycINFO, EconLit, Scopus, Web of Science and Social Policy and Practice on April 14, 2020. Search terms were the names of all countries in low and middle income settings and the term ‘sexual harassment’ in any abstract or title published in English on or after 1 January 1990. We also screened the reference lists of included papers. Our detailed search strategy is included as [Appendix 1](#).

Studies were eligible for inclusion if they: (1) were published in English, (2) were conducted in low and middle income countries (as defined by World Bank country classifications) [20] at any point from 1 January 1990 to April 2020; (3) measured the prevalence of sexual harassment in peer-reviewed studies based on either a cross-sectional survey, case control study, or cohort study; (4) included female or male participants aged 14 and over; and (5) conceptualised sexual harassment as an independent or dependant variable. Studies were excluded if they were: (1) non-English studies, (2) conducted in high income countries, (3) case studies, legal/policy frameworks, theoretical pieces, qualitative studies, conference abstracts, dissertation abstracts, theses, and book chapters; or (4) studies focused on groups such as those in military services, in war zones, or in refugee camps as these were population groups and situations with a higher prevalence of sexual harassment owing to their unique situation. We also excluded five studies that did not include a measure of sexual harassment or did not include the prevalence estimate despite a mention in the abstract [21]–[25].

Data screening, extraction, and quality appraisal

The first author (MR) and last author (HS) initially screened records by title and abstract according to the inclusion and exclusion criteria. Full text articles were then reviewed by one reviewer (MR) for eligibility and then double-checked by a second reviewer (HS). Disagreements about inclusion of articles were discussed by MR and HS until consensus was reached on articles to include. For instance, during the full text screening, we excluded studies on health care professionals (e.g., nurses and doctors) as this population was well-studied with two meta-analyses focused exclusively on this group in China [26], [27] and one on nurses globally [28]. The final set of included full-text articles were formally appraised by two reviewers (MR and HS). Data from full-text sources were extracted using the following headings: first author and year; country; study setting; description of study sample; study design and sample number; information provided on sexual harassment –study definition, measurement approach, reporting period, prevalence estimates, frequency of acts and main perpetrator; outcomes (e.g., sleep disorders or mental health effects, if measured), outcome direction and nature of effect. The study selection process, including the number of study abstracts and full texts screened with reasons for

exclusion, is depicted in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flowchart as [Figure 1](#).

Using criteria adapted from Hoy et al. (2012) [29], the Joanna Briggs Institute (JBI) checklist [29] and our own study criteria, two reviewers appraised the quality of included studies. The completed quality appraisal table (please see [Appendix 2](#)) includes nine questions about study quality: whether studies answered our research question, sampling strategy, participation rates, and any bias in the measurement of prevalence of sexual harassment and reported results. Papers received a grade of either 0 (low) or 1 (high) for each question, giving a maximum total score of 9. Studies with a total score 0-3 were considered low quality, 4-6 were of moderate quality and 7-9 were of high quality. No studies were included or excluded from the review based on their quality score. We have followed PRISMA guidelines for this review and include the completed 2020 checklist (please see [Appendix 3](#)).

Data Analysis

We used a narrative synthesis textual approach to synthesise data as our study was focused on resolving questions for measuring the prevalence of sexual harassment and not the effectiveness of an intervention [30]. We grouped studies around measures used to report prevalence estimates of sexual harassment and assessed this across different studies. We also compared the findings with our conceptual understandings of sexual harassment to interpret the findings. We presented the results after assessing the methodological quality of the included studies, and critically reflected on the strengths and weaknesses of the approaches used, including limitations such as evidence gaps, quality of the evidence and biases in the review process.

Given the high heterogeneity across studies, we conducted a meta-analysis of only three studies that presented odds ratios (ORs) for exposure to sexual harassment on the outcome of poor mental health, namely depressive symptoms. We focused on depressive symptoms, as from all the studies that measured symptoms of poor mental health, only three studies were similar in their study definition, had extractable information and showed associations with symptoms of depression. A random-effects meta-

analysis was conducted to provide a pooled OR and 95% confidence intervals using Stata 15, specifically the ‘metan’ command. This pooled OR was calculated based on the results of three studies [9], [31], [32]; which, in total, provided three ORs for the risk of depression among sexually harassed women. We used a random-effects model due to the perceived variability in populations and methods used in the included studies.

Ethics Statement

All data used in this review were already in the public domain and ethical approval was not required.

Patient and public involvement

No patient and public involvement as this is a systematic review.

Results

The study selection process is presented in [Figure 1](#). Our literature searches returned 485 unique records, of which 310 were excluded after screening titles and abstracts. Full text copies of the remaining 175 references that met the inclusion criteria were retrieved. After further screening, 49 papers were retained for inclusion. Of the 49 papers, 48 were identified from searches of electronic databases and one from a citation search.

<Insert Figure 1: PRISMA flowchart for study selection >

Description of included studies

[Table 1](#) provides a summary of the characteristics of all included studies. Except for two studies published between 2000 and 2020; a majority (n=35) of the studies were published after 2010. In terms of geographic spread, most studies were either from Asia (n=26) and sub-Saharan Africa (SSA) (n=22) with only three studies from Latin America and four from the Middle East and North Africa region. Studies (77.5%, n=38) were primarily focused on either a workplace or educational setting, with only eleven studies focused on public spaces, such as public transport, streets or the community. Among

educational settings, most were higher educational institutions with four studies [33]–[36] focused on adolescents at secondary schools. All, but two studies were observational with cross-sectional surveys; only two studies had a longitudinal design [37], [38]. Most studies (n=41) focused on surveys representative of the population in specific settings; samples of males and females working in universities, in public sector jobs, or male and female students at schools or universities. Seven studies focused on special populations with increased vulnerabilities based on their occupation or life situation, for instance, female bar workers [31], frontline hotel employees [37], homeless individuals [39], female migrant workers in garment factories [40], female domestic workers [40] or clergy members [41]. Most studies had small sample sizes with less than 500 participants (n=28), some were medium size samples of 500-5000 (n=18) and a handful of studies with sample sizes above 5000 (n=3). Only four studies were nationally representative [19], [36], [42], [43].

Definition of sexual harassment

Despite an intention to measure sexual harassment, 35% (n=17) of identified articles had no listed definition of sexual harassment. This rendered their conceptualisation of sexual harassment as unclear. For studies that defined sexual harassment, these varied from a two-part objective (the identification of the activity) and subjective (the person's perception) definition of sexual harassment, to a 'lay' definition of sexual harassment that included types or classes of behaviour; 'unwanted sexual related behaviour' or 'unwelcome conduct of a sexual nature' or 'intimidating verbal or physical sexual advances'. These studies sought to find out behaviours that constitute harassment, and those that do not (for instance, Fitzgerald and colleagues, 1995) [16]. Despite not having an explicit definition of sexual harassment, one study (Tripathi et al., 2016) acknowledged that a range of acts ranging in severity can come under its purview, for example, from passing comments about a girl amongst a group of friends to sexual assault and that there are subjective perceptions of whether the actions are sexual harassment or not, especially where no physical contact is involved [5].

Eight studies in this review drew on the definition by Fitzgerald et al., 1995 that assumes classes of behaviours that constitute sexual harassment. This definition was initially conceptualised for the

workplace but is applicable to other settings. It is composed of three related but conceptually distinct dimensions, gender harassment, unwanted sexual attention and sexual coercion.

Gender harassment is considered as the most common type of sexual harassment. It consists of insulting verbal and nonverbal behaviours conveying derogatory, hostile, or degrading attitude toward women based on their gender; unwanted sexual attention consists of verbal and nonverbal behaviours that are offensive, unwanted, and unreciprocated; sexual coercion entails sexual advances, and makes the conditions of employment (or education, for students) contingent upon sexual cooperation [16]. In line with the ILO definition, harassing behaviours can be either direct (targeted at an individual) or ambient (a general level of sexual harassment in an environment). Furthermore, a harasser may be male or female, and harassment is not limited to men harassing women, although this is the most common.” [16]. Please see Appendix 4 for a range of study-specific definitions of sexual harassment.

Table 1: Summary characteristics of included studies (n=49)

Reference	Study setting				Sample	Sample size		SH definition.	Measurement approach			Scales		Sex disaggregated	Perpetrator information	Frequency of acts/experience
	Workplace	Educational	Public places	Community/other		General	Special populations		Less than 500	More than 500	Included	Direct query	List of behaviours or acts			
Luo 1996 [44]	x				x		x	x	x				x		x	
Tang et al., 1996 [45]		x			x		x	x		x			x		x	
Mayekiso et al., 1997 [46]		x			x		x	x		x			x		x	
Shumba et al., 2002 [47]		x			x		x	x		x			x		x	
Fineran et al., 2003 [35]		x			x		x	x		x			x		x	x
Fawole et al., 2005 [38]	x				x		x	x		x			x		x	
Okoro et al., 2005 [48]				x	x		x	x		x			x		x	
Parish et al., 2006 [19]				x	x		x	x			x		x		x	
Puri et al 2007 [40]	x				x		x	x		x			x		x	x
Merkin 2008 [7]	x				x		x	x		x			x		x	x
Marsh et al., 2009 [9]	x				x		x	x		x	x		x			
De Souza et al., 2009 [49]	x				x		x	x		x			x			x
Owoaje et al., 2009 [50]		x			x		x	x		x			x		x	
Koehlmoos et al., 2009 [39]			x		x		x	x		x			x		x	x
Premadasa et al., 2011 [51]		x			x		x	x			x		x		x	
Owoaje et al., 2011 [52]		x			x		x	x		x			x		x	x
Lahsaeizadeh et al., 2012 [53]		x			x		x	x		x			x		x	x
Dhlomo et al., 2012 [54]		x			x		x	x		x			x			
Hutagalang et al., 2012 [55]	x				x		x	x			x		x			
Norman et al., 2012 [56]		x			x		x	x		x			x		x	x
Fernandes et al., 2012 [32]				x	x		x	x		x			x			
Norman et al., 2013 [41]	x				x		x	x		x			x		x	
de Puiseau et al., 2013 [34]		x			x		x	x		x			x			
Norman et al., 2013 [57]		x			x		x	x		x			x		x	
Haile et al., 2013 [58]		x			x		x	x					x			
Park et al., 2013 [42]	x				x		x	x		x			x			
Austrian et al., 2014 [33]				x	x		x	x		x			x		x	

Reference	Study setting				Sample	Sample size		SH definition.	Measurement approach			Scales		Sex disaggregated	Perpetrator information	Frequency of acts/experience
	Workplace	Educational	Public places	Community/other		General Special populations	Less than 500		More than 500	Included	Direct query	List of behaviours or acts	Categories of physical, non-verbal, verbal			
Maurya et al., 2014 [59]	x				x	x			x			x		x		x
Mamaru et al., 2015 [60]		x			x	x		x			x		x		x	
Tobar et al., 2015 [61]		x			x		x	x		x			x		x	x
Kunwar et al., 2015 [62]	x				x	x		x			x		x		x	
Vuckovic et al., 2016 [3]	x				x		x	x	x				x	x	x	
Sahraian et al., 2016 [63]		x			x	x		x	x			x		x		x
Tripathi et al., 2016 [64]	x				x	x		x	x				x		x	
Zhang et al., 2016 [43]				x	x		x	x			x		x	x	x	
Talboys et al., 2017 [65]				x	x	x		x		x			x		x	x
Xie et al., 2017 [66]		x			x	x					x		x		x	
Tripathi et al., 2017 [67]			x		x	x		x			x		x			
Dar et al., 2018 [68]				x	x		x		x			x			x	
Aina et al., 2018 [69]		x			x	x		x	x				x			
Mabetha et al., 2018 [36]		x			x		x			x			x		x	
Ul Haq et al., 2018 [70]		x			x	x			x					x	x	x
Akoku et al., 2019 [31]	x				x		x	x		x					x	
Murshid et al., 2019 [71]				x	x		x	x		x					x	
Zhu et al., 2019 [37]	x				x	x		x		x					x	
Saberi et al., 2019 [72]	x				x		x		x						x	x
Gautam et al., 2019 [73]			x		x	x		x			x				x	
Huang et al., 2019 [74]		x			x		x	x		x			x	x	x	
Oni et al., 2019 [75]		x			x		x	x		x			x	x		

Measurement approach for sexual harassment

The measurement approach in studies was either a direct query method with the question “*have you been sexually harassed?*” (n=14) [3], [9], [68]–[70], [32]–[34], [42], [44], [59], [63], [64] [7] or a series of questions where participants had to indicate whether they had experienced behaviours or acts considered offensive and consistent with sexual harassment (n=26) [9], [31], [35]–[39], [41], [45]–[48], [50], [52], [54], [56], [57], [61], [65], [71], [72], [74], [75]. Nine studies [19], [43], [51], [55], [60], [62], [66], [67], [73] conceptualised sexual harassment as physical, verbal and non-verbal acts; *physical* consisted of purposely bumping or hurting someone, acting indecently, and inappropriate touching, *verbal* consisted of inappropriate sexual comments about body parts, telling sexual or dirty jokes and asking a favour for having sexual intercourse; and *non-verbal* consisted of displaying inappropriate pictures through email/social media, inappropriate eye contact. We excluded three studies that reported measuring sexual harassment, but measured sexual violence explicitly defined and measured as sexual violence or sexual abuse in the study with forced sex or rape [76]–[78] (See [Table 1](#)).

Many studies did not deploy a validated tool, but either used a direct question or a series of behavioural questions (see table 1). These were preceded sometimes with a single ‘gate question’ to assess an entire class of events where only respondents with a positive response receive additional questions to clarify the nature of the event(s). Sixteen studies used existing sexual harassment scales from studies conducted in high income settings, particularly North America. Examples scales are listed in [Table 2](#).

Table 2: Sexual harassment scales validated in high income setting used in prevalence studies across low and middle income settings

Validated scales	Description	Study references
Adapted version of the 25-item Sexual Experiences Questionnaire (SEQ) (Fitzgerald, et al 1995) [16], Berdahl and Moore (2006) [79], Murry and Sivasubramaniam [80], Stark 2002 [81] for workplace and educational	<p>A questionnaire that combines a series of questions across three dimensions:</p> <ul style="list-style-type: none"> • gender harassment, most common type of sexual harassment. It refers to a broad range of verbal and nonverbal behaviours not aimed at sexual cooperation but that convey insulting, hostile, and degrading attitudes about members of one gender (e.g., demeaning jokes or comments about women), • unwanted sexual attention includes expressions of romantic or sexual interest that are unwelcome, unreciprocated, and offensive to the target (e.g., staring, whistling in a sexual way) 	8 studies [37], [41], [49], [54], [56], [57], [59], [74]

Validated scales	Description	Study references
	<ul style="list-style-type: none"> sexual coercion entails sexual advances, and makes the conditions of employment (or education, for students) contingent upon sexual cooperation (e.g., implied faster promotion for sex) <p>These were combined into a single estimate of sexual harassment and by categories.</p> <p>Three studies included an additional final direct question on whether they consider any of the above as sexual harassment.</p>	
Modified version of the American Association of University Women (AAUW) Educational Foundation questionnaire on sexual harassment in college campuses [82]	<p>Sexual harassment experiences were asked across four categories:</p> <ul style="list-style-type: none"> Whether they experienced sexual harassment (Y/N) Form of sexual harassment (physical or non-physical) Type of non-physical (e.g., unwanted sexual comments, ask for sexual exchange for favours, leering, leave sexual pictures) Type of physical (e.g., unwanted sexual touching, forced kissing, clothes pulled in a sexual way, intentional brushing against a person in a sexual way) 	3 studies [48], [50], [70]
Eve Teasing Questionnaire–Mental Health (ETQ-MH) in public places	<p>Consisted of questions about: (a) eve teasing exposure, nature, timing, and intensity; (b) chronicity that delineates one time or on-going harassment</p> <p>Actual questions were:</p> <ol style="list-style-type: none"> Have you ever been eve-teased? When was the last time you were eve-teased? I am going to read you this list of behaviours. As I read each one, can you tell me if you have been the target of any of these in the past year by men/boys: staring; stalking; making vulgar gestures; passing an insulting or threatening comment; pushing or brushing by accident 	1 study [65]
Sexual harassment question in Workplace Violence questionnaire created by the International Labour Organisation/World Health Organisation/International Council of Nurses/Public Services International (ILO/WHO/ICN/PSI) [18]	<p>Direct question on experiencing sexual harassment in the past year:</p> <ol style="list-style-type: none"> In the last 12 months, have you been sexually harassed in your workplace? Y/N How often have you been sexually harassed in the last 12 months? all the time, sometimes, once Please think of the last time you were sexually harassed in your place of work. Who sexually harassed you? (client, staff member, external colleague, relatives of patient/client, supervisor, general public, other) Do you consider this to be a typical incident of sexual harassment in your workplace? Y/N 	2 studies [63], [72]
WHO's adolescent's sexual behaviour questionnaire. [83]	<p>Questions on sexual harassment:</p> <ol style="list-style-type: none"> Young boys/girls are sometimes touched on the breast or some other parts of the body when they do not want it, by a stranger, relative or an older person. <ol style="list-style-type: none"> Has this ever happened to your friends? Has this ever happened to you? Young boys/girls are sometimes forced to have sexual intercourse against their will by a stranger, relative or an older person, teacher, owner etc. <ol style="list-style-type: none"> Has this ever happened to your friends? Has this ever happened to you? <p>IF YES "When did it happen?" "If yes, then please say by whom?"</p>	1 study [40]

Validated scales	Description	Study references
Rautio et al (2005) Medical Student questionnaire [84]	<ol style="list-style-type: none"> 1) If you have been subjected to sexual harassment or discrimination, what form did it take? (Check all that apply): denied opportunities, exchange of rewards for sexual favours; sexual advances; sexist slurs; sexist materials; malicious gossip, favouritism, poor evaluations. 2) How often, if ever, have any of the following persons subjected you to sexual harassment or discrimination (e.g. favouritism, advances, slurs, sexist teaching material)?: Fellow students, consultants, registrars, assistants, lecturers, nurses, laboratory workers. 3) All of the above perpetrators asked in terms of frequency (never, rarely (1-2 times), sometimes (3-4 times), often (5 or more times). 	1 study [52]
Braine et al (1995) sexual harassment questionnaire adapted for university students [85]	<p>11 behaviours that may constitute sexual harassment (uncategorised):</p> <ul style="list-style-type: none"> • unwelcome touching and fondling, • sexually directed remarks about clothing, body, sexual activities • unwanted sexual remarks/jokes • unwanted sexual advances • staring, suggestive looks at parts of the body • pressure for dates and sexual favours despite refusing • sexually loaded noises, gestures or comments • derogatory remarks about women • unwanted letters, phone calls or materials of a sexual nature • wolf-whistling, embarrassing whistling, howling 	1 study [46]

Most studies (n=35) did not ask about frequency of behavioural acts at all. None of the studies provided information on cases of sexually harassing behaviours that could present a better indication of the pervasiveness of the behaviour. For example, an unwanted comment received once differs from one received regularly over a month or few months. Thus, an emphasis on specific patterns of behaviour rather than just a focus on singular incidents is a better measure for pervasiveness. Studies that used the adapted versions of the Sexual Experiences Questionnaire (SEQ) scale assessed the number of times or the frequency with which different types of harassment are experienced on a Likert scale, either 0-4 or 0-5 (0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = almost always) or the Eve -Teasing Questionnaire-Mental Health (ETQ-MH) scale delineated one time versus on-going. Perpetrator data is important to understand sexual harassment perpetration and the power differential with the survivor of sexual harassment. Fifteen studies did not ask for any information about perpetrators. In workplace settings, 11 studies mentioned perpetrators of the opposite sex and more often a superior at the

workplace. In educational settings, when the study was collecting information from students, most studies (n=7) reported that most students reported a superior (lecturer or a senior student) [36], [41], [45]–[47], [50], [51]. In some studies (n=2) with staff members, it was often a head of department of the opposite sex. In public places and community settings, three studies referred to strangers of the opposite sex as perpetrators [33], [67], [73].

Prevalence of sexual harassment

The definition and the measurement approach used by studies is crucial to determining prevalence rates. However, the measurement dimensions and techniques used to measure prevalence rates across these studies are heterogenous with no international comparability. This presented a challenge for calculating an overall estimate or measuring a range.

Table 3 provides prevalence measures by measures, scale, setting and population. In studies that used only the direct query method, the prevalence of sexual harassment (as defined by the studies) ranged from 0.6-26.1%. Among studies where questions were based on behavioural acts, the prevalence range was wide-ranging from 14.5-98.8% indicating that studies were able to capture a higher prevalence for certain individual behaviours or acts, such as suggestive comments, inappropriate staring, unwanted touching and sexual calls. Only three studies [9], [57], [74] had a list of behavioural questions, followed by a direct question about whether participants thought ‘they had been sexually harassed?’ or ‘whether they consider the above behaviours as sexual harassment?’. It appeared that the prevalence rates for experiencing offensive acts was higher when followed up in the survey with the direct question. In studies that asked questions based on physical, verbal and non-verbal categories the ranges were: physical (1.6%-42.3%), verbal (8.3%-90.4%), non-verbal (11.3%-80.1%) (see table 3). There was variation in prevalence rates by the type of validated scale, as seen in the following examples. For studies that adapted different types of the SEQ scale with a range in the types of questions included, the overall prevalence range from six studies was 6.2%-28% with only one study [74] reporting 78%; the modified version of the American Association of University Women (AAUW) Educational Foundation questionnaire, the range was high from 69.8%-83%, the ETQ-MH for one study where the

prevalence was 48.3% ever experienced and 37.1% past year experience; for the direct query method in the ILO/WHO/ICN/PSI studies were 26.1% aggregate in one study [63] and 12% females in another study [72] (see table 3).

There was variation in prevalence rates by type of setting; workplace settings ranged from 1-52% depending on the context of the workplace and the population group. However, the methods or techniques used to calculate prevalence varies noticeably across studies in these settings. In educational settings, it ranged from 14.4%-73% , but studies measured or categorised dimensions differently and it was also based on the type of study population, such as adolescent girls and boys. In the three studies [39], [67], [73] done in public places the range was 25-78%. In the seven studies done in the community, the prevalence range was 11.9%-83% [19], [32], [33], [43], [48], [65], [71]. In studies with special populations (n=7) who were more vulnerable to experiencing sexual harassment, based on their occupation or life situation, average prevalence rates were reported to be higher than in studies with a general sample with lower estimates of prevalence. For example, the prevalence of sexual harassment among female bar workers was 98.8% and among clergy and lay members 73% (see table 3).

Appendix 5 provides further details on study characteristics and information on sexual harassment.

Table 3: Prevalence of sexual harassment by measures, setting and population

Type	Prevalence range	Reference
Measurement approach		
Direct query method	0.6% - 26.1%	[3], [7], [64], [68]–[70], [9], [32]–[34], [42], [44], [59], [63]
List of behaviours or acts (wide-ranging behaviours). Most common below:	14.5%-98.8%	[9], [31], [35]–[39], [41], [45]–[48], [50], [52], [54], [56], [57], [61], [65], [71], [72], [74], [75]
Suggestive comments	85-90%	
Inappropriate staring	70-90%	
Unwanted touching	46-70%	
Categories (physical, sexual, non-verbal, verbal)		[19], [43], [51], [55], [60], [62], [66], [67], [73]
Physical	1.6%-42.3%	
Verbal	8.3%-90.4%	
Non-verbal	11.3%-80.1%	
Settings		

Type	Prevalence range	Reference
Workplace	1-52%	[3], [7], [55], [59], [62], [64], [72], [9], [31], [37], [38], [40], [42], [44], [49]
Educational	14.4%-73%	[34], [35], [50], [51], [54], [60], [61], [66], [69][36], [45]–[47], [52], [58], [70], [74], [75]
Public places/ Community/Other	25-78%	[39], [67], [73]
	11.9%-83%	[19], [30], [31], [41], [52], [53], [61]
Special populations		
Female bar workers	98.8% in the past 3 months	[31]
Homeless adult population	62.9% in the time-period of being homeless	[39]
Clergy and lay members	73% in the past 12 months	[41]
Female domestic workers	25% in the past 12 months	[49]
Female migrant workers	12.2% ever experience	[40]
Female apprentices (hairdressers, tailors)	22.9% (time-period not specified)	[38]
Female patients in hospitals (with mental health issues) *	65% (time-period not specified)	[68]

*as reported by relatives

Sexual harassment and associations with mental health

Thirteen out of 49 studies measured outcomes associated with sexual harassment. These were positive associations with symptoms of poor mental health (n=8) [9], [31], [32], [37], [56], [57], [59], [60], risky sexual behaviours (n=1) [36], work related life satisfaction or stress (n=2) [42], [55], student's quality of life (n=1) [66] and loss of trust in other religious members (n=1) [41]. Of the studies that measured symptoms of poor mental health with extractable information, three studies showed associations with symptoms of depression (Akoku, 2019, Fernandes et al., 2012 and Marsh et al., 2009) [9], [31], [32], one study showed associations with psychological distress (Mamaru et al., 2015) [60] and one with work related sleep problems [42] (see [table 4](#)).

Table 4: Prevalence and risk of depressive symptoms, psychological distress and work related sleep problems among sexually harassed women

Author, year	Setting	Outcome	Instrument & threshold to assess mental distress	OR and 95% CI
Akoku et al. (2019)	Workplace	Depressive symptoms	Five-item Mental Health Inventory scale (MHI-5)	Experienced inappropriate staring from male customers (aOR: 3.08; CI: 1.9-5.0); Repeated demands for dates despite a rejection (aOR 1.61, 1.04-2.49).
Fernandes et al. (2012)	Youth (aged 16-24) community survey	Common mental disorders (CMDs) defined usually by depression (including unipolar major depression), anxiety and somatoform disorders	General health questionnaire with 12 items (GHQ-12). Cut off score=5 and above.	Sexual harassment: aOR: 2.25; CI: 1.63–3.1
Marsh et al. (2009)	Workplace	Depression	Patient Health Questionnaire (PHQ-9) quick depression assessment tool. 0=never, 1=several weeks in the past year, 2=more than half of past year, 3 =nearly the whole year. Summative score divided into summative categories.	Workplace abuse and sexual harassment: OR: 8.0; 95% CI: 1.1-60.8
Mamaru et al. (2015)	Educational	Psychological distress	Self-reported questionnaire (SRQ-20) (World Health Organisation)	Physical sexual harassment (aOR: 3.9; CI: 1.9-7.9) Non-verbal sexual harassment (aOR: 12.1; CI: 5.2-28.2)
Park et al. (2013)	Workplace	Work related sleep problems	Sleep problems assessed by single item 'Do you currently suffer from work-related sleep problems?'	Sexual harassment: aOR: 6.99 (CI: 3.87–12.6)

aOR: adjusted odd ratio

One study showed that students who were physically [aOR = 3.950, 95% CI: 1.979, 7.884] and non-verbally harassed [aOR = 12.1, 95% CI: 5.190, 28.205] had four and 12 times higher odds of experiencing psychological distress respectively [60]. Another study in the workplace showed that those who experienced sexual harassment experienced close to seven times higher odds of work related sleep problems [42].

For the association between sexual harassment and symptoms of depression, we calculated a random-effects meta-analysis to obtain a pooled odds ratio. The pooled OR was 1.75 (95% CI: 1.11, 2.76; $p=0.016$), showing a significant relationship between exposure to sexual harassment and symptoms of depression. This pooled OR showed a heterogeneity of 71.9%, with a p -value of 0.028 suggesting that there was some heterogeneity. A forest plot presenting the results of the random effects meta-analysis of three studies presenting odds ratios for the association between sexual harassment and symptoms of depression is shown in [Figure 2](#). Please note Akoku et al.2019, presents seven ORs for the association between various forms of sexual harassment and the outcome of depressive symptoms. These seven ORs were pooled using a fixed effects meta-analysis to produce one overall OR to represent the findings of this study. The study does not provide frequency distributions for the variables thus we were unable to create an overall OR using the exact numbers.

<Insert Figure 2>

Discussion

In our systematic review on sexual harassment in LMICs, most studies were published in the past decade (>2010) indicating that the issue of sexual harassment has gained prominence in LMICs more recently. Studies were primarily convenience samples focused on either a workplace or educational setting and were from Asia and SSA, with only three studies from Latin America. All the studies were cross-sectional surveys, only two studies had a longitudinal design and four were nationally representative. The review showed that a third of the studies intended to measure the prevalence of sexual harassment without a clear definition. Even when studies included a definition, from the WHO or the ILO or Fitzgerald's (1995) definition, there was variation between studies on the conceptualisation of sexual harassment and the measurement focus of the study was ambiguous. In particular, due to the subjective nature of sexual harassment, and how a participant might perceive their experience, versus what the legal definition is, there were challenges to measuring sexual harassment and obtaining a true prevalence measure [86]. To emphasise the ambiguity with definitions, in our literature search, three studies conflated sexual harassment with sexual violence when discussing their measurement of sexual

harassment. We excluded these studies in the final review but wanted to raise the issue of unclear conceptualisation of sexual harassment. We acknowledge that sexual harassment and sexual violence might overlap, especially regarding the unwanted sexual nature of physical contact, and we should not expect to clearly distinguish them in every case as they appear to lie on a continuum of severity. However, sexual violence tends to be more severe acts such as forced sex or attempted rape. Further, a conflation of the sexual harassment and sexual violence has implications for measurement, as individuals may not report the non-penetrative experiences that characterises sexual harassment.

In terms of prevalence rates of sexual harassment there was variation by the type of setting with higher educational institutions having a higher range than the workplace, however as most studies used convenience samples with small sample sizes it is difficult to draw conclusions. For the 30 studies that were conducted on males and females, 19 studies disaggregated prevalence rates by sex and in all studies, except one study [70], females reported a higher prevalence of sexual harassment than males. In the one study [70] when there was higher reporting by males, it was related to the age difference between the individuals and the perpetrators who were in positions of authority. This aligns with evidence from high-income settings that some behaviours are more likely to be perceived as harassing by both sexes if they are engaged in by someone who has higher status or formal authority over the harassed. When there is no status differential the immediate threat is not apparent, which may elicit actual gender differences in how events are interpreted; men may perceive the behaviour as harmless social interaction, women may perceive an element of threat [87]. However, it is difficult to conclude that females experience a higher prevalence of sexual harassment than men as this varies by study setting. For instance, a global meta-analysis of nurses and workplace sexual harassment conclude that compared with male nurses, female nurses reported a lower prevalence of sexual harassment. However, this may also have to do with under-reporting of sexual harassment by females due to reasons, such as shame and embarrassment [28].

There was also wide variation by the type of measurement approach (direct query versus behavioural acts or categories). Studies were able to capture a higher prevalence for certain individual behaviours

or acts, such as suggestive comments, inappropriate staring, unwanted touching and sexual calls, than with only a direct question asking if they have been sexually harassed. Further, three studies that used the SEQ scale used a combination approach that included the list of offensive behaviours, followed by one question on whether the individual who responded positively to one or more instances of inappropriate behaviour *acknowledges* that they have experienced sexual harassment. Surprisingly, the studies show that a high percentage of individuals have experienced two or more harassing behaviours (e.g., unwanted touching, suggestive comments), but a lower percentage acknowledge that their experience is sexual harassment. For example, in Huang et al. (2019), while 78% of 1,075 respondents experienced at least one situation of harassment listed in SEQ-China, only 43% reported having been sexually harassed [74]. This suggests the need to consider other factors for this discrepancy, such as cultural norms and normalisation of the practice or the power dynamic between the perpetrator and the victim. This is also clarified by Stockdale et al. (1995) who describe this discrepancy between reporting a harassment-like experience and reporting that one has been sexually harassed as *the acknowledgment process* [88]. They found that acknowledgment was more likely if someone had experienced unwanted sexual attention, such as sexual looks, gestures, or touching, if (a) the offences were frequent and pervasive, (b) the respondent was harassed by a higher status perpetrator, and (c) the respondent was a woman [89]. Thus, individuals harassed by perpetrators higher in status (and thus having more power) would be more likely to label their experience as sexual harassment than individuals harassed by perpetrators of the same or lower status. In this review, if the information on perpetrators was available, most studies indicated offensive behaviour by lower status perpetrators compared to higher status perpetrators. Students and co-workers were the most frequently mentioned type of perpetrator in educational and workplace settings. Moreover, in those studies that measure it, peer harassment is far more common than harassment by superiors [35], [36], [45]. One explanation for low acknowledgment is that most incidents involve offensive behaviour by perpetrators not considered to be sexual harassers (e.g., peer). This, however, does not change the fact that the behaviours they experienced were offensive and unacceptable behaviours. Furthermore, apart from measurement being an issue for under-reporting, in the workplace, a fear of a negative impact on their jobs, feeling embarrassed, fear of being discriminated against by work colleagues, or a fear that their report will not be taken seriously are other

reasons for low reporting rates. In school settings, fear of negative reprisal from teachers and peers, normalisation of sexual harassment and not being able to recognise it can also result in under-reporting,

There is strong agreement that the consequences of sexual harassment are manifold and serious, irrespective of whether the focus of research is employees in working life or students and staff in higher education [11]. Research from high income countries have shown the impact of sexual harassment on depressive symptoms [89]. In our review, there is evidence of a significant negative association between sexual harassment and symptoms of depression. There however needs to be more empirical research from LMICs. by setting and different mental health outcomes, such as risk of anxiety, depression, post-traumatic stress disorder, as well as diminished self-esteem, self-confidence, and psychological well-being.

Strengths and Limitations

To our knowledge, this is the first systematic review to assess the prevalence and measurement of sexual harassment in LMICs, with the first pooled estimate of the association between sexual harassment and depression in LMICs. In terms of limitations, our review has not included non-peer reviewed literature or articles not published in English, potentially leading to an underrepresentation of non-English speaking countries. Using a low, moderate and high cut-off for methodological quality could imply that all criteria carry equal weight, and some studies may have been misclassified as regards their overall quality. We also identified several conceptual and methodological issues in the included studies that limit the conclusions that can be drawn from the review. Following quality appraisal by two reviewers, 17 of the 49 included papers scored <4/9 (low/moderate) on questions relating to selection bias. Further, we found that most studies used non-probability sampling and did not provide information on the representativeness of their samples. Finally, heterogeneity in studies' definitions of sexual harassment is likely to further reduce the comparability of findings. A further definitional complexity is around the conflation of sexual harassment with sexual violence by some studies. While there are overlaps between sexual harassment and sexual violence particularly around unwanted sexual comments or advances, sexual violence tends to encompass more coercive and severe penetrative behaviours such as rape,

whereas sexual harassment tends to focus on less physically severe but offensive behaviours that can create a hostile environment for victims of sexual harassment. Even though our search were limited to studies that used the term sexual harassment, there were some studies that indicated measuring sexual harassment but referred to sexual violence, Hence, by conflating sexual violence and sexual harassment, we risk the under-reporting or non-measurement of sexual harassment with negative impacts on women and girls. Also, if sexual harassment was only a secondary objective of studies and did not feature in the abstract, this review might have missed it, resulting in publication bias. Finally, our meta-analysis of sexual harassment and depression must be interpreted with caution. First, the three studies were deemed homogeneous enough to be included in a meta-analysis because they all presented odds ratios for the association between sexual harassment and depression; however, in each of these studies, different definitions of sexual harassment were used, along with different methods of assessing symptoms of poor mental health. Second, both Akoku et al. (2019) and Fernandes et al. (2015) were concluded in the quality assessment to have a high risk of bias, with Marsh et al. (2009) concluded as showing a moderate risk of bias. Both Marsh et al. (2009) and Akoku et al. (2019) did not use random samples in their study and were not representative of their target population. In Fernandes et al. (2012), the study lacked both clear definitions of sexual harassment and clear descriptions of how it was measured. Finally, only three measures of effect were included and one (Marsh et al., 2009) presented only a non-significant unadjusted odds ratio for the association between sexual harassment and depression. The aforementioned points mean that, although the results of this study may suggest there is a significant association between sexual harassment and symptoms of depression, there is a lack of strong evidence to support this and more research is needed.

Conclusions

Overall, this review provides a needed summary of the state of the evidence on sexual harassment in LMICs. Despite a dramatic increase in the profile of sexual harassment over the past decade, there is limited definitional clarity and rigorously designed prevalence studies that use validated measures for sexual harassment from LMICs. Nevertheless, this review confirms that the prevalence of sexual harassment is high across workplace, educational, and public settings and women experience a higher

prevalence than men. Questions that capture behavioural acts over the direct query method seem to be more effective in garnering a response, but this needs to be cognitively tested more widely. Our analysis also suggests that sexual harassment is associated with symptoms of depression. We, however, recognise the limitations of this pooled estimate and need higher quality studies that explore the consequences of sexual harassment in LMICs. As there is no sign that sexual harassment is abating, there is an urgent need to improve the measurement of sexual harassment and improved measures are particularly critical for large, repeat nationally representative surveys. Further, with improved measures and a better understanding of the prevalence of this issue, by setting, policies and programmes can be designed accordingly.

Declarations

Ethics approval

Not applicable

Consent for publication

Not applicable

Availability of data and material

All data generated or analysed during this study are included in this published article [and its supplementary files].

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

Conceived and designed the study: MR, HS, JW. Data collection: MR. Analysed the data: MR, HS, IP. Wrote the first draft of the manuscript: MR. Contributed to the writing of the manuscript: MR, HS, JW, IP. Agreed with manuscript results and conclusions: MR, HS, JW, IP.

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Figure 1: PRISMA flowchart for study selection

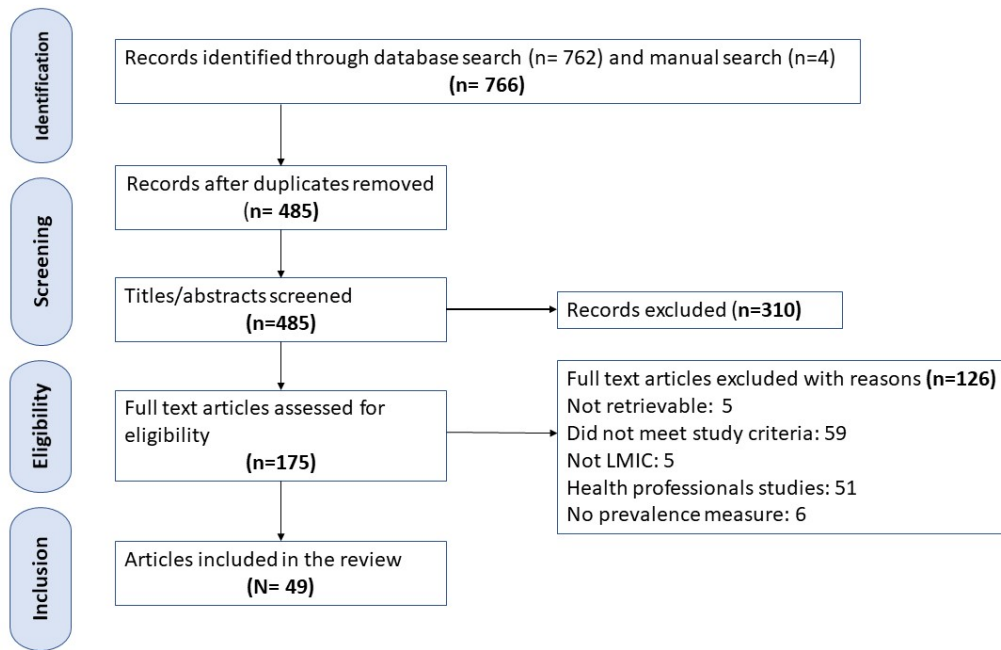
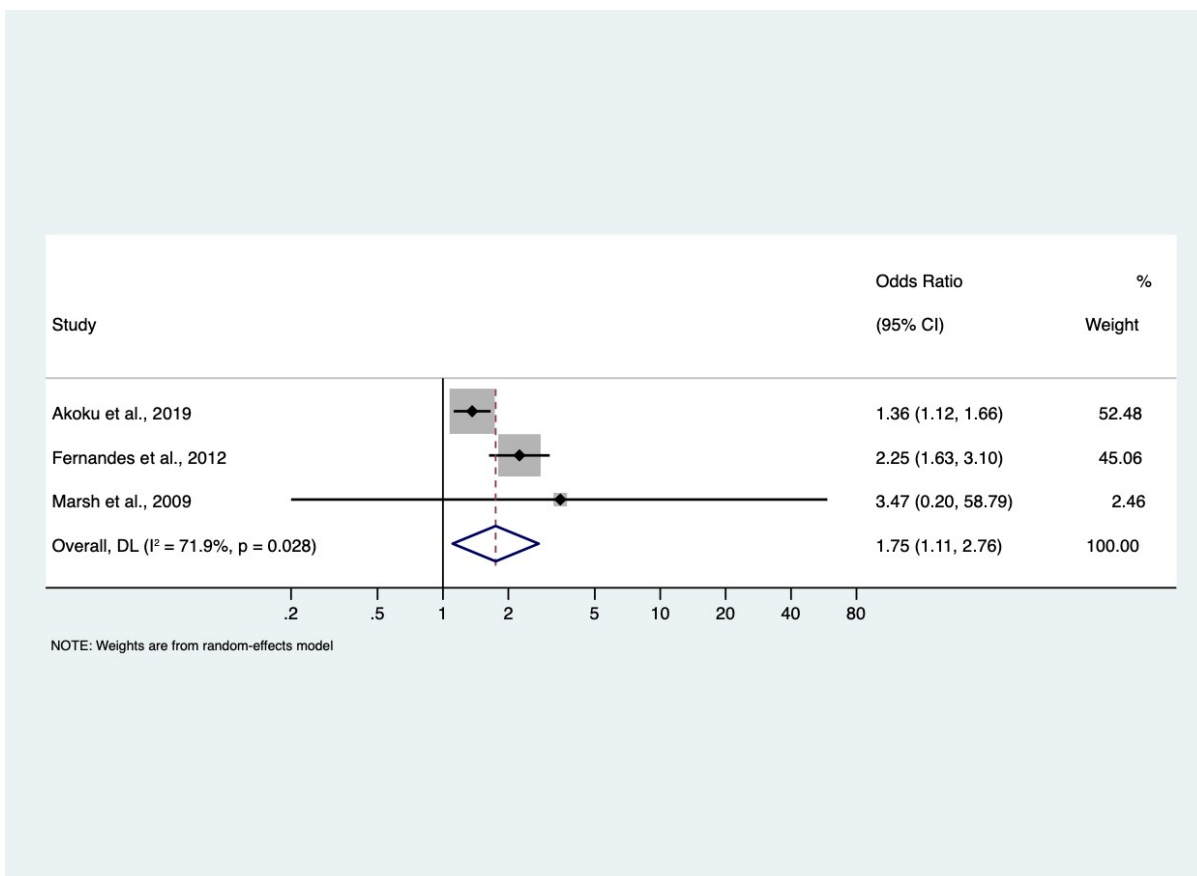


Figure 2: Forest plot for the association between sexual harassment and symptoms of depression



Appendices

Appendix 1: Search terms used for Ovid Medline, EMBASE, and PSYCInfo.

1. ((developing or less* developed or under developed or underdeveloped or middle income or low* income or underserved or under served or deprived or poor*) adj (economy or economies)).ti,ab.
2. ((developing or less* developed or under developed or underdeveloped or middle income or low* income or underserved or under served or deprived or poor*) adj (countr* or nation? or population? or world)).ti,ab.
3. (low* adj (gdp or gnp or gross domestic or gross national)).ti,ab.
4. (low adj3 middle adj3 countr*).ti,ab.
5. (Imic or Imics or third world or lami countr*).ti,ab.
6. transitional countr*.ti,ab.
7. global south.ti,ab.
8. Developing Countries/
9. "africa south of the sahara"/ or africa, central/ or africa, eastern/ or africa, southern/ or africa, western/
10. ("africa south of the sahara" or sub-saharan africa or central africa or eastern africa or southern africa or western africa).ti,ab.
11. "Democratic People's Republic of Korea"/
12. (north korea or (democratic people* republic adj2 korea)).ti,ab.
13. Cambodia/
14. cambodia.ti,ab.
15. Indonesia/
16. indonesia.ti,ab.
17. Micronesia/
18. Kiribati.ti,ab.
19. Laos/
20. (laos or (lao adj1 democratic republic)).ti,ab.
21. (marshall island* or caroline island* or ellice island* or gilbert island* or johnston island* or mariana island* or micronesia or pacific island*).ti,ab.
22. Mongolia/
23. mongolia.ti,ab.
24. Myanmar/
25. (myanmar or burma).ti,ab.
26. Papua New Guinea/
27. Papua New Guinea.ti,ab.
28. Philippines/
29. Philippines.ti,ab.
30. Timor-Leste/
31. Timor-Leste.ti,ab.
32. Vanuatu/
33. Vanuatu.ti,ab.
34. Vietnam/
35. (Viet Nam or Vietnam).ti,ab.
36. American Samoa/
37. american samoa.ti,ab.
38. exp China/
39. china.ti,ab.
40. Fiji/
41. fiji.ti,ab.

42. Malaysia/
43. malaysia.ti,ab.
44. marshall islands.ti,ab.
45. nauru.ti,ab.
46. samoa/
47. "independent state of samoa"/
48. ("independent state of samoa" or (samoa not american samoa) or western samoa or navigator islands or samoan islands).ti,ab.
49. Thailand/
50. Thailand.ti,ab.
51. Tonga/
52. tonga.ti,ab.
53. Tuvalu.ti,ab.
54. Armenia/
55. Armenia.ti,ab.
56. "Georgia (Republic)"/
57. Kosovo/
58. Kosovo.ti,ab.
59. Kyrgyzstan/
60. (kyrgyzstan or kyrgyz republic or kirghizia or kirghiz).ti,ab.
61. Moldova/
62. Moldova.ti,ab.
63. Tajikistan/
64. tajikistan.ti,ab.
65. Ukraine/
66. Ukraine.ti,ab.
67. Uzbekistan/
68. Uzbekistan.ti,ab.
69. Albania/
70. Albania.ti,ab.
71. Azerbaijan/
72. Azerbaijan.ti,ab.
73. "Republic of Belarus"/
74. (belarus or byelarus or belorussia).ti,ab.
75. Bosnia-Herzegovina/
76. (bosnia or herzegovina).ti,ab.
77. Bulgaria/
78. Bulgaria.ti,ab.
79. Kazakhstan/
80. (Kazakhstan or kazakh).ti,ab.
81. "Macedonia (Republic)"/
82. Macedonia.ti,ab.
83. Montenegro/
84. Montenegro.ti,ab.
85. Romania/
86. Romania.ti,ab.
87. exp Russia/
88. USSR/
89. (Russia or Russian Federation or USSR or Union of Soviet Socialist Republics or Soviet Union).mp.
90. Serbia/
91. serbia.ti,ab.

92. Turkey/
93. turkey.ti,ab. not animal/
94. Turkmenistan/
95. Turkmenistan.ti,ab.
96. Yugoslavia/
97. yugoslavia.ti,ab.
98. Haiti/
99. Haiti.ti,ab.
100. Bolivia/
101. Bolivia.ti,ab.
102. El Salvador/
103. El Salvador.ti,ab.
104. Guatemala/
105. Guatemala.ti,ab.
106. Honduras/
107. Honduras.ti,ab.
108. Nicaragua/
109. Nicaragua.ti,ab.
110. Belize/
111. Belize.ti,ab.
112. Brazil/
113. Brazil.ti,ab.
114. Colombia/
115. Colombia.ti,ab.
116. Costa Rica/
117. Costa Rica.ti,ab.
118. Cuba/
119. Cuba.ti,ab.
120. Dominica/
121. Dominica.ti,ab.
122. Dominican Republic/
123. Dominican Republic.ti,ab.
124. Ecuador/
125. Ecuador.ti,ab.
126. Grenada/
127. Grenada.ti,ab.
128. Guyana/
129. Guyana.mp.
130. Jamaica/
131. Jamaica.ti,ab.
132. Mexico/
133. Mexico.ti,ab.
134. Paraguay/
135. Paraguay.mp.
136. Peru/
137. Peru.ti,ab.
138. Saint Lucia/
139. (St Lucia or Saint Lucia).ti,ab.
140. "Saint Vincent and the Grenadines"/
141. Grenadines.ti,ab.
142. Suriname/

143. Suriname.ti,ab.
144. Venezuela/
145. Venezuela.ti,ab.
146. Djibouti/
147. (Djibouti or French Somaliland).ti,ab.
148. Egypt/
149. Egypt.ti,ab.
150. Jordan/
151. Jordan.ti,ab.
152. Morocco/
153. Morocco.ti,ab.
154. Syria/
155. (Syria or Syrian Arab Republic).ti,ab.
156. Tunisia/
157. tunisia.mp.
158. Gaza.ti,ab.
159. Yemen/
160. Yemen.ti,ab.
161. Algeria/
162. Algeria.ti,ab.
163. Iran/
164. Iran.ti,ab.
165. Iraq/
166. Iraq.ti,ab.
167. Jordan/
168. Jordan.ti,ab.
169. Lebanon/
170. Lebanon.ti,ab.
171. Libya/
172. Libya.ti,ab.
173. Afghanistan/
174. Afghanistan.ti,ab.
175. Nepal/
176. Nepal.ti,ab.
177. Bangladesh/
178. Bangladesh.ti,ab.
179. Bhutan/
180. Bhutan.ti,ab.
181. exp India/
182. India.ti,ab.
183. Pakistan/
184. Pakistan.ti,ab.
185. Sri Lanka/
186. Sri Lanka.ti,ab.
187. Indian Ocean Islands/
188. Maldives.ti,ab.
189. Benin/
190. (Benin or Dahomey).ti,ab.
191. Burkina Faso/
192. (Burkina Faso or Burkina Fasso or Upper Volta).ti,ab.
193. Burundi/

194. Burundi.ti,ab.
195. Central African Republic/
196. (Central African Republic or Ubangi-Shari).ti,ab.
197. Chad/
198. Chad.ti,ab.
199. Comoros/
200. (Comoros or Comoro Islands or Mayotte or Iles Comores).ti,ab.
201. "Democratic Republic of the Congo"/
202. ((democratic republic adj2 congo) or belgian congo or zaire).ti,ab.
203. Eritrea/
204. Eritrea.ti,ab.
205. Ethiopia/
206. Ethiopia.ti,ab.
207. Gambia/
208. Gambia.ti,ab.
209. Guinea/
210. (Guinea not (New Guinea or Guinea Pig* or Guinea Fowl)).ti,ab.
211. Guinea-Bissau/
212. (Guinea-Bissau or Portuguese Guinea).ti,ab.
213. Liberia/
214. Liberia.ti,ab.
215. Madagascar/
216. (Madagascar or Malagasy Republic).ti,ab.
217. Malawi/
218. (Malawi or Nyasaland).ti,ab.
219. Mali/
220. Mali.ti,ab.
221. Mozambique/
222. (Mozambique or Mocambique or Portuguese East Africa).ti,ab.
223. Niger/
224. (Niger not (Aspergillus or Peptococcus or Schizothorax or Cruciferae or Gobius or Lasius or Agelastes or Melanosuchus or radish or Parastromateus or Orius or Apergillus or Parastromateus or Stomoxys)).ti,ab.
225. Rwanda/
226. (Rwanda or Ruanda).ti,ab.
227. Senegal/
228. senegal.ti,ab.
229. Sierra Leone/
230. Sierra Leone.mp.
231. Somalia/
232. Somalia.ti,ab.
233. South Sudan/
234. south sudan.ti,ab.
235. Tanzania/
236. (Tanzania or Tanganyika or Zanzibar).ti,ab.
237. Togo/
238. (Togo or Togolese Republic).ti,ab.
239. Uganda/
240. Uganda.ti,ab.
241. Zimbabwe/
242. (Zimbabwe or Rhodesia).ti,ab.

243. Angola/
244. angola.ti,ab.
245. Cameroon/
246. Cameroon.ti,ab.
247. Cape Verde/
248. (Cape Verde or Cabo Verde).ti,ab.
249. Congo/
250. (congo not ((democratic republic adj3 congo) or congo red or crimean-congo)).ti,ab.
251. Cote d'Ivoire/
252. (Cote d'Ivoire or Ivory Coast).ti,ab.
253. Ghana/
254. (Ghana or Gold Coast).ti,ab.
255. Kenya/
256. kenya.mp.
257. Lesotho/
258. (Lesotho or Basutoland).ti,ab.
259. Mauritania/
260. Mauritania.ti,ab.
261. Nigeria/
262. Nigeria.ti,ab.
263. Atlantic Islands/
264. (sao tome adj2 principe).ti,ab.
265. Sudan/
266. (Sudan not south sudan).ti,ab.
267. Swaziland/
268. Swaziland.ti,ab.
269. Zambia/
270. (Zambia or Northern Rhodesia).ti,ab.
271. Botswana/
272. (Botswana or Bechuanaland or Kalahari).ti,ab.
273. Equatorial Guinea/
274. (Equatorial Guinea or Spanish Guinea).ti,ab.
275. Gabon/
276. (Gabon or Gabonese Republic).ti,ab.
277. Mauritius/
278. (Mauritius or Agalega Islands).ti,ab.
279. Namibia/
280. Namibia.ti,ab.
281. South Africa/
282. South Africa.ti,ab.
283. or/1-282 [ALL COUNTRIES DESIGNATED AS LMIC]
284. sexual harassment.ab,ti.
285. 283 and 284
286. remove duplicates from 285

Appendix 2: Quality assessment of included studies (n=49)

Study author and year	Research focus on SH (as detailed in the objective)	Clear definition of SH	Clear description of measurement approach/tool for SH	Representativeness of target population to national population	Representativeness of sampling frame	Random sample?	Non-response bias minimal?	SH prevalence included in results	Numerator & denominator clear or appropriate?	Score / 9	Rating
Luo (1996)	Y	Y	Y	N	Y	N	Y	Y	N	6	Moderate
Tang, et al (1996)	Y	N	Y	N	N	N	N	Y	Y	4	Moderate
Mayekiso et al (1997)	Y	Y	Y	N	N	N	N	Y	N	4	Moderate
Shumba et al (2002)	Y	Y	N	N	N	Y	Y	Y	Y	6	Moderate
Fineran et al (2003)	Y	Y	Y	N	Y	N	N	Y	N	5	Moderate
Fawole, et al (2005)	Y	Y	N	N	Y	N	N	Y	Y	5	Moderate
Okoro et al (2005)	Y	Y	Y	N	Y	N	Y	Y	Y	7	High
Parish et al (2006)	Y	N	Y	Y	Y	Y	N	Y	N	6	Moderate
Puri et al (2007)	Y	N	Y	N	Y	Y	Y	Y	N	6	Moderate
Merkin (2008)	Y	Y	Y	N	Y	Y	N	Y	N	6	Moderate
Marsh, et al (2009)	Y	Y	Y	N	Y	N	N	Y	Y	6	Moderate
De Souza et al (2009)	Y	Y	Y	N	Y	N	Y	Y	Y	7	High

Study author and year	Research focus on SH (as detailed in the objective)	Clear definition of SH	Clear description of measurement approach/tool for SH	Representativeness of target population to national population	Representativeness of sampling frame	Random sample?	Non-response bias minimal?	SH prevalence included in results	Numerator & denominator clear or appropriate?	Score / 9	Rating
Owoaje et al (2009)	Y	Y	Y	N	N	N	Y	Y	Y	6	Moderate
Koehlmoos et al (2009)	Y	N	N	N	Y	Y	N	Y	Y	5	Moderate
Premadasa et al (2011)	Y	Y	Y	N	N	N	N	Y	Y	5	Moderate
Owoaje, et al (2011)	Y	N	Y	N	N	N	Y	Y	N	4	Moderate
Lahsaiezadeh et al (2012)	Y	Y	Y	N	Y	N	N	Y	Y	5	Moderate
Dhlomo et al (2012)	Y	Y	Y	N	Y	N	N	Y	N	4	Moderate
Hutagalang et al (2012)	Y	Y	Y	N	N	Y	NP	Y	N	5	Moderate
Norman et al (2012)	Y	Y	Y	N	N	N	Y	Y	N	6	Moderate
Fernandes et al (2012)	N	N	N	Y	Y	Y	Y	Y	Y	6	High
Norman et al (2013)	Y	N	Y	N	N	N	N	Y	N	3	Low
de Puiseau et al (2013)	Y	Y	Y	N	Y	N	N	Y	Y	5	Moderate
Norman et al (2013)	Y	N	Y	N	N	N	N	Y	N	3	Low
Haile, et al (2013)	Y	N	N	N	Y	Y	Y	Y	N	5	Moderate

Study author and year	Research focus on SH (as detailed in the objective)	Clear definition of SH	Clear description of measurement approach/tool for SH	Representativeness of target population to national population	Representativeness of sampling frame	Random sample?	Non-response bias minimal?	SH prevalence included in results	Numerator & denominator clear or appropriate?	Score / 9	Rating
Park et al (2013)	N	N	Y	Y	Y	Y	Y	Y	Y	7	High
Austrian et al (2014)	Y	N	Y	N	Y	N	Y	Y	Y	6	Moderate
Maurya et al (2014)	Y	N	Y	N	N	N	N	N	N	2	Low
Mamaru et al (2015)	Y	Y	Y	N	Y	Y	Y	Y	Y	8	High
Tobar et al (2015)	N	Y	Y	N	Y	N	Y	Y	N	5	Moderate
Kunwar et al (2015)	Y	Y	N	N	N	N	N	Y	N	3	Low
Vuckovic et al (2016)	Y	Y	N	Y	Y	Y	Y	Y	Y	8	High
Sahraian et al (2016)	N	Y	Y	N	N	N	N	Y	Y	4	Moderate
Tripathi et al (2016)	N	N	N	N	N	N	N	Y	Y	2	Low
Zhang, et al (2016)	Y	Y	Y	Y	Y	Y	Y	Y	N	8	High
Talboys et al (2017)	Y	Y	Y	N	N	N	N	Y	N	4	Moderate
Xie et al (2017)	N	N	N	Y	N	N	Y	Y	Y	4	Moderate
Tripathi et al (2017)	Y	N	N	N	N	N	Y	Y	N	3	Low

Study author and year	Research focus on SH (as detailed in the objective)	Clear definition of SH	Clear description of measurement approach/tool for SH	Representativeness of target population to national population	Representativeness of sampling frame	Random sample?	Non-response bias minimal?	SH prevalence included in results	Numerator & denominator clear or appropriate?	Score / 9	Rating
Dar et al (2018)	N	N	Y	N	N	N	Y	Y	N	3	Low
Aina et al (2018)	Y	Y	N	N	N	Y	N	Y	N	3	Low
Mabetha et al (2018)	Y	N	Y	Y	Y	Y	Y	Y	Y	8	High
Ul Haq et al (2018)	Y	N	Y	N	N	N	N	Y	N	3	Low
Akoku et al (2019)	Y	Y	Y	N	Y	N	Y	Y	Y	7	High
Murshid et al (2019)	N	N	N	Y	Y	Y	Y	Y	N	5	Moderate
Zhu et al (2019)	Y	Y	Y	N	Y	N	Y	Y	Y	7	High
Saberi et al (2019)	Y	N	Y	N	Y	Y	Y	Y	N	6	Moderate
Gautam, et al (2019)	Y	Y	N	N	N	Y	Y	Y	Y	6	Moderate
Huang et al (2019)	Y	Y	Y	Y	Y	Y	Y	Y	N	8	High
Oni et al (2019)	Y	Y	N	N	N	N	N	Y	N	3	Low

Appendix 3: PRISMA Checklist 2020

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	Page 1
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	Pgs 2 and 3
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	Pgs 4-6
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	Pg 6
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Pg 7
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Pg 6 and Appendix 1
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	Pg 7,8 and figure 1
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	Pg 7 and 8
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Pg 8
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	Pg 8 and appendix 2
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	Pg 8 and 9
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	Pg 8 and 9
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	Pg 8 and 9

Section and Topic	Item #	Checklist item	Location where item is reported
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	Pg 8 and 9
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	Pg 9 and figure 1
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	Pg 9
Study characteristics	17	Cite each included study and present its characteristics.	Pg 9-13
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Pg 17-20
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	Pgs 19=21
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	Pgs 19-21 and figure 2
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	Pg 20
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	Pgs 21-24
	23b	Discuss any limitations of the evidence included in the review.	Pg 24
	23c	Discuss any limitations of the review processes used.	Pg 24

Section and Topic	Item #	Checklist item	Location where item is reported
	23d	Discuss implications of the results for practice, policy, and future research.	Pg 25-26
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Pg 6
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	Pg 6
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	Pg 27
Competing interests	26	Declare any competing interests of review authors.	Pg 27
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	

Appendix 4: Definitions of sexual harassment by study.

Study author	Definition of sexual harassment (if included)
Akoku et al 2019	Sexual harassment is any unwelcome sexual advance, unwelcome request for sexual favour, verbal or physical conduct or gesture of a sexual nature, or any other behaviour of a sexual nature that might reasonably be expected or be perceived to cause offence, humiliation or intimidation to the person (adapted from UN Women).
Xie et al 2017	No definition provided.
Sahraian et al 2016	Sexual harassment was defined as any unwanted or unwelcome behaviour of a sexual nature such as standing too close, staring and focusing more than usual, undesirable sexual words and questions, insisting on a private invitation and direct sexual offers that are offensive to the person involved and that cause the person to feel vulnerable or embarrassed (adapted from the WHO definition).
Tripathi et al (2016)	No definition provided
Mamaru et al 2015	Sexual harassment is commonly defined as unwanted and unwelcome sexual behaviour in a work or educational setting affecting both physical and psychological well-being of a person. It could be evident in three different ways: verbal, physical and nonverbal forms
Fernandes (2012)	No definition provided
Norman et al (2013)	No definition provided
Norman et al (2012)	The unwanted sex-related behaviour at work that is appraised by the recipient as offensive, exceeding her resources, or threatening well-being
Owoaje (2009)	Unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct of a sexual nature, constitute sexual harassment. An act/conduct is considered to constitute sexual harassment when any one of the following is true: submission to such conduct is made either explicitly or implicitly a term or condition of a person's employment or academic advancement; submission to or rejection of such conduct by an individual is used as the basis for employment decisions or academic decisions affecting the person and such conduct has the purpose or effect of unreasonably interfering with a person's work or academic performance or creating an intimidating, hostile, or offensive working, learning, or social environment
Koehlmoos (2009)	No definition provided
Tobar et al 2015	Fitzgerald et al 1997 definition: a behavioural construct consisting of three dimensions: (i) general harassment – insulting verbal and nonverbal behaviours conveying derogatory, hostile, or degrading attitude toward women; (ii) unwanted sexual attention – verbal and nonverbal behaviours that are offensive, unwanted, and unreciprocated; (iii) sexual coercion – behaviours using bribes or threats contingent upon sexual cooperation. Furthermore, a harasser may be male or female, and harassment is not limited to men harassing women, although this is the most common
Parish et al (2006)	No definition provided
Murshid et al (2019)	No definition provided

Study author	Definition of sexual harassment (if included)
Zhu et al (2019)	Workplace sexual harassment (WSH) refers to any form of unwelcome conduct of a sexual nature (verbal, non-verbal or physical) that is perceived by the recipient as hostile, humiliating or threatening his/her well-being (Fitzgerald, 1997)
Aina et al (2018)	An unwanted conduct with sexual undertones if it occurs or which is persistent and which demeans, humiliates or creates a hostile and intimidating environment or is calculated to induce submission by actual or threatened adverse consequences and includes any one or more or all of the following unwelcome acts or behaviour (whether directly or by implication), namely; - (a) Any unwelcome physical, verbal or non-verbal conduct of sexual nature; (b) demand or request for sexual favours; (c) making sexually coloured remarks (d) physical contact and advances; or (e) showing pornography
Tripathi et al (2017)	Definition is not clear, but recognition that a range of acts can come under its purview (from passing comments amongst a group of friends about a girl, to a sexual assault) but also because of differences in the perception of actions as sexual harassment or not, especially where no physical contact is involved.
Vuckovic et al (2016)	Authors say that sexual harassment is considered part of gender-based violence. Draw on the International Labour Organization (2010) definition. Highlights two forms of sexual harassment specific to the workplace: when a job benefit is made conditional on the victim acceding to demands to engage in some form of sexual behaviour; and hostile working environment in which the conduct creates conditions that are intimidating or humiliating for the victim.
Talboys et al (2017)	Sexual harassment involves nonverbal, verbal, physical, or visual sexual attention, intimidation, or coercion that is unwelcome and unwanted and often has a negative impact on the psychosocial health of the victim.
Austrian (2014)	No definition provided
Maurya (2014)	No definition provided
Norman et al (2013)	No definition provided
de Puisseu & Roessel (2013)	In line with the legal definition and also according to the conceptualisations by Fitzgerald, Gelfand, and Drasgow (1995), they refer to sexual harassment as including general harassment, unwanted sexual attention, and sexual coercion.
Lahsaeizadeh (2012)	Sexual harassment'' is a kind of gender discrimination that women in different societies experience in various forms and restricts their liberty. Bowman (1993: 520) suggests that the liberty of women is substantially limited by street harassment, which reduces their physical and geographical mobility, and often prevents them from appearing alone in public places.
Dhlomo et al (2012)	Fitzgerald et al. (1997) proposed a tripartite model of sexual harassment that includes three behaviours: gender harassment, unwanted sexual attention and sexual assault and coercion. These occur mostly with the hostile environment form of sexual demands on another person.

Study author	Definition of sexual harassment (if included)
Premadasa et al (2011)	Unwanted sexual advances, requests for sexual favours or other verbal or physical conduct of a sexual nature in a setting in which noncompliance, refusal or protest could have a negative effect on negative standing (e.g., marks). Examples include: being stared or leered at, ogled; unwelcome remarks, jokes, innuendo, or taunting about a person's body, attire, age or marital status; Display of pornographic, sexually offensive or derogatory pictures; unnecessary physical contact such as touching, pinching and patting; sexual intimacy with or without actual intercourse. (Moscarello R et al (1994)
De Souza et al(2009)	Unwanted sex-related behaviour at work that is appraised by the recipient as offensive, exceeding her resources, or threatening her well-being (Fitzgerald, Swan, & Magley, 1997, p. 15)
Merkin (2008)	Sexual harassment is defined as behaviour that is unwelcome and of a sexual nature.
Puri et al (2007)	No definition provided
Fawole, et al (2005)	Sexual harassment - unwanted body contact, sending apprentices on dates with male friends, taking to parties
Fineran et al (2003)	Unwanted or unwelcome behaviours, such as making sexual comments, jokes, gestures or looks, showing sexual pictures, photographs, illustrations, messages or notes, writing sexual messages or graffiti on bathroom walls or locker rooms; spreading sexual rumours; calling someone gay or lesbian in a malicious manner; touching, grabbing, or pinching in a sexual way; pulling at clothing in a sexual way; intentionally brushing against someone in a sexual way; pulling clothing off or down; blocking or cornering in a sexual way; and, forcing a kiss, or forcing other unwelcome sexual behaviour other than kissing.
Shumba et al (2002)	Any unwanted, unsolicited and/or repeated verbal or sexual advances, sexually derogatory statements or sexually discriminatory remarks made by a member of the University community in respect of another member of the University community, whether in or outside the University, which are offensive or objectionable to the recipient, or which cause the recipient discomfort or humiliation, or which the recipient believes interfere with the performance of his or her job or study, undermine job security or prospects or create a threatening or intimidating work or study environment.
Mayekiso et al (1997)	Sexual harassment means unwanted conduct of a sexual nature or conduct based on sex which is offensive to the recipient
Saber et al (2019)	No definition provided
Dar et al (2018)	No definition provided
Gautam et al (2019)	Sexual harassment is an action within men and women, which is related to unwelcome behaviour on sex. It is characterized by a wide range of offensive manners including teasing, staring, winking, groping, pinching, sexual comments, telling jokes of a sexual nature, spreading sexual rumours, displaying porn videos, drawing pictures of a sexual nature, and squeezing or touching the private organs of women.
Huang et al (2019)	Sexual harassment is unwanted and unwelcome sexual behaviour which interferes with your life. Sexual harassment is not behaviours that you like or want (for example wanted kissing, touching or flirting)

Study author	Definition of sexual harassment (if included)
Oni et al (2019)	Sexual harassment refers to as persistent, unsolicited, and unwelcomed sexual advances which could be visual, physical, verbal and non-verbal gestures and it is seen as a disease of present-day learning institutions.
Ul Haq et al (2018)	No definition provided
Mabetha et al (2018)	No definition provided
Zhang, et al (2016)	Sexual harassment (unwelcome sexual advances, requests for sexual favours, and other verbal or physical harassment of a sexual nature).
Kunwar et al (2015)	ILO (2005) Unwelcome sexual advances or verbal or physical conduct of a sexual nature which has the purpose or effect of unreasonably interfering with the individual's work performance or creating an intimidating, hostile, abusive or offensive working environment
Haile, et al (2013)	No definition provided
Owoaje, et al (2011)	No definition provided
Marsh, et al (2009)	Sexual harassment is understood as a collection of verbal and physical actions, including intimidation, bribery and threats of sexual nature. Unwanted sexual advances may be subtle as innuendo and patronisation or as overt as blatant sexual comments and advances.
Okoro et al (2005)	The United States Equal Employment Opportunity Commission (EEOC) defines sexual harassment as "unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct of a sexual nature". Sexual harassment has also been defined as a continuum of behaviours, with physical sexual assault at one extreme and non-verbal sexually suggestive behaviour at the other extreme.
Luo 1996	Sexual harassment refers to any unwanted/unwelcome sexual attention and advances considered intrusive, offensive or harassing by the recipient. This includes (a) unwelcome sexual jokes or remarks; (b) unwelcome sexual materials or gestures; (c) unwelcome deliberate touching or physical closeness; (d) unwelcome pressure for a date; (e) verbal coercion for sexual activities; and (f) physical coercion for sexual activities, for example rape or attempted rape
Tang, et al (1996)	No definition provided
Hutagalang et al (2012)	Sexual harassment is generally recognized as encompassing all forms of unwanted conduct of a sexual nature, whether verbal or physical, the Malaysian Code of Practise specifically defines sexual harassment as any unwanted conduct of a sexual nature that may be perceived by an individual (a) as a condition on one's employment, (b) as an offence or humiliation, or (c) as a threat to one's well-being.

First author, year	Location, Country	Study setting	Study sample	Study design/sample size	Sexual Harassment						Outcomes (measured)
					Definition included	Measurement approach	Reporting period	Prevalence estimates (%)	Frequency of acts asked (if available)	Main perpetrator	
Luo (1996)	Taipei, Taiwan	Workplace	Male and female workers across different occupational categories	Cross-sectional survey (n=927)	yes	Definition was first read out. Participants were asked to report the most severe form of sexual harassment he/she ever experienced in a work related situation.	Ever	25% of sample experienced some form of sexual harassment in the workplace. Females almost three times (36% 177/493) more likely than male workers (13% (51/415) to report having experienced unwanted/unwelcome sexual attention or advances in work related situations.	Not asked	Status and sex of harasser asked. More than half of victims in the sample reported co-workers particularly of the opposite sex.	Not applicable
Tang et al (1996)	Hong Kong	Educational	Male and female Chinese students at a local university in Hong Kong	Cross-sectional survey (n=859), 368 males, 491 females.	No	Sexual harassment scale: a 16-item behavioural scale to assess students' definition, awareness and experiences of sexual harassment by opposite sex faculty members or peers. <i>Faculty-student sexual harassment scale</i> consists of three items: sexual coercion, physical seduction and gender harassment. <i>Peer sexual harassment</i> consists of four items: sexual coercion, physical seduction, non-physical seduction and	Not specified	<i>Faculty-student harassment:</i> Females reported experiencing more incidents than males. Women: ~12% reported teachers' misogynistic comments, 5% of women reported sexist comments about their body, unwanted pressure for dates and sexually suggestive looks from their teachers. <i>Peer sexual harassment:</i> Women twice as much being sexual harassed as men. <i>Men:</i> 13% sexist remarks and 5-6% experienced both physical and non-physical seductive	Not asked	Faculty-student and peer sexual harassment	Not applicable

						gender harassment. Sum total of yes responses represents index. Low index indicates low level experience of harassment.		behaviours. <i>Women: 20-26%</i> reported experiencing various forms of physical seductive behaviours, and gender harassment.			
Mayekiso et al (1997)	Transkei, South Africa	Educational	Male and female university students	Cross-sectional survey (n=827)	Yes	Modified version of the Sexual Harassment Questionnaire (Braine et al, 1995). The questionnaire consists of 11 specific categories of behaviour that may constitute sexual harassment, ranging from unwelcome touching, unwanted sexual remarks, unwanted sexual advances, sexually loaded noises or gestures, unwanted letter, pressure for dates and sexual favours despite refusals, and rape or date rape.	Not specified	Females: 43%-66% Males: 33%-55%	Not asked	Males/females and staff/students	Not applicable
Shumba et al (2002)	Zimbabwe	Educational	First and third year students from an institution of higher education	Cross-sectional survey (n=83)	Yes	30-item 'Sexual Harassment Questionnaire' was adapted and modified from a previous study on	School year.	66% (40/61) females indicated they have been asked for sexual favours by some lecturer. 95% (21/22) of	Not asked	Lecturers	Not applicable

Fineran et al (2003)	Johannesburg, South Africa	Educational	Students in four urban schools (males and females)	Cross-sectional survey (n=208)	Yes	<p>sexual harassment of female students in colleges of higher education in Zimbabwe (Zindi, 1994). Questions ranged from general perceptions on the nature and extent of sexual harassment perpetrated by lecturers. There were 4 questions focused on student's individual experiences and the rest on general perceptions. This measure is the sum of 12 ordinal items on a 5-point scale (never to frequently). It was the frequency of 12 behaviours that they experienced during their school year.</p> <p>These were: made sexual comments, jokes, gestures or looks; 2) showed, gave you sexual pictures, photographs, illustrations, messages, or notes; 3) wrote sexual messages/graffiti about you on bathroom walls, in</p>	School year	<p>Overall prevalence: 79% Males: 73% Females: 83%</p>	5 point likert scale: never to daily.	<p>Classmates they knew casually, or they had dated; or whom they were dating or students who attended their school whom they did not know.</p> <p>Most prevalent among girls were peers they did not know and peer they dated. Boys perpetrated more sexual harassment towards a dating partner.</p>	Not applicable
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locker rooms; 4) spread sexual rumours about you; 5) said you were gay or lesbian; 6) spied on you as you dressed or showered at school; 7) flashed or 'mooned' you?; 8) touched, grabbed or pinched you in a sexual way; 10) intentionally brushed against you in a sexual way; 11) pulled your clothing off or down; 12) forced you to do something other than kissing.

Fawole, et al (2005)	Ibadan, Nigeria	Workplace	Female apprentices receiving vocational training (e.g., tailors, hairdressers) at workshops	Baseline and follow-up survey after training (n=350)	Basic, but yes.	Sexual harassment measured separately, but grouped as part of sexual forms of violence (e.g., rape). Although actual measure used is unclear. Questions were on acts of harassment: touching parts of the body, taking on dates, making sexual advances or sexually suggestive remarks.	Unclear	Baseline: 22.9% (80/359) of females. Endline: 19.7% of females (40/350). The types of harassment consisted of touching parts of the body, taking on dates, making sexual advances or sexually suggestive remarks.	Not asked.	Persons well know to the girl, such as male partners at baseline and close associate or neighbour at endline.	Not applicable
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Okoro & Obozokhai (2005)	Benin city, Nigeria	Community	Out of school teenagers (males and females)	Cross-sectional survey (n=650 - 293 males, 357 females)	Yes	Adopted from the American Association of University Women (AAUW)'s Educational Foundation questions. Sexual harassment experiences were in four categories: verbal intimidation/threats; physical unwanted touch of private areas, hand holding or kiss; deceit tending towards attempted sexual demand or activity; and actual sexual activity (intercourse), by coercion or force.	Ever	Any form of harassment: 83% (296/357) of females and 62% (182/293) of males. Verbal assaults more common in females (83% compared to 21% males) as was unwanted touching of private parts (parts 71% for the females and 43% of males).	Not asked	Not asked	Not applicable
Parish et al (2006)	Mainland China	Community	General adult population	Population based national sample (n=3821)	No	Two sexual harassment questions included in the Chinese Health and Family Life Survey (CHFLS) : <u>Physical harassment</u> : "In the past 12 months, did someone sexually harass you (e.g., touch you, act indecently towards you, or take advantage of you with a sexual intent)?" <u>Verbal harassment</u> :	Past 12 months	Nationwide sample: Females: 12.5% Males: 7.8% Urban areas: All females: 15.1% Males: 6.4% Younger females (20-45y): 19.2%	Not asked	Co-worker, neighbor, or other peer (7.0%) was the most common. Asked about different categories: 1) older (supervisor, teacher, senior); 2) colleague, schoolmate etc 3) boyfriend 4) family member 5) stranger	Not applicable

						In the past 12 months, has anyone said anything sexually offensive to you"? Coding was a combined measure as numbers were small to separate them.					
Puri et al (2007)	Kathmandu, Nepal	Workplace	Female migrant workers in carpet and garment factories	Cross-sectional survey (n=550)	No	Questionnaire format based on WHO's adolescents sexual behaviour questionnaire. Questions to measure sexual harassment: 1) Young boys/girls are sometimes touched on the breast or some other parts of the body when they do not want it, by a stranger, relative or an older person. a)Has this ever happened to your friends? b)Has this ever happened to you? 2) Young boys/girls are sometimes forced to have sexual intercourse against their will by a stranger, relative or an older person, teacher, owner etc. a)Has this ever happened to your friends?	Ever	Respondent ever experienced sexual harassment (12.2%) Aware of friends who experienced sexual harassment (27.6%) Aware of friends who have been raped/coerced sex (11.3%) Respondent has been raped/coerced sex (2.2%)	Kept open ("when did it happen?")	Coworkers, boyfriends, employers, and relatives. Appears to be mostly co-workers or boyfriends/husbands.	Not applicable

						b)Has this ever happened to you? IF YES "When did it happen?" "If yes, then please say by whom?"					
Merkin (2008)	Latin America (Argentina, Brazil, Chile)	Workplace	Employed female and male workers part of International Labour Organisation (ILO)'s InFocus Programme on Socio-Economic Security	Cross-sectional survey (ILO's People's Social Survey (PSS). (Total N=8198, Argentina-n=2800, Brazil-n=4000, Chile - n=1180)	Yes	Survey used a global measure similar to the Navy Equal Opportunity/Sexual Harassment Survey (NEOSH). Direct question: During the past 2 years, have you experienced sexual harassment at work or school?	Past 2 years	Chile (8.7%), Brazil (4.8%), Argentina (3.5%)	For each of the behaviours: asked never, once, once a month or less, 2-4 times a month, once a week or more.	Asked whether: immediate supervisor, higher level supervisor, co-worker, subordinate.	Not applicable
Owoaje et al (2009)	Ibadan, Nigeria	Educational	Female graduates in higher learning institutions	Cross-sectional survey (n=398)	Yes	Modified version of the American Association of University Women (AAUW) Educational Foundation questionnaire on sexual harassment in college campuses. Sexual harassment experiences were asked by four categories: - verbal intimidation/threats;	Past 12 months	Overall prevalence: 69.8% (278/398); 65.3% (260/398) experienced non-physical sexual harassment 48.2% (192/398) experienced physical types of sexual harassment.	Not asked	Male classmates (61.9%) and lecturers (59.7%)	Not applicable

						<ul style="list-style-type: none"> - physical unwanted touch of private areas, hand holding or kiss; - deceit tending towards attempted sexual demand or activity; and - actual sexual activity (intercourse), by coercion or force. 					
Koehlmoos et al (2009)	Dhaka, Bangladesh	Street and public place	Homeless adult men and women	Community based cross-sectional survey (n=896)	No	<p>Only asked to female respondent. First asked if they were approached for unwanted physical contact or sexually propositioned while walking or lying in public spaces.</p> <p>Victims also asked to describe types of harassment such as: unwanted physical contact, unwanted sexual advances, touching, leering, rude gestures and rape.</p>	During the time period of being homeless.	62.9% (282/448) of women experienced some form of unwanted physical contact or sexual proposition during their time as homeless women.	74% (208/228) reported frequently.	Husbands/boyfriends	Not applicable

De Souza et al (2009)	Porto Alegre, Brazil	Workplace	Female domestic workers (16-60 years)	Cross-sectional survey (n=376)	Yes	Shortened version of the Sexual Experiences Questionnaire (SEQ) (Stark et al 2002) - asks about 16 different behaviours initiated by either men or women at the workplace based on 5 categories: sexist hostility, sexual hostility, unwanted sexual attention, sexual coercion and gender harassment.	Past 12 months	25% (94/376) reported some form of past year sexual harassment. Of these, 68% (n = 64/94) reported sexist hostility, followed by 59% (55/94) sexual hostility, 46% unwanted sexual attention (n = 43/94), 30% sexual coercion (n = 28/94). About 54% (n = 51/94) reported having experienced two or more types of sexual harassment, with 17% (n = 16/94) reporting having experienced all four types of sexual harassment.	Five point scale: 1 = never, 2 = once or twice, 3 = sometimes, 4 = often, and 5 = many times. Next, if participants had experienced a sexually harassing behavior at least once, they were asked how bothersome it was on a 5-point scale. Higher scores represented higher reported levels of feeling bothered by such incidents.	Not asked, but sex of perpetrator asked.	Not applicable
Marsh et al (2009)	Awassa, Ethiopia	Workplace	Female administrative and faculty staff from colleges.	Cross-sectional survey (n=387)	Yes	<u>First asked five questions:</u> 1) Made you feel like you might get some reward if you engaged in sexual behaviour (no/yes) 2) Made you feel like you might get punished in some way if you weren't sexually cooperative; 3) Made unwanted	Past 12 months	46.8% (181/387) of sample reported experiencing at least one type of sexual harassment. Of this sample (n=181), only 8% (31 /181) believed they had been sexually harassed at their workplace	Not asked	Not asked	Depression

						<p>suggestions about or references to sexual activity;</p> <p>4) On the job, have you experienced unwanted physical contact, included sexual contact?</p> <p>5) Have you felt mistreated at work because of your gender?</p> <p>and <u>one direct single item question:</u></p> <p>Do you believe you have been sexually harassed at work?</p> <p>Summary score computed by adding up items with at least one experience of sexual harassment (0-5).</p>					
Premadasa et al (2011)	Peradeniya, Sri Lanka	Educational	Dental undergraduate students (male and females)	Cross-sectional survey (n=65)	Yes	<p>Adapted from Moscarello et al (1994)'s survey instrument. Students were asked about six types of sexual 'mistreatment' as they worded it on staring; unwelcome comments; being shown pornographic or sexually offensive pictures; unwanted sexual advances and unnecessary touching; sexual</p>	Since being at University	<p>Any type of sexual harassment: 23.2% (15/65); Females: 17.1% (7/44) Males: 38.1% (8/21)</p> <p>Ranged from 1.6% for sexual intimacy to 18.4% for unwelcome sexual comments. In this setting, males experienced a higher prevalence of sexual harassment than females.</p>	Not asked.	Senior student (most common), lecturer, outsider.	Not applicable

						intimacy, unwanted touching of genitals or breasts.					
Owoaje, et al (2011)	Ibadan, Nigeria	Educational	Male and female medical students	Cross-sectional study (n=269)	No	Adapted from Rautio et al (2005): 1) If you have been subjected to sexual harassment or discrimination, what form did it take? (Check all that apply): denied opportunities, exchange of rewards for sexual favours; sexual advances; sexist slurs; sexist materials; malicious gossip, favouritism, poor evaluations; 2) How often, if ever, have any of the following persons subjected you to sexual harassment or discrimination (e.g. favouritism, advances, slurs, sexist teaching material)? Fellow students, consultants, registrars, assistants, lecturers, nurses, laboratory workers. 3) All of the above perpetrators asked in terms of	Not specified	Overall prevalence: 33.8% Females: 40.4% Males (29.7%). Most common type of sexual harassment was unwanted sexual advances.	Most common: 2-3 times.	Resident doctors, and consultants	Not applicable

						frequency (never, rarely (1-2 times), sometimes (3-4 times), often (5 or more times).					
Fernandes et al (2012)	Goa, India	Community survey in urban and rural areas	Youth aged 16-24 years (males and females)	Cross-sectional survey (n=3,662)	No	One question on sexual harassment: Ever been talked to about sex in away that was uncomfortable (yes, no)	Lifetime	11.9% (n=414) Not disaggregated by sex.	Not asked	Not asked	Common mental disorders
Norman et al (2012)	Ghana	Educational (19 public universities)	University students (males and females)	Cross-sectional survey (n=883)	Yes	Adapted version of 25-item Sexual Experiences Questionnaire-US Department of Defense (SEQ-DoD; Bastian, Lancaster, & Reyst, 1995). It is reported in five broad categories: (1) Crude/Offensive behavior; (2) Sexist behaviour; (3) Unwanted sexual attention; (4) Sexual coercion; and (5) Sexual assault. Final question on whether they consider the above as sexual harassment.	Past 12 months	Overall prevalence: 6.2% (55/883); Females: 4% of total (36/893) and 66% of those sexually harassed (36/55) Males: 2.1% of total (19/883) and 34% of those sexually harassed (19/55).	Majority reported few times (2-5 times)	Other students (asked from list of: classmate, other student, lecturer/instructor/supervisor, other school staff)	Range of health effects ranging from psychological trauma to irritability to loss of trust in friends

Lahsaeizadeh et al (2012)	Shiraz, Iran	Educational, but asked about experience in public places	Female university students	Cross-sectional survey (n=369)	Yes	13 item sexual harassment questions categorised by visual harassment, verbal harassment, following, and touching harassment.	Past 2 years	No overall prevalence, but acts. Staring most prevalent (97% 358/369); shoving or touching (87% 321/369)), eyeing the woman's body up and down (86% 315/369)), comment on the woman's appearance (85% 315/369)), and sitting too close to women or not giving them enough space in a taxi (85% 315/369) most prevalent kinds of harassment.	These were asked but not reported 0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = almost always	Strangers	Not applicable
Dhlomo et al (2012)	Zimbabwe	Educational	Female students (21-35y)	Cross-sectional survey (n=136)	No	15 items of the Sexual Experiences Questionnaire (SEQ) adapted from Fitzgerald et al., (1995). The measure of perceived sexual harassment had three domains: gender harassment (3 items), unwanted sexual attention (5 items), and sexual coercion (7 items). Participants also asked to describe the action after the sexual harassment experience.	Ever	Overall, 31% (43/136) sexually harassed. <u>Gender harassment:</u> Suggestive stories and offensive jokes most common mode of harassment (46%). <u>Unwanted sexual attention:</u> ~ 46% been told suggestive stories and jokes, 30% shown sexist or suggestive materials, and 24% subjected to crude or offensive remarks. <u>Sexual coercion:</u> 25%Unwanted attempts to have sex; 18% implied better grades or favours if you were sexually cooperative.	Not asked	Not asked	Not applicable

Hutagalang et al (2012)	Klang Valley, Malaysia	Workplace	Female employees at three universities	Cross-sectional survey (n=1423)	Yes	Sex and the Workplace Questionnaire developed by Gutek (1985) developed using 8 question items related to verbal and non-verbal sexual harassment. The marking scheme used 3 scales, ranging from 1(never) - 3 (ever) .	Ever	52.7% (750/1423) experienced sexual harassment. No further breakdown provided.	Not asked	Not asked	Job satisfaction and work stress
Park et al (2013)	South Korea	Workplace	National working population sample, aged 15-65 (males and females)	Cross-sectional survey (N=10,039)	No	Direct question in the Korean Working Conditions Survey (KWCS) and SH was included as a covariate in this study: Over the past 12 months, have you been subjected to sexual harassment at work? (yes/no)	Past 12 months	n=63 (0.6%) Not disaggregated by sex.	Not asked	Not asked	Work-related sleep problems
Norman et al (2013)	Ghana	Educational (4 medical schools)	Medical students (males and females)	Cross-sectional survey (n=409)	No	Adapted version of 25-item Sexual Experiences Questionnaire-US Department of Defense (SEQ-DoD; Bastian, Lancaster, & Reyst, 1995). It is reported in five broad categories: (1) Crude/Offensive behavior; (2) Sexist behaviour; (3) Unwanted sexual attention; (4) Sexual	Past 12 months	Overall: 14.4% (n=59/409) females: 8.8% (36/409) males: 5.6% (23/409) Most prevalent form in females was inappropriate or unwanted gifts for sex (71.4%) and unwanted sexual	Not shown in paper	Lecturer (asked from list of: classmate, other student, lecturer/instructor/supervisor, other school staff)	Psychological distress

						coercion; and (5) Sexual assault. Final question on whether they consider the above as sexual harassment.		comments or jokes (57.1%).			
Norman et al (2013)	Accra, Ghana	Faith Based Organisations	Clergy and lay members (male and female); 18-60 years	Cross-sectional survey (n=600)	No	Adapted version of 25-item Sexual Experiences Questionnaire-US Department of Defense (SEQ-DoD; Bastian, Lancaster, & Reyst, 1995). It is reported in five broad categories: (1) Crude/Offensive behavior; (2) Sexist behaviour; (3) Unwanted sexual attention; (4) Sexual coercion; and (5) Sexual assault.	Past 12 months	Females: 73% ; Males: 27% Sexually harassed when attending a religious activity but numerator and denominator unclear. Primarily reported unwanted physical contact or comments or jokes, inappropriate gifts, and even rape.	Not asked	Both female on male and male on female harassment was common (and main perpetrators were members of the clergy)	Loss of trust of other religious members; fear of the general public; feelings of anger.
de Puiseau et al (2013)	Benin	Educational	Students from 7 high schools across urban and rural areas in Benin (males and females)	Cross-sectional survey (n=249)	Yes	Three questions about sexual harassment (used the French term <i>harcelement sexuel</i> in the questionnaires). (1) whether participants had experienced sexual harassment at school (personal; among peers only;	Lifetime	Overall 41% among males (72/176) and females (30/73) (similar proportion among both males and females).	Not asked	Not asked	Not applicable

						no; don't know).(2) indicate their self-perceived probability of experiencing sexual harassment at school on a scale ranging from 0 (not likely at all) to 10 (very likely); (3) whether participants feared experiencing sexual harassment at school (3 much fear; 2 some fear; 1 little fear; 0 no fear).					
Haile et al (2013)	Addis Ababa, Ethiopia	Educational	Male secondary students	Cross-sectional study (n=830)	No	Sexual harassment asked but question unclear. Also, seems to be part of questions on sexual abuse and sexual coercion.	Lifetime and 12 month	Males: Lifetime: 68.2%. 12 month: 21.4%	Not asked	Not asked	Not applicable
Austrian et al (2014)	Kampala, Uganda	Low income community areas	Adolescent girls (ages 10-19)	Two treatment (savings plus and savings only) and comparison (two wave) trial (n=1064)	No	Sexual harassment was constructed using two dichotomous variables indicating girls who agreed with the statements: (1) In the past six months I have been touched indecently by someone of the opposite sex in my neighborhood, and (2) In my neighborhood, people of the	Past 6 months	<u>Savings plus:</u> Proportion of girls who experienced indecent touching: 8%. Proportion who were teased by members of the opposite sex: 24%. <u>Savings only:</u> Proportion of girls who experienced indecent touching: 15%. Proportion who were teased by members of the opposite sex: 25%.	Not asked	Members of the opposite sex	Not applicable

opposite
sex tease me as I
go about my day.

Maurya et al (2014)	Uttar Pradesh, India	Workplace	Civil police officers (male and female)	Cross- sectional survey (n=118)	No	Sexual harassment measured as part of the Workplace Harassment scale developed by Berdahl and Moore (2006). From this scale, 14 items focused on traditional sexual harassment (sexist and sexual comments, unwanted sexual attention, and sexual coercion); 11 of the 14 questions were based on items from the Sexual Experiences Questionnaire (SEQ; Fitzgerald, et al, 1995)	Past 2 years	Traditional sexual harassment Females: 9.7% Males: 6.7%	Result not clear. Scale from 0 (never) to 4 (most of the time).	Not specified	Mental health
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Mamaru et al (2015)	Jimma, Ethiopia	Educational	Jimma University female students	Cross-sectional survey (n=385)	Yes	Pre-tested questionnaire containing acts of physical, verbal and nonverbal SH items. <u>Physical:</u> purposely bumping or hurting someone, raping, attempting rape, and inappropriate touching. <u>Verbal:</u> Inappropriate sexual comments about body parts, telling sexual or dirty jokes and asking a favor for having sexual intercourse. <u>Non-verbal:</u> displaying inappropriate pictures through email/social media, inappropriate eye contact.	Lifetime	Physical: 78.2% Verbal: 90.4% Non-verbal: 80.0%	Not asked	University students (asked from list: university students, off campus boys, university teachers, total administrative staff)	Psychological distress
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Tobar et al (2015)	Mansoura, Egypt	Educational	University students (males and females)	Cross-sectional survey (n=744)	Yes	Two forms: one form for male participants (16 items) and the other for female participants (12 items); both were in Arabic. It included items on perception of the problem of harassment, frequency of occurrence and direct experience, and feelings and attitudes toward harassment. Men were not asked the question on whether they experienced sexual harassment.	Lifetime	Overall prevalence in females was 73% (258/354).	Appears to be collected as ever in their lifetime and more than half of the sample of women reported experiencing SH 1-3 times.	Unclear, but study mention male harassers	Not applicable
Kunwar et al (2015)	Kailali district, Nepal	Workplace	Female respondents in public sector employment	Cross-sectional survey (n=92)	Yes	No measure specified.	Ever or lifetime	Overall prevalence : 77.2% (71/92) Verbal (teasing or vulgar jokes): 56.3% (40/92) Physical (unwanted touching) 16.9% (12/92) Non-verbal: 11.3% (8/92) Emotional: 7.0% (5/92)	Not asked	Co-worker (52.1%), immediate supervisor (19.7%), manager (12.7%)	Not applicable

Sahraian et al (2016)	Shiraz, Iran	Educational/ Teaching hospital	Medical students (males and females)	Cross sectional survey (n=193)	Yes	Direct question on sexual harassment - have they been sexually harassed? Asked by frequency: never, sometimes, several times Taken from the Workplace violence questionnaire created by ILO/WHO/ICN/PSI.	Past 12 months	26.1% (49/193) reported sexual harassment; 33.6% female students; 10.3% male students	56.3% sometimes experienced physical sexual harassment; 77% verbal sexual harassment. Choice asked: once, sometimes, several times.	Physician colleagues	Not applicable
Tripathi et al (2016)	Udupi, India	Workplace	Workers from fisheries in the Malpe harbour (males and females)	Cross-sectional survey (n=171)	No	Questionnaire that asked about the occurrence of any events of verbal abuse, physical abuse and a direct question on sexual harassment (have they been sexually harassed?)	Past 12 months	Female workers: 0.6% (n=1)	Not asked	Male fishermen	Not applicable
Vuckovic et al (2016)	Mtwara and Dar Es Salaam, Tanzania	Public sector workplaces	Male and female civil servants in rural and urban areas	Cross-sectional survey (n=1,593)	Yes	Unclear, but appears to be a direct question: Have you ever been sexually harassed? Also, have a follow-up question on their reaction to being sexually harassed.	Lifetime	Females: 20.5% (129/629 females) Males: 12% (116/964 males). Figure among females was 27.8% when asked about avoiding the person who sexually harassed them, suggesting a discrepancy due to under-reporting.	Not asked	Male superiors, especially heads of departments. Asked from a list of: supervisors or leaders, heads of facilities/departments.	Not applicable

Zhang et al (2016)	Hong Kong	Community	Population based, young adults (males and females)	Cross-sectional survey (Youth Sexuality Study) (n=1223)	Yes	Sexual harassment questions: experienced unwelcome sexual advances; experienced requests for sexual favour; and experienced other verbal or physical harassment of a sexual nature.	Lifetime and 6 months	<u>Females</u> : 2.3% (6-month) & 13.2% (lifetime) <u>Males</u> : 0.6% (6-month) to 3.6% (lifetime)	Asked if 0 (none), 1 (once), and 2 (twice or more).	Males towards females	Pregnancy
Xie et al (2017)	Western China	Educational	Medical students (males and females)	Cross sectional survey (n=157)	No	Self-administered questionnaire. Details of questions not included. Brief indication of question on verbal sexual harassment (patients flirted with students) and physical sexual harassment (patients physically touched students). Sexual harassment was measured as verbal and physical sexual harassment.	Past 12 months	Verbal: 8.3% Physical: 1.6% Not disaggregated by sex.	Not asked	Patients	Student's quality of life (SF-36 scale)
Tripathi et al (2017)	Lucknow, India	Public transport	Third year university female students aged 18-29 years	Cross-sectional survey (n=200)	Yes, but not explicit	Designed a victimisation survey. To overcome measurement issues around acts and differences in perceptions of acts considered to be SH, the survey used descriptive categories of sexual crimes against women added to	Past 6 months	25% of the students have experienced more than ten incidents per month	Not asked	Strangers	Not applicable

						the Indian law after the 2012 Delhi gang rape case. Acts were: (a) Any unwelcome physical, verbal or non-verbal conduct of sexual nature; (b) demand or request for sexual favors; (c) making sexually colored remarks (d) physical contact and advances; or (e) showing pornography.					
Talboys et al (2017)	Punjab, India	Rural community	Rural, young females aged 18-26	Cross-sectional survey (n=89)	Yes	Eve Teasing Questionnaire–Mental Health (ETQ-MH).The questionnaire included questions about (a) eve teasing exposure, nature, timing, and intensity; (b) chronicity, which delineates onetime or ongoing harassment. Actual questions were: a) Have you ever been eve-teased? b) When was the last time you were eve-teased? c) I am going to read you this list of behaviours. As I read each one, can you tell me if you have been the target of any of	Scale that ranged from past week. Past month, <3 months, 3-7 months, 7-12 months, > year.	48.3% (43/89) (Ever eve-teased) 37.1% (33/89) (past year)	30.6% reported as on-going versus one-time	Men or boys known to the victim	Not applicable

						these in the <u>past year</u> by men/boys: staring; stalking; making vulgar gestures; passing an insulting or threatening comment; pushing or brushing by accident					
Aina et al (2018)	Delhi, India	Educational	Male and female private and public university students	Cross-sectional survey (n=430)	Yes	Direct question: Have you experienced any form of sexual harassment in your institution?	Ever or lifetime	16.3% (35/215) (private university), 18.6% (40/215) (public university) Not disaggregated by sex	Not asked	Not asked	Not applicable
Dar et al (2018)	Lahore, Pakistan	Hospital	Female patients diagnosed with conversion disorder at three public hospitals	Cross-sectional survey (n=51)	No	3 questions on sexual harassment included in the Urdu version of the Traumatic Experiences Checklist (TEC). The questions are direct questions on sexual harassment enquiring on the family. These are: 1) Sexual harassment (acts of a sexual nature that DO NOT involve physical contact) by your parents, brothers, or sisters. Y/N 2) Sexual harassment by more distant	Ever (not specified)	65% (33/51) reported sexual harassment.	Not asked	The main perpetrator was outside the family	Not applicable

						members of your family. Y/N 3) Sexual harassment by non-family members. Y/N FOR EACH, how much of an impact did this have on you? 1-5 (none to an extreme amount).					
Ul Haq et al (2018)	Lahore, Pakistan	Educational	1st and 2nd year medical students (male and female)	Cross-sectional study (n=358)	No	Direct question from the Medical School Graduation Questionnaire (developed by the American Association of Medical Colleges) : Have you experienced any form of sexual harassment in your institution? The responses consisted of a Likert scale ranging from never, once, occasionally, frequently.	Ever	Overall, 2.5% (9/358) experienced sexual harassment once, 4.2% (15/358) occasionally, and 3.6% (13/358) frequently. Sexual harassment was reported more frequently in male students as opposed to female students (56.8%>43.2%)	Occasionally	Faculty and classmates	Not applicable
Mabetha et al (2018)	South Africa	Educational	School-going adolescents, male and female (aged 10-19 years)	Cross sectional survey (South African National HIV, Behaviour and Health Survey (2011/2012). N=219,456	No	Having experienced sexual harassment using the following criteria: (i) boys sexually harassing girls by touching, threatening or making rude remarks to them; (ii) girls sexually harassing boys by touching,	Past 12 months	30.1% of respondents had experienced peer sexual harassment and 6.2 had experienced teacher sexual harassment.	Not asked	Peers and teachers.	Risky sexual behaviours (non using condom) and multiple sexual partners

						threatening or making rude remarks to them; (iii) male educators proposing relationships with female learners; (iv) female educators proposing relationships with male learners, and (v) educators proposing relationships with learners of the same sex. 'Peer perpetrated sexual harassment' refers to positive responses ('always' or 'often') to criterion i or ii, while positive responses to criterion iii, iv or v were coded as 'teacher-perpetrated sexual harassment' using principle component analysis.					
Akoku et al (2019)	Yaounde, Cameroon	Workplace	Female bar workers (FBW) (Median age: 29 years)	Cross-sectional survey (n=410)	Yes .	Definition of sexual harassment read out and respondents asked if they had experienced any behaviour of that sort from male customers in <3 months. If yes, then read out	Past 3 months	Most prevalent forms: Sexual advances including requesting telephone numbers to contact them later for a date (90.9%), sexually suggestive comments or jokes that made FBWs felt offended (76.3%), Inappropriate staring	Not asked	Male customers	Depressive symptoms (five-items mental health inventory scale)

						<p>a list of 7 behaviours likely to constitute sexual harassment by male customers:</p> <ul style="list-style-type: none"> sexual advances asking for a date ; sexually suggestive and offensive comments; inappropriate staring that made you feel uncomfortable; repeated demands for a date despite your rejection; touching parts of your body like buttocks or breasts; asking intrusive questions about your private and physical appearance; unwelcome physical contact from male customers including hugging or forcibly kissing. 		<p>or leering that made FBWs felt uncomfortable (70.7%).</p> <p>Summary: 98.8% (405/410) experienced one or more forms of sexual harassment in the < 3 months.</p>			
Murshid et al (2019)	Urban and rural Bangladesh	Community	Adolescent boys and girls (age 12-19)	Household level survey (n=520)	No	Measures not clearly stated, but mention five items relating to experiencing sexual harassment or “eve teasing” and insecurity.	Not clear	Females and males: 64%	Not asked	Not asked	Not applicable
								Not disaggregated by sex.			

Zhu et al (2019)	Shangdong, China	Workplace	Frontline hotel employees (male and female)	Three phase field survey (n=266)	Yes	21 items scale adapted by Murry et al. (2001) from the scale created by Fitzgerald et al. (1995). Comprise of four dimensions: <i>gender harassment</i> (e.g., treating someone differently because of their sex), <i>crude and offensive behaviours</i> (making offensive sexual gestures), <i>unwanted sexual attention</i> (staring, whistling in a sexual way) and <i>sexual coercion</i> (implied faster promotion for sex).	Ever or lifetime	~14% (36/266) of the respondents reported experiencing workplace sexual harassment. 28 % reporting moderate to severe levels.	Not asked	Supervisors/co-workers/customers	Depression and work related interpersonal deviance
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Saberi et al (2019)	Kashan, Iran	Workplace	Female workers in the industrial sector	Cross-sectional survey (n=817)	No	ILO/WHO/INA workplace violence questionnaires translated into Persian. 78 items on violence at work. The section that focused on sexual harassment asked about unwanted behaviors and actions in which the individual might experience sexual abuse, offense or threats to her health, including sexual comments, deliberately touching, suggestive looks, unwelcome letters and phone calls and acting for sexual favors.	Past 12 months	Overall 12% of females reported sexual harassment. Sexual comments and remarks (14.3%), deliberately touched (23.8%), suggestive looks (23.8%), unwelcome letters or phone calls (16.6%).	Seldom, monthly weekly, daily. Most females reported seldom exposure to sexual harassment.	Co-workers most frequent perpetrators (61%). Others were supervisors and office employees.	Not applicable
Gautam, et al (2019)	Kathmandu, Nepal	Public transport	Female students (public health and nursing students)	Cross-sectional survey (n=280)	Yes	Questions not provided, but mention of information on type of harassment (verbal, non-verbal and physical), effect of harassment (physical and psychological), type of public transport, time of harassment and perpetrator was collected.	Past 12 months	78.2% (219/280) of females using public transport reported being harassed. Among unmarried (54%) and married (46%). <i>Unmarried:</i> Physical (42.3%), verbal (14.4%) and non-verbal (43.2%). <i>Married:</i> Physical (38.6%), verbal (14.9%) and non-verbal (46.5%).	Not asked	Male passenger (93%)	Not applicable

Huang et al (2019)	Mainland China	Educational	College students (male and female)	Nationwide cross-sectional study (n=2080)	Yes	Modified version of SEQ-DOD (SEQ-China).25 items of the original SEQ-DOD were adapted; 23 close-ended questions and then 2 open-ended questttons. - Have you ever experienced other offences, please describe it; - Have you ever been sexually harassed? Options were never, once, more than once. If once or more than once, then coded yes and also asked to rprovide gender of harasser. As a follow up: Those who reported experiencing sexual harassment “more than once” were asked to express the emotional and behavioral reactions of “the first time” and “the latest time” harassment.	Ever	78% females and 67.3% males reported experiencing some form of sexual harassment. For the four categories: <i>Sexist hostility</i> : Males (28.6%)females (39.5%) <i>Sexual hostility</i> : Males (63%), females (71.2%) <i>Unwanted sexual attention</i> : Males (37.4%), females (57.1%) Sexual coercion: Males (5.6%), females (5.9%). 29.7% reported having been sexually harassed	Not reported	Students (79.3%); Strangers (31.3%)	Not applicable
Oni et al (2019)	Limpopo, South Africa	Educational	College students residing on campus (male and female)	Cross-sectional survey (n=342)	Yes	Questions not mentioned. Authors mention that it is a structured questionnaire developed based on extensive literature review, coupled with expert	Unclear	Unwanted touching: males (17.3%), females (25.3%); Personally experienced rape: males (1.3%), females (2.7%); Verbal harassment (unwanted sexual	Not asked	Not asked	Not applicable

consultation to ensure sensitive questions were valid.

advance, sex-related jokes): Males (12.2%) and females (18.4%)

Appendix 5: Description of included studies