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PO Box 117
221 00 Lund
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The hidden curriculum

Sexual harassment among university students in Sweden

JACK PALMIERI
SOCIAL MEDICINE AND GLOBAL HEALTH | FACULTY OF MEDICINE | LUND UNIVERSITY

The hidden curriculum

The hidden curriculum

Sexual harassment among university students in Sweden

Jack Palmieri

DOCTORAL DISSERTATION

by due permission of the Faculty of Medicine, Lund University, Sweden.
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Professor Carmen Vives-Cases
Dept. of Community Nursing, Preventive Medicine and Public Health and History of Science
University of Alicante, Alicante, Spain

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Abstract:

Background: The #metoo and #akademiuppropet media campaigns brought into stark relief the ongoing issue of workplace sexual harassment. Previous research shows this to be a pernicious and prevalent problem with severe consequences for individuals and organisations. Universities are complex spaces that can be considered as a workplace for students and as a site where boundaries between formal education and social activities can become blurred. They are also sites where strict hierarchies and power structures exist. Few large-scale studies have been conducted on sexual harassment in university settings in Sweden, with existing research lacking in comprehensiveness and academic rigour. The overall aim of this thesis was to examine individual and organizational factors associated with exposure to sexual harassment among students at Lund University, to contribute new and up-to-date knowledge in this area.

Methods: Papers I and II analysed cross-sectional data from a self-administered survey completed by 8960 students at Lund University in Sweden. Paper I was a validation of a modified instrument for measuring psychosocial study environment for students that utilises exploratory factor analysis and Cronbach's alpha. Paper II examined associations between study environment and exposure to sexual harassment using logistic regression and synergy indexes. Paper III was a Grounded Theory study that used data from 7 focus group discussions conducted among 28 students at Lund University to explore conceptualisations and organisational structures as explanatory mechanisms for sexual harassment.

Results: The main finding of Paper I was that the modified instrument for measuring demand, control, and support among students is a reliable and valid tool. Paper II applied this tool to the question of sexual harassment and found that high demands and low control were independently associated with higher odds of being exposed to sexual harassment and that high study strain (combination of high demands and low control) could account for 14% and 15% of study environment sexual harassment for females and males, respectively. Paper III highlighted that although students were aware of sexual harassment at the university, they were conflicted as to interpreting and assigning responsibility on a continuum from individual to organisational. This confusion permeated every aspect of understanding and responding to sexual harassment.

Conclusions: To work proactively to prevent sexual harassment, and to create systems for redress in the university setting requires a multilevel approach that works to reduce situations of high strain for students and improves support from lecturers. Simultaneously, the approach must generate trust in university systems through establishing common understandings of sexual harassment, clear and accountable pathways for reporting, and transparency of outcome.

Key words: Sexual Harassment, Demand-Control-Support, University students

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The hidden curriculum

Sexual harassment among university students in Sweden

Jack Palmieri

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“Power is relations; power is not a thing”

Michel Foucault, 1983

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List of Papers

This compilation thesis is based on the following original papers, referred to in text by their roman numerals:

I. **Palmieri JW**, Agardh A, Östergren PO. Validating a modified instrument for measuring Demand-Control-Support among students at a large university in southern Sweden. *Glob Health Action*. 2023 Dec 31;16(1):2226913.

II. **Palmieri J**, Östergren PO, Larsson M, Agardh A. Psychosocial study environment characteristics associated with exposure to sexual harassment at a large public university in southern Sweden: a cross sectional study. *Glob Health Action*. 2023 Dec 31;16(1):2264627.

III. **Palmieri JW**, Emmelin M, Svensson P, Agardh A. Aware but confused: Conflicted between individual and collective responsibility. A grounded theory study of norms and organisational structures relating to sexual harassment among students at a university in southern Sweden (*Manuscript*).

Abstract

Background: The #metoo and #akademiuppropet media campaigns brought into stark relief the ongoing issue of workplace sexual harassment. Previous research shows this to be a pernicious and prevalent problem with severe consequences for individuals and organisations. Universities are complex spaces that can be considered as a workplace for students and as a site where boundaries between formal education and social activities can become blurred. They are also sites where strict hierarchies and power structures exist. Few large-scale studies have been conducted on sexual harassment in university settings in Sweden, with existing research lacking in comprehensiveness and academic rigour. The overall aim of this thesis was to examine individual and organizational factors associated with exposure to sexual harassment among students at Lund University, to contribute new and up-to-date knowledge in this area.

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Key words: Sexual Harassment, Demand-Control-Support, University students

Abbreviations

CI	Confidence interval
COPSOQ	Copenhagen psychosocial questionnaire
DCS	Demand-Control-Support
EFA	Exploratory factor analysis
ERI	Effort-reward imbalance
FGD	Focus group discussion
LUSHI	Lund University sexual harassment index
OR	Odds ratio
PI	Principal investigator
PTSD	Post Traumatic Stress Disorder
SEQ	Sexual experiences questionnaire
SH	Sexual harassment
WEH	Work environment hypothesis

Introduction

In 1993, Louise Fitzgerald and Sandra Shullman made the claim that "Sexual harassment is an issue whose time has come" [1]. Reflecting on the near two decades of collected research in an American context focusing on women and the workplace, they claimed that sexual harassment research was finally receiving the attention it deserved and resulting in a coherent and sophisticated body of literature. Sexual harassment, they concluded, had a long past, but a short history [1].

Now, 30 years on from this statement, the field of sexual harassment research is much more extensive. Research into sexual harassment at the workplace has examined the definition and incidence of sexual harassment [2], prevalence and form of expression [3], and cost and consequences [4]. Despite this wealth of literature, there is still no common understanding of sexual harassment, and no single theoretical model to explain its occurrence. The research field is dominated by quantitative cross-sectional studies that focus on developing empirical definitions of harassment that lack theoretical rigour [5], and primarily focus on North America, with limited research in Europe and Australia [6]. In short, the quest for a coherent body of literature continues.

Although there is no consensus about how workplace sexual harassment should be defined, there is no doubt it is a severe violation of fundamental rights, and a prevalent problem in almost all organisations. Research conducted in the USA concluded that around 50% of women had been exposed to sexual harassment in their lifetime [7] while research conducted in the European context put this figure between 17 and 81% depending on the methodology used [6]. Universities are complex organisations hosting occupational, educational, and social elements that reflect a broad range of social contexts and structures. It is logical, therefore, to believe that sexual harassment occurs in these settings.

Due to the multiple roles for those who live and learn there, universities can be considered as workplaces for students. Some of the literature on workplace harassment will be used to frame the issue in this introduction, where specific literature from the academic setting is missing.

Defining sexual harassment

Despite decades of research, there is no consensus about how sexual harassment should be defined [6]. As a concept, sexual harassment can be understood through different theoretical, political, and social approaches [8]. Depending on how sexual harassment is defined, how we measure the occurrence of the phenomenon can vary substantially.

One broad distinction that can be made is between definitions of sexual harassment that are legally based, and those that are psychological/experiential [9]. Legal definitions are based on legal statutes and capture sexual harassment as a criminal act. This has benefits in as much as they are explicit within a given context and can be linked to fundamental rights or the violations of these [10]. Legal definitions within the EU tend to include two types of sexual harassment, quid pro quo, and hostile or offensive work environment. Quid pro quo sexual harassment is defined as pressure to undertake sexual activity in exchange for workplace benefits, whereas hostile or offensive work environments refers to the creation of an environment that can support sexual harassment, and intimidate victims [10].

Both of these legal definitions consist of general statements about the nature of behaviour that can be classed as sexual harassment, in a way that is derived from theoretical propositions as opposed to defining a list of behaviours. As such, therefore, they can be considered an "a priori" definition according to Fitzgerald [11]. Legal definitions have disadvantages including their geographical limitations that challenge generalisability, and their tendency to change over time as laws are updated [12]. In Sweden, sexual harassment pertinent to the workplace is defined in law based on the discrimination act (diskrimineringslagen) [13] and criminal code (brottsbalken) [14].

The discrimination act defines sexual harassment as "conduct of a sexual nature that violates a person's dignity. Besides comments and words, this could involve unwanted touching or leering. It could also be a question of unwelcome compliments, insinuations, text messages and images of a sexual nature." [13]. In addition to being a form of discrimination, sexual harassment may also be a form of victimisation that is covered under the work environment act in situations where it leads to discriminatory behaviour outside of the protected characteristics [15]. The criminal code (brottsbalken) does not include direct reference to sexual harassment, but does contain provisions for defamation or insult including 'revenge porn' (chapter 5), invasive photography (chapter 4), sexual molestation (chapters 4 and 6), and rape and sexual assault (chapter 6) [14].

Previous research into sexual harassment has shown that different individuals categorise different situations or events as sexual harassment [16], with large variations between individuals and groups. This calls for a psychosocial definition of sexual harassment that allows space for respondents to consider factors related to

defining sexual harassment such as behaviour, relationship between actors, observer, and contextual factors [17].

An experiential definition of sexual harassment also allows for the multidimensional nature of sexual harassment, capturing aspects of generalised sexist remarks and gender harassment, through to unwanted sexual attention and rape [18].

This thesis has adopted a psychological definition of sexual harassment that is aligned with Swedish discrimination laws and University definition but leaves space for subjectivity in interpretation. More details about this can be found in the Methods and Materials section and Conceptual Framework.

Consequences of sexual harassment

Workplace sexual harassment has been associated with a number of negative outcomes that can affect individuals and organisations. A meta-analysis of the antecedents and consequences of workplace sexual harassment conducted in 2007 grouped these into 'Job-related outcomes', and 'Health and Wellbeing outcomes' [3]. Job-related (or organisational) outcomes of having experienced sexual harassment include lowered job satisfaction resulting in withdrawal, loss of productivity, and higher staff turnover [19-21], loss of organisational commitment that can lead to task avoidance [22, 23], and absenteeism [24].

For individuals who have experienced sexual harassment, consequences can affect both physical and psychological health. General reduced life-satisfaction and wellbeing can be impacted through psychological outcomes including increased anxiety, depressive symptoms, lowered self-esteem, and even post-traumatic stress disorder (PTSD) [4, 25, 26].

Many of these psychological complications can also manifest in physical effects that include headaches, weight loss or gain, nausea, sleep disorder, sexual disfunction, and in some cases, suicidal tendencies [25, 27, 28].

In an academic setting, research has shown similar consequences for individuals, with decreased mental health [29] and increased health-risk behaviours [30]. In terms of organisational or career-equivalent consequences, research identifies disruptions to an academic journey due to time off, withdrawal and the withdrawal from courses [5].

Theoretical perspectives on sexual harassment

Sexual harassment research can be guided by a number of theoretical perspectives. This section will briefly introduce five of these perspectives before reflecting over the approach taken in this project.

The natural-biological model builds on the assumption that men possess a stronger sex drive than women, and that this leads to a propensity to aggress sexually without discriminatory intent. The claim is therefore that sexual harassment is a natural expression of attraction and not therefore harassment at all [31]. This problematic explanation trivialises sexual harassment and fails to reflect the established body of literature on the causes and consequences of sexual harassment [32]. It also fails to explain same-sex harassment or harassment of men by women and for this reason has been largely discredited [2].

Sex spill-over models see sexual harassment as a manifestation of differences between men and women that are legitimised by a patriarchal society [33] because of the roles of men as sexual agents and women as sexual objects [34]. This is perhaps one of the most widely used models, that is sometimes critiqued for its lack of awareness of organisational contexts [35]. Related models that can be considered as more socio-cultural are so called power models that highlight unequal power as important for understanding sexual harassment [36]. Power models built upon feminist models of power take a more nuanced approach than sex spill-over theories and offer space for same-sex harassment, and "contrapower" harassment, that is harassment against a power gradient, across multiple levels [37, 38].

Organisational models see the power asymmetries embedded in the structures of workplaces, combined with occupational norms and cultures as facilitating the occurrence of sexual harassment and closing down the space for redress [39]. Some authors who ascribe to this theoretical framework see the power differentials as superseding gender differences, that is that those in positions of power tend to be men, and thus the power asymmetry may be related to position as opposed to sex [33]. Others locate organisations within a broader sociocultural context of gender socialisation and see organisations therefore as existing within, and responding to, these underlying patriarchal norms [39].

Legal consciousness refers to how individuals are aware of, understand, and recognise the law and legality [40]. It deals directly with how perceptions of the law can be lead to (in)action, be this formal, in as much as filing complaints, or informal such as confronting the perpetrators of violence [41]. This process, sometimes termed "naming, blaming, and claiming" [42], requires victims to experience an action as sexual harassment, be able to identify the perpetrator of the act, and be willing to take action to redress the situation.

The models presented above offer a short introduction to the various theories surrounding sexual harassment in the workplace. More recent publications have focused on combining these theories with an appreciation of intersecting vulnerabilities experienced by some minority groups. These theories are sometimes termed ‘multidimensional’ theories [43].

This thesis does not ascribe to any one single explanation for the occurrence of sexual harassment, but rather sees it as an intersection between power, organisational structures, and models of legal consciousness. This is elaborated on further in the discussion section.

The Nordic Paradox

Nordic countries, including Sweden, are some of the most gender equal countries in the world according to multiple international indicators and measurements [44]. At the same time, EU-wide survey data reports higher prevalence of gender-based violence in these countries than in countries that are comparatively less gender equal [45]. This phenomenon is called the Nordic paradox. If one were to adopt a purely sex spill-over theoretical understanding of sexual harassment, this could appear counter intuitive. Recent research on this phenomenon, however, suggests that gender-based violence against women needs to be understood as a multi-level phenomenon that must be analysed on individual, situational and socio-cultural levels [45]. Once these factors are taken into consideration, high gender equality does not remain a statistically significant explanation for high sexual harassment rates, and thus in these multilevel models there is insufficient evidence to reject the null hypothesis and claim support for the so called ‘Nordic Paradox’.

Sexual harassment in the time of #MeToo

The term MeToo has its roots in the writings of African-American activist Tarana Burke and was first used in 2006 as part of an intersectional project aimed at “supporting women and girls of colour who had experienced sexual violence” [46]. At the time, this campaign garnered some support, but it was first in 2017 when actress Alyssa Milano used social media to challenge women who had been sexually harassed or assaulted to write ‘Me too’ in their status to highlight the magnitude of the problem [47] that the campaign really took off. Reactions to the #MeToo campaign were instantaneous and enormous, with millions of people engaging with the campaign in the first days after the post went viral [48].

Far from being the first or only campaign targeting awareness raising around sexual harassment, #MeToo has been hailed as representing a paradigm shift due to the way that it challenged the hegemonic narratives on victimhood and epistemic injustice by creating space for victims, as agents, to put words to their own experiences and openly discuss the issue more broadly [47].

In Sweden, the response to #MeToo was far reaching. In 2017, the then prime minister Stefan Löfven claimed the disclosure of sexual harassment in Sweden was a 'shame to society', and researchers spoke of a 'moral shock' that such events were happening in a country for so long portrayed as gender progressive [49]. Media coverage was extensive and generally positive, although opponents of the movement criticised the 'sidestepping' of legal processes that led to public trials outside of due process and undermined the legal systems in place [49].

In 2018 the Swedish parliament passed a new law often erroneously referred to as the 'consent-based law'. This law, more accurately referred to as a law of voluntary participation, is an update to the legal definition of rape that falls under an affirmative consent model. The law changed the definition of rape to "sexual acts comparable to sexual intercourse that occurs without express voluntary participation" [50]. This legal change had been debated in Sweden for a number of years prior to the #MeToo movement, but many researchers attribute this campaign with generating the social and political space for such changes in the law to be considered.

The #MeToo movement inspired the launch of a number of sector-specific hashtags, intended to highlight challenges faced in specific work environments and contexts. One such hashtag was #Akademiuppropet that was launched in November of 2017 through the publishing of an open letter signed by 2400 women employed by universities in Sweden. The letter called for more awareness of sexual harassment, misuse of power, and psychological violence that was occurring in the academic setting, and for necessary changes to the structures of academic institutes to end such violations for all who currently work at universities, and for women who dream of one day working there [51]. This movement highlighted the culture of silence that female academics are forced to endure, as well as the clear role that power played in these negative interactions.

The legal, social, and political impacts of the #MeToo and related #Akademiuppropet campaigns resonated deeply in Swedish society, and undoubtedly created space for more open discussions about experiences of sexual harassment. Global research that has been conducted both before and shortly after the campaign was launched, points to changes in the incidence of some forms of sexual harassment, as well as a perceived increase in support and empowerment for women that could lead to an increased likelihood to report [52].

Beyond the legal and media awareness, the #MeToo campaign offered opportunities for opening up the space for dialogue about sexual harassment in a way that had not

been done before. For researchers in sexual harassment, it also offered a chance for increased engagement from participants in a field that had been difficult to research. Although some research points to evidence that more women are believed in the post #MeToo era when reporting sexual harassment [53], others have noted a potential increase in hostility towards women as a form of hostile sexism that has occurred as a backlash to this movement [54].

Sexual harassment in academia

Universities are complex entities that encompass places of work, study, and socialising. In addition, the hierarchical structures of universities and the tradition-laden cultures can be the perfect breeding ground for cultures of silence and power relationships that can smother disclosures of sexual harassment [55].

Existing international research into sexual harassment in higher education shows that sexual harassment is a persistent problem among students and staff, that does not show any tendencies of decreasing over time. In addition, it suggests intersecting vulnerabilities connected to age, minority group identity, and gender, as well as serious consequences for individuals in terms of both physical and psychological outcomes [56].

The research field, however, lacks methodological variety, and includes predominantly quantitative cross-sectional studies, with limited theoretical perspectives. This also poses challenges for comparison due to different definitions of the phenomenon [5].

The majority of existing empirical research studies into sexual harassment that have been broadly cited, have been conducted at universities located in the North American context, and are based on limited sample sizes [5]. North American universities tend to be campus-based organisations, where students live, learn and often socialise in a self-contained area. This poses problems for transferability of study results to contexts that do not have campus-bases universities, such as in Sweden. Many of the studies that are conducted outside of campus-based universities tend to focus either on staff only [36], or exclusively on students [57], and lack a large mixed sample.

Studies conducted outside of North America tend to be in English speaking settings, for example Australia [58], Canada [59], and the United Kingdom [60]. Furthermore, studies that are conducted outside of this anglophonic area often touch on sexual harassment tangentially with a focus on other issues such as unwanted pregnancies, or HIV prevention [61].

Regardless of where the research was conducted however, the issue of prevalence is included in most research. Research in the USA, for example has found that

between 20-25% of female students have experienced sexual harassment[62], and European research reports similar figures [63].

In a Swedish context, the 1997 change to the law governing higher education saw the introduction of the third task, to move beyond research and education and to engage in collaboration with society for the implementation of knowledge for societal good [64]. This change charges the university with contributing to societal change based on the best available evidence. In the context of sexual harassment, universities therefore have the potential to be sites of change for good, able to inspire change based on the up-to-date research evidence.

A recent report mapping published research in the area of sexual harassment in academia in Sweden [56] resulted in 50 publications, a number of which were reports as opposed to original research articles. The resulting publication list highlighted the limited scope of quantitative research both in terms of the number of respondents, and the cross-sectional nature of the study design. Issues of definition, methodology and selection made comparisons difficult, and the theoretical framework of the articles was not always clear. The qualitative research identified was even more limited in number, but anchored better in theoretical perspectives such as feminist sociology and organisation theory [56]. Since the publication of this report, a number of additional articles have been published examining self-reported sexual harassment among medical students over time [65]; testing the 'shadow of sexual assault' hypothesis among Swedish university students [66]; exploring doctoral students' perceived work environment in Sweden [67]; and examining obstacles in identifying sexual harassment in academia: insights from five countries, including Sweden [63]. These publications have served to expand the existing field of research but fall short with regards to comprehensive studies and large populations.

Existing research on sexual harassment highlights a gender disparity, with more cases reported among women [68], and an age disparity, with younger persons more likely to report experiences of sexual harassment than older [10]. These two factors also motivate a special focus on university settings as sites where large numbers of youth are gathered.

In summary, few large-scale studies have been conducted on sexual harassment in university settings in Sweden, with existing research lacking in comprehensiveness and academic rigor. Studies are needed that target the full range of students, academic and auxiliary staff, and work to identify preventative measures. This was the motivation for this thesis project.

#Tellus

This thesis utilised data that was collected as part of the Tellus Project. Tellus was initiated in the spring of 2018 by the then Vice Chancellor of Lund University Torbjörn von Schantz, as a response to #MeToo and #Akademiuppropet. The project was a three-year research-based initiative that aimed to generate knowledge-based proposals for measures to strengthen the preventive work against sexual harassment at the university. The project was built on a four-phase cycle: first a needs analysis would be conducted highlighting the current situation, this would be followed by the preparation of an action plan with proposed measures to strengthen the preventive work against sexual harassment, an implementation phase for the proposed measures, and regular follow up.

Recognising the multi-faceted nature of sexual harassment, phase 1 was designed to use both qualitative and quantitative approaches. Qualitative data was collected through individual interviews from students and staff with personal experiences of sexual harassment (as victims, perpetrators, or witnesses), and through group discussions for students and staff willing to discuss norms and organisational structures relating to sexual harassment. This qualitative data was then used to develop survey instruments that were distributed to all students and staff, separately, at the university. Qualitative data collection took place autumn 2018-spring 2019, and the questionnaire in autumn 2019-spring 2020.

Although data for the studies in this thesis were collected as part of the Tellus project, analysis and publication was conducted under the auspices of a research grant from the Swedish Research Council (Number 2018-02457).

At the time of writing, data from the Tellus project has been used in a number of publications outside of the ones included in this thesis. Two of these articles have a particular relevance for the context in which this thesis is set and will therefore be briefly introduced.

In 2022, an article was published providing prevalence data from the cross-sectional survey conducted at the university, with a focus on victims, perpetrators and location [69]. The study included data for both students and employees at the university. Due to the employment status of PhD students at universities in Sweden (discussed in study population), this group were discussed alongside employees.

Results of this study show that 21.1% of students had experienced sexual harassment during their time at the university, a figure much higher for females (26.8%), than males (11.3%). The three most common expressions of sexual harassment among female students were “unwelcome suggestive looks or gestures”, “unwelcome comments” and “unwelcome ‘inadvertent’ brushing or touching”. Among male students unwelcome bodily contact was the most frequently reported behaviour. Experiencing sexual harassment was more common among younger

students, females, and for those born in Sweden. The most commonly reported perpetrator was another student (84.5%), and men accounted for the largest number of perpetrators reported in the survey [69]. These findings set the context for this PhD thesis and will be referred to throughout the following sections.

The second published article was a study that aimed to investigate validity and reliability of the Lund University Sexual Harassment Inventory (LUSHI). This is an instrument developed to assess sexual harassment at the university. Results of this study showed that the 10-item instrument could be a valid and reliable instrument for use among male and female students in the university setting [12]. More discussion about this instrument can be found under Materials and Methods.

Conceptual frameworks

To better understand the interplay of individual and organisational factors associated with conceptualising and explaining experiences of sexual harassment among students at Lund University, two primary conceptual models have been used. These models are the Demand-Control-Support model [70], and the social-cognition model [71]. In this thesis, these models were used to operationalise concepts of organisation study environment, and to assist in locating sexual harassment as a multi-level concept.

Demand-Control-Support

This thesis adopts an explanation of sexual harassment that builds upon socio-cultural, power, and organisational theories. Within organisational theories, the thesis explores organisational norms and cultures through qualitative inquiry, and occupational stress as one measure or organisational environment in the survey instrument. Occupational stress is an organisational factor that has been linked to the occurrence of harassment and sexual harassment in workplaces through, for example the work environment hypothesis [72], and is thus a pertinent issue to discuss in this context. Occupational stress is considered through the Demand-Control-Support model (DCS) [70].

The Job-Demand-Control model (or job strain model) is the predecessor to the DCS model, that posits that work related stress can be understood through examining demands placed on a worker by their job, and the amount of control workers perceive themselves to have to make their own decisions and enhance job satisfaction [73]. Originally developed in the USA and Sweden in the 1970s, the model was expanded in 1988 to include social support as a potential effect modifier for the association between demand and control [74]. This expanded model is known as the Demand-Control-Support model (DCS).

The DCS model of occupational strain has been widely used to examine relationships between workers' organisational strain, and a host of psychological and physical health outcomes, and has been shown to have 'substantial empirical evidence' for a number of negative outcomes [75].

Despite its abundant use in 'traditional' workplaces, the DCS model has rarely been used to investigate the study environment of university students. In those few cases where the model has been applied, it tends to be on practical placements and apprenticeships outside of the university setting [76], or on limited elements of the study setting such as clinical practice [77].

Those few studies that have applied the DCS model to university students' settings have concluded that the psychosocial work environment for students is a factor behind perceived stress, in line with research in traditional workplaces [78].

The university is a complex space for students, as both a site of learning, socialising, and work. It is therefore an appropriate location in which to apply theories of occupational stress, such as the DCS model. **Figure 1** below shows this model adapted for the student study environment. The model suggests that experiences of stress and strain as described in the psychosocial study environment can be understood as a consequence of demands placed on students by their studies, modified by perceptions of control among the students, and support from their supervisors/teachers, and fellow students. It is also conceivable that control and support could directly influence the psychosocial study environment.

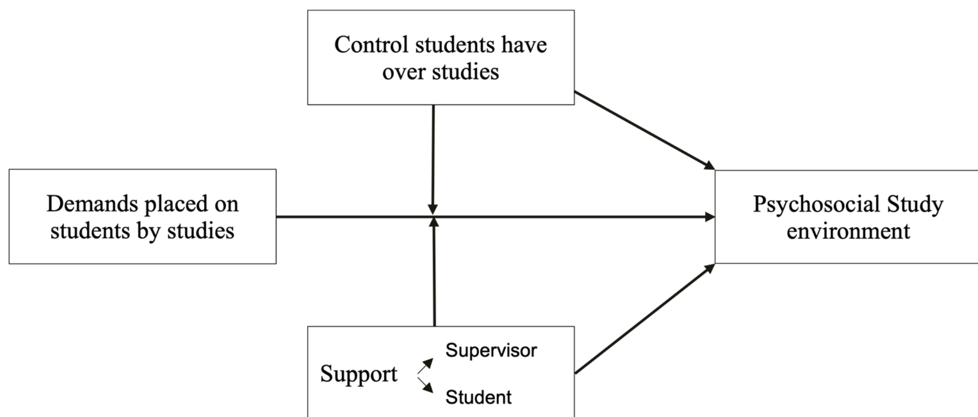

Figure 1. Model of Demand-Control-Support applied to psychosocial study environment for university students. Adapted from Del Pozo-Antúnez et al. [79]

Four level analysis of social cognitive theory

Social cognitive theory posits that human behaviour is shaped by a triad of personal factors, behavioural elements, and environment that interact and influence each other bidirectionally [80]. In this theory, personal factors can include knowledge, expectations and attitudes; behaviours, factors skills, practice and self-efficacy; and

environmental factors, social norms, influence on others, and access in a community [81].

First developed in 1986, social cognitive theory has generated a significant body of research across domains as diverse as health behaviour [82], education [83], and organisational behaviour [84].

In the context of sexual harassment, while not necessarily named explicitly, social-cognitive methods for understanding and explaining sexual harassment have been used in a number of publications [85]. This includes the adaptation of the moral disengagement theory to sexual harassment [86], the role of cognitive factors such as rape myths and gender stereotypes [87], and the automaticity of power and sex and its consequences for sexual harassment [88].

In this thesis the social cognitive model is used to contextualise the actions of individuals (sexual harassment) in a broader understanding of norms, peer influence, and behaviour modelling. Its elements are also used as sensitising concepts in the qualitative study. These elements are visualised in **Figure 2**.

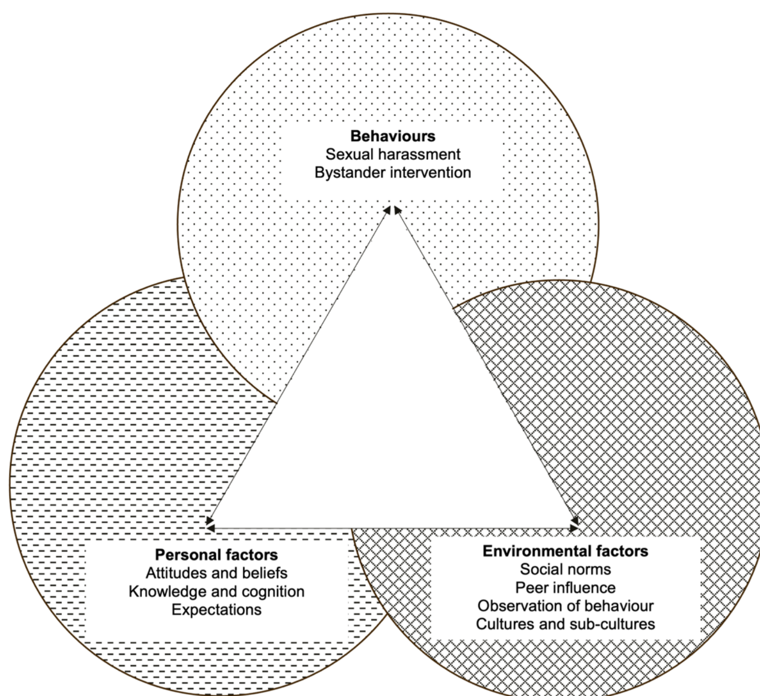

Figure 2. Socio-cognitive model applied to sexual harassment. Adapted from Yount et al [89]

Social cognitive theories can operate at different levels. These levels are described by Doise as intra-individual, inter-individual, intergroup, and collective [90].

Adopting an analysis method that considers all four levels and explores the articulation between them, is a way to gain a more holistic understanding of a phenomenon [91].

Following the work of Doise, the intraindividual level can best be understood as the way that personal experiences attitudes and beliefs shape one's own understanding; the interindividual level deals with the way that social networks and communication can shape perceptions and behaviours; how group dynamics and social categories and positions interact is dealt with under the positional level; and the ideological level examines how social representations, norms, and institutional frameworks can influence understanding and actions [90]. This four-level model was used to focus the analysis and examine the results of the qualitative study from multiple different levels.

Rationale

The Tellus project was initiated in 2018, barely 6 months after the #MeToo and #Akademiuppropet campaigns were so prominent in the media. At the time, the University was already aware of limitations in its reporting systems and was experiencing an increased demand for knowledge of rights, duties, and responsibilities for employees, managers and students within the University [92].

The launch of the Swedish Research Council's international research review on sexual harassment in academia [56] coincided with this increased interest, and threw into stark relief the current state of research in a Swedish context. Existing studies were few, fragmented, and small scale [5]. There was a lack of comprehensive studies that included both staff and students' experiences of sexual harassment, and few that framed their results in the context of promoting preventative work [56]. Existing research also showed a focus on traditional framing of sexual harassment as exclusively affecting women as victims [5].

In was into this space that the Tellus project was launched, with a commitment from the University to utilise the knowledge generated to design, implement, and evaluate measures and actions for strengthening the preventative work against sexual harassment.

This thesis analyses the data collected during the Tellus project to fill some of the gaps relating to experiences and understandings of sexual harassment in the university setting from a student perspective, with a focus on identifying areas for action and mitigation.

Aim

The overall aim of this thesis was to examine individual and organisational factors associated with exposure to sexual harassment among students at Lund University, to contribute new and up-to-date knowledge in this area. This data should contribute to strengthened sexual harassment prevention and management at universities in Sweden, informed by knowledge. To achieve this, three studies were conducted.

Specific aims

Paper I	To validate a modified version of the Demand-Control-Support (DCS) instrument among students at Lund University in Sweden to determine whether it is an appropriate tool for measuring psychosocial study environment in this setting.
Paper II	To examine individual and study environment characteristics associated with exposure to sexual harassment among students at Lund University, Sweden
Paper III	To explore what the concept of sexual harassment means for students in a university setting, with a focus on perceived norms and organisational structures as explanatory mechanisms.

Materials and methods

This thesis explores students' understandings and experiences of sexual harassment and examines individual and psychosocial study environment factors associated with this exposure through three interlinked studies. Paper I is a study that validates a new instrument for measuring psychosocial study environment for students in a university setting, and Paper II is an application of this instrument to examine the association between individual and psychosocial characteristics and sexual harassment. Paper III is a qualitative study that explores the conceptualisation of sexual harassment for students in a university setting, with a focus on perceived norms and organisational structures as explanatory mechanisms. An overview of materials and methods is presented in **Table 1**.

Table 1. Overview of papers included in the thesis

Paper	Study design	Data source	Participants	Data analysis
I	Quantitative Cross-sectional	Self-administered questionnaire	8960 students at Lund University	Exploratory factor analysis and Cronbach's Alpha
II	Quantitative Cross-sectional	Self-administered questionnaire	8960 students at Lund University	Univariable and multivariable logistic regression analysis
III	Qualitative	Focus Group Discussions	28 students at Lund University	Grounded theory

Conceptual framework

Figure 3 shows the location of each of these studies within a broad conceptual framework. The framework builds on definitions, conceptualisations and understandings of sexual harassment as understood through the four-level model of social cognitive analysis, on experiences of sexual harassment framed through theories of power, and organisational theories using the Demand-Control-Support model.

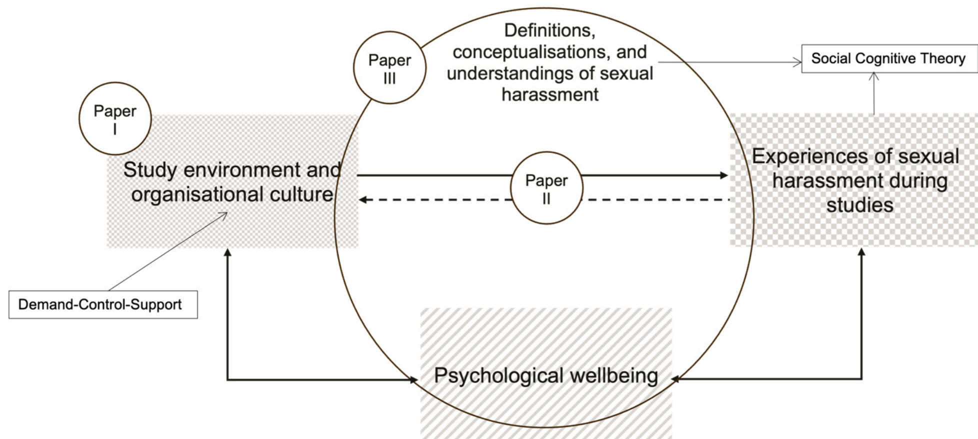

Figure 3. Model showing placement of each paper within a conceptual framework

Study population and data collection

The study population for this thesis was students of undergraduate, graduate, and free-standing courses and programmes at Lund University, Sweden. Doctoral students at Swedish universities are often employed, either at the university or in another capacity, and were therefore included in studies on employees of the university [69] and not with undergraduate and graduate students.

Based in southern Sweden, Lund University has around 30,000 students distributed across 9 faculties and 4 campuses. Twenty-eight percent of students have their home county outside of Sweden. Lund University's social life is mainly organised by student associations or the 13 student 'nations', large social clubs run by students who work on both a voluntary and renumerated basis. These nations vary in size, with some nations offering accommodation where students can live for the duration of their studies [93].

Papers I and **II** utilised cross-sectional quantitative data from a survey developed for data collection as part of the Tellus project. The survey instrument was designed by researchers from different faculties who were engaged with research on sexual harassment, in close collaboration with student groups and student representatives. The survey design was also informed by the interviews and focus group discussions conducted as part of the Tellus project.

The final instrument comprised 120 questions including questions about exposure to sexual harassment; the study environment; physical and mental health; trust in the university and in one's colleagues; and experiences of other types of harassment and insulting or derogatory treatment. Where available, validated instruments and scales were used. The survey was available in English and in Swedish, with native speakers involved in translation and backtranslation to ensure accuracy. The survey was distributed online via a project email to all students registered in the student administration system (LADOK) for studies during the autumn term of 2019, and the settings adjusted so that all submissions were anonymous and de-linked from the email addresses. The survey was distributed in November 2019, with reminders on weeks 2, 4 and 8.

The selection of an anonymous and self-administered survey was partly a practical consideration, but also a design that has been suggested to limit social desirability bias for sensitive topics [94]. The body of the email contained information about the study and contact details for those responsible. Prior to answering the questionnaire, participants were asked to provide their consent to participate in the study. Students who chose to participate were compensated with a cinema ticket as thanks for their time.

For **Paper III,** focus group discussions following a semi-structured guide were conducted with 28 students from Lund University. Participants for the FGDs were recruited through university-wide advertisement in the form of physical and digital posters, pop-up information points, and short posts on student media. Recruitment materials made it clear that no prior experience of sexual harassment was required for participating in the FGDs. Students interested in participating in the study then contacted a project email address and were offered times and locations for their group discussion. Seven FGDs were conducted with groups of 3-6 participants in private rooms belonging to Lund University and facilitated by the main author of this thesis and supported by one other researcher from the Tellus project. FGDs were conducted in Swedish and English and lasted between 55 and 80 minutes in length.

The discussion guide was developed by the Tellus team and included questions on conceptualising sexual harassment, organisational culture, work environment, and expectations for the future. The thematic guide can be seen in **Figure 4**. The guide was pilot tested at the neighbouring Malmö University. Due to the process of constant comparison, where data collection and analysis occur simultaneously [95],

the language used to present the topics was revised and developed periodically throughout the data collection.

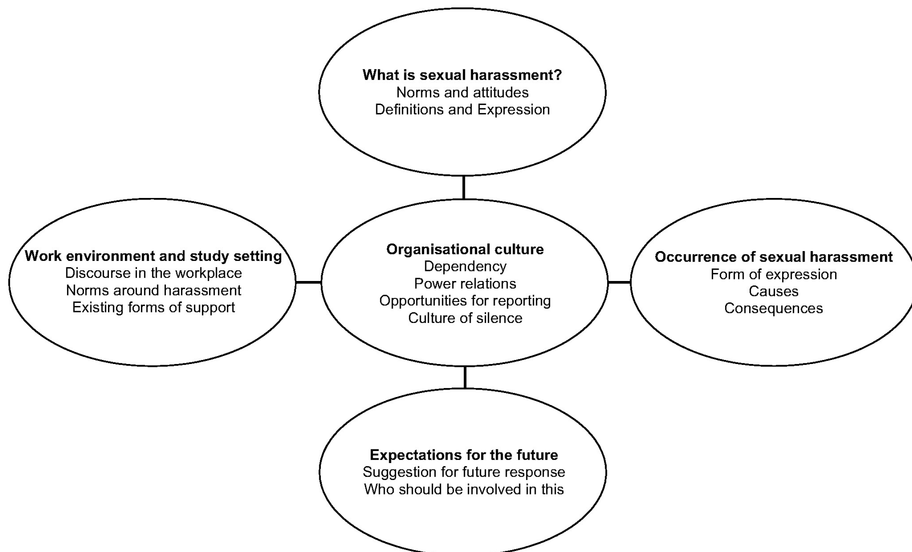

Figure 4. Overview of thematic guide for Focus Group Discussion

Measuring sexual harassment

There are myriad ways to measure sexual harassment that, in part, stem from the definitions of SH used, and in part from the methodological and theoretical standpoint chosen by the authors as well as practical considerations related to questionnaire length. These different methods can broadly be categorised as single measures or multiple item measures.

Single item measurements

Single item measurements of sexual harassment are often constructed around a question that requires respondents to self-label events as sexual harassment. Due to the complex nature of sexual harassment, and the lack of a common definition and understanding, these single-item measurements often lead to underestimation of sexual harassment [96]. In addition, the lack of conceptual clarity makes it difficult for researchers to know exactly what it is they are measuring, thus reducing the utility of the data collected. The subjectivity in self-labelling events as sexual harassment has also been shown to results in significant gender disparities in reporting when compared to multiple item-scales [97]. Despite this, single item

measurements continue to be used in a number of studies, often accompanied by an ingress definition that seeks to clarify the boundaries of sexual harassment to aid in interpretation of results (see for example [98, 99]).

Multiple item measurements

To address the issues of interpretation and underestimation found in single-item measurements, therefore, behavioural specific items have been developed that provide examples using clear and specific terms to help minimize subjective interpretations of the sexual harassment. Research in this area shows that these can improve reporting and can reduce gender bias in these reports [97]. In addition, the clear definition provided through behaviourally specific items supports the researcher to know exactly what has been measured. There are a number of different instruments that have been developed, the most prominent of which is the sexual experiences questionnaire.

Sexual Experiences Questionnaire (SEQ)

One of the oldest and most widely used instruments is the SEQ, developed in 1988 by Fitzgerald et al. in the specific context of students' experiences in higher education [100]. With questions formed around Till's five sexual harassment dimensions (generalised sexist remarks or behaviour, inappropriate and offensive but essentially sanction-free sexual advances, solicitation, coercion, and sexual crimes) [18], the initial measure contained 30-items (revised down to 28 following the first publication). The scale has been revised multiple times, with versions of the instrument introduced that are more or less specific to certain groups and contexts. These instruments vary in terms of number of items (although all have at least 18 except for a short 8-item version), timeframe (from previous 12 months to ever), and in terms of the wording of the 'lead-in' to the questions [101]. The lack of standardisation makes assessing the validity and reliability of the instrument difficult. The various versions of the SEQ have been assessed for internal consistency and validity, with mixed results [101, 102].

Some of the limitations of the SEQ include a lack of conceptual clarity as to sexual harassment vis a vis gender harassment and sexual coercion [101], its geographic validation as being primarily in the USA [103], and its original focus on females as victims of sexual harassment [104]. Specific versions have also been developed for medical students [105], and for men [106], to address these issues. Despite these limitations, the SEQ is one of the most widely used measurements of sexual harassment in research.

Other instruments for measuring sexual harassment

Research originating outside of the USA has seen the development of other scales of measurement such as the Bergen Sexual Harassment Scale [107], and the FRA

survey on sexual harassment with its 11-situations/acts [10]. Unlike the SEQ, these scales tend not to include gender harassment scales and therefore align more with the definitions of sexual harassment that build upon the Swedish discrimination act and other Swedish laws such as the law of volunteerism [13, 14].

The choice of instrument for the Tellus project

In this research it was important to use a questionnaire that captured both 'everyday' sexual harassment and sexual assault, as both of these expressions have been shown to occur in the university setting. In addition, the instrument should include online forms of sexual harassment, be inclusive to experiences of men and marginalised groups (such as members of the LGBTQI+ community) and should make clear that the behaviour was considered to be sexual harassment and unwanted. The measurement should also align with the Swedish discrimination Act [13], and the law of volunteerism [14], as previously discussed. It would also be beneficial for the definition to align with that of Lund University in order to be linked to reporting. The Lund University definition is built upon the discrimination act's definition, with an additional paragraph that states "It is the individual subjected to the conduct who determines what is undesired or unwelcome. If you are subjected to harassment, it is important that you make clear to the person harassing you that they must stop. For situations in which the abusive conduct is obvious, you do not need to clarify this point" [108].

To achieve all of the requirements for an instrument, we decided to adapt an instrument that had been developed for a study among medical students in Canada [59]. This instrument originally contained 12 scenarios/events that participants should respond to. Through discussions with researchers and students involved in the Tellus project, the instrument was adapted to fit the requirements of the survey, with changes including the replacement of 'inappropriate' with 'unwelcome', and the slight re-wording of some of the questions. This new instrument of 10-items, named the Lund University Sexual Harassment Inventory (LUSHI) has since been validated, with results yielding two factors labelled 'unwanted sexual attention of soliciting type', and 'unwanted attention of non-soliciting type' that exhibit satisfactory validity and reliability [12]. The items of the LUSHI instrument can be seen in **Table 2**.

Table 2. Items included in the Lund University Sexual Harassment Index (LUSHI). Response alternatives include 'Yes, once', 'Yes, more than once', and 'No'.

Item
Unwelcome suggestive looks or gestures
Unwelcome soliciting or pressuring for 'dates'
Unwelcome 'inadvertent' brushing or touching
Unwelcome bodily contact such as grabbing or fondling
Unwelcome gifts
Unwelcome comments,
Unwelcome contact by post or telephone
Unwelcome contact online for example social media or email
Stalking
Attempts to conduct or the conduct of oral, vaginal or anal sex or other equivalent sexual activity in which you did not participate voluntarily

To ensure that the respondents interpreted the question in the context of sexual harassment that had occurred during their time as students at Lund University, the following ingress text was provided "We will now ask some questions about your experiences of sexual harassment and sexual violence. Sexual harassment is defined as conduct of a sexual nature that violates someone's dignity. This can be, for example, through comments or words, groping or indiscreet looks. It can also include unwelcome compliments, invitations, or suggestive acts. Sexual violence is defined in this study as attempts to conduct, or the conduct of sexual acts in which the person did not participate voluntarily. Have you experienced any of the following situations during your time as a student at Lund University?".

When categorising responses to the 10-item question, participants who had responded yes, once, or yes, more than once to any of the items were classified as having been exposed to sexual harassment. The 10-items in this question depict a continuum of behaviour of different expressions of sexual harassment. It may be tempting to see this as a scale, with the forms of harassment representing increasing severity of acts. This would, however, be reductive. Research shows that the perceived severity of any act of sexual harassment it not only a function of the type of act, but also a situational one in which individual and situation-level variables play a role [109]. Even frequency of sexual harassment can play an important role in determining perceptions of severity for individual acts [110]. Given this subjective element to perceived severity, the decision was made to not differentiate experiences of sexual harassment nor to try and rank them in terms of a hierarchy of sexual harassment in this thesis.

Measuring Psychosocial Study environment

Psychosocial study environment can be defined as "an intermediate step in a causal pathway linking economic, social and political structures with health and illness through psychological and psycho-physiological processes" [111]. Because of this broad conceptualisation, there are many different instruments that have been developed to measure this in a workplace setting. A systematic literature review conducted in 2008 identified a total of 26 survey instruments that had been developed for this purpose [112]. These different frameworks emphasise the primacy of different elements of the measurement, with some focusing specifically on effort and reward mechanisms, for example Effort-Reward Imbalance (ERI) [113], and others on, for example, coping and stress such as the Copenhagen Psychosocial Questionnaire (COPSOQ) [114].

In some research, sexual harassment is considered as one factor that is part of the psychosocial environment, indeed some of the instruments named above contain in-built questions on sexual harassment (for example COPSOQ), but these are often single item questions or framed in a way that does not meet the definitions used in this thesis.

The Demand-Control-Support is one of the most widely used measures of workplace psychosocial environment, first developed in the 1970s [70]. It provides a simple and clear framework for both respondents and researchers and has been well tested through numerous studies. This simplicity is the core of one of the main critiques of the model, that it takes an over simplified view and misses important factors that may influence the relationship between work place characteristics and strain [115]. Despite this critique, the model continues to be widely used and is highly regarded. In addition, the predictive value of the model has been used to examine interactions with physical [75] and psychological outcomes [116]. The instrument for measuring this model has a version validated in the Swedish workplace setting (as well as many others), with versions available in Swedish and English [117]. The cross-cultural usage of this instrument, as well as its broad scientific merit were key reasons for its selection for this thesis.

In combination with the exploration of organisational structures found in the qualitative research (Paper III), the DCS model (presented under Conceptual Framework) was chosen to measure psychosocial study environment.

Data Analysis

Validating a DCS instrument for study environment (Paper I)

Paper I was based on the analysis of the responses of 8960 students at Lund University who completed the survey. The main variable of interest was psychosocial study environment as measured by a modified Demand-Control-Support instrument (DCS-instrument) that consisted of 24 items.

First, socio-demographic characteristics including sex, age, study level, country of birth, and semesters studied were used to describe the study population. After this, the modified Demand-Control-Support instrument was tested through assessing construct validity using an exploratory factor analysis (EFA), and for internal consistency through using Cronbach's alpha coefficients.

Following an initial test of the instrument, two items were dropped before the 22-item instrument was tested using EFA and Cronbach's alpha once again.

The EFA was used to measure dimensionality of the sub-scales under each of the main Demand-Control-Support elements. Principal factor extraction and varimax rotation were used. All statistical analysis was conducted using Stata 16 MP [118].

Study environment characteristics and sexual harassment (Paper II)

This cross-sectional study examined the association between exposure to sexual harassment and the psychosocial study environment characteristics using the same dataset (8960 students) as Paper I.

The main dependent variable was *Exposure to Sexual harassment while a student as Lund University* assessed in the questionnaire using the 10 situation/event question discussed above.

Psychosocial study environment was measured using the modified DCS-instrument of 22-items validated in Paper I. Background characteristics were also collected.

In generating the Demand and Control variables, each of the scores of the unweighted items of the scales were summed (after reversing the scoring where necessary), and then dichotomised along the median. In contrast, student and supervisor support variables were summed and dichotomised along the upper quartile. Some authors who use the DCS model weight their items prior to summation, to represent differential importance of factors and nuance understanding (for example Karasek in the original model [73]). Others however have chosen to work with the unweighted items, especially in new situations or where the focus is less on sub-scales [119]. Sensitivity analyses of weighted vs

unweighted measures tend to show marginal differences at most [120]. In this thesis, we decided to use unweighted item scores.

Determining cut-off values is also debated, with some authors choosing to use 25th percentile for Demand and Control to be able to compare more extreme subgroups [121]. The standard is median values, however, as has been adopted in this study. This approach has been criticised for underestimation of the true association [75]. The same methodological ambiguity is also present in the case of support variables, where some authors use the median split to dichotomise the summed variable [70]. In the case of support, it is logical to consider only those who report high level of support as having support. If one is unsure whether they have support, they most likely do not have it. Therefore, we chose the quartile approach for specifying support variables.

Socio demographic characteristics were presented, stratified by gender, before bivariate analysis was used to describe associations between socio-demographic characteristics and exposure to sexual harassment with 95% confidence intervals.

Multivariable logistic regression was used to show the association between study strain (measured using the DCS-instrument) and exposure to sexual harassment in three different models. The final model was adjusted for age, status as international student, and support from supervisors and students.

Population attributable fractions were calculated to examine the proportion of sexual harassment that could be prevented by eliminating high strain study environments, and synergy indexes were calculated to analyse the effect modification between demand and control, as well as between study strain and support from students and lecturers/supervisors. All analyses were conducted using Stata 16MP [122].

Understanding and conceptualising sexual harassment (Paper III)

To explore students' understandings and conceptualisations of sexual harassment in a university setting, Grounded Theory as described by Corbin and Strauss [123] was deemed a suitable method. In Grounded Theory studies, data collection and analysis occur simultaneously, with one informing the other [95]. Thus, analysis of the data from the focus group discussions was started during data collection.

The choice of research methodology is primarily driven by the choice of research question. Building on the theoretical standpoint that sexual harassment can be understood in the context of organisations, as discussed in the introduction, this paper sought to explore the norms and organisational structures perceived by students at the university. To do this, we needed to explore how different concepts are discussed and constructed [124]. Focus Group Discussions are an ideal method to do this as they allow individuals to expound their thinking and share their

processes together. The study also aimed to interpret these understandings as explanatory mechanisms through the construction of a conceptual framework or theoretical model. For this purpose, Grounded Theory was identified as the appropriate approach. Grounded theory is not merely an analytic tool, but rather a complete approach that encompasses data collection, analysis and presentation, with all findings derived from the data [95].

Grounded Theory was first developed by Glaser and Strauss in the 1960s, and published in the book 'The Discovery of Grounded Theory' [125]. Since this time, grounded theory has, in fact, become grounded theories, with a proliferation of versions by various authors. Broadly speaking, three main approaches to Grounded Theory are represented in these publications [126]; Glaserian as primarily positivist and objectivist [127]; Straussian as symbolic interactionist [95]; and Constructivist based on the work of Charmaz [128]. Each of these approaches emphasise different fundamental understandings of the world, and the importance of context and interpretation/construction of data, and this results in slight differences in analysis methods.

In this Paper the focus was on generating theory based on processes, actions and interactions shaped by conceptualisations, attitudes and norms. These ideas of knowledge align mostly with pragmatist writings (for example those of Dewey [129]), and thus with Straussian approaches to grounded theory. The analysis process therefore follows the procedures outlined by Corbin and Strauss [123]. Pre-existing theories and ideas that are "embedded in our disciplinary emphases and perspectival proclivities" are used as sensitising concepts in line with the writings of Charmaz [130]. In the analysis process, the concepts used in the four level model of social cognitive interpretation [90] were used as sensitizing concepts and offer a starting point for the analysis.

All focus group discussions were recorded and transcribed verbatim. Transcripts were read through and compared to the reflexive journal kept by the main author, and the seating plan and notes attached to each discussion. Reflecting on the research question, concepts were identified on different levels, and memoing used to record the process and reflections on the data. These memos were expanded to reflect properties and dimensions of the concepts that are formed from the data. These expanded concepts were used to review the dataset in its entirety before categories and one core-category was developed.

The core-category, categories, and sub-categories were then arranged in a theoretical model. All analysis was conducted using NVivo version 14 [131].

Ethical considerations

All studies included in this thesis abide by the ethical principles outlined in the Declaration of Helsinki [132]. The studies in this thesis have also received ethical approval from the Swedish Ethical Review Authority (Etikprövningsmyndigheten) (number 2018/350).

Receiving ethical approval for research studies can be an important step in ensuring that researchers act in a way that is moral but is by no means a guarantee of this. Rather, adherence to strict ethical rules can obfuscate moral responsibility and close down discussions about ethical actions [133]. Many existing ethical codes also struggle with public health research with its clear normative framework and focus on population rather than individual processes (see for example the writings of John Coggon on this topic [134]). Bearing this in mind, three specific ethical elements of this thesis will be considered in more detail.

Conducting research on Sexual harassment

Sexual harassment can be a sensitive topic that in some cases can trigger emotional distress among study participants. For those who have been exposed to sexual harassment, having to recall experiences of a highly personal nature could induce a current stress reaction and/or other emotional disturbances, often called 're-traumatisation'. There are also considerations related to potential consequences that can results from disclosure of events should confidentiality not be protected.

The concept of re-traumatisation implies that the initial event has been traumatising. This is not necessarily the case, and is one of the reasons that trauma researchers tend to use the term 'potentially traumatic events' to discuss these topics [135]. In addition, a meta-analysis of participant reactions to trauma research concluded that while some participants with a history of Post-traumatic stress disorder (PTSD) could experience distress, respondents generally experienced their participation in research as positive [135].

In the studies contained in this thesis, re-traumatisation could occur during the focus group discussions or while responding to the survey instrument. As the focus group discussions did not target those who had personal experiences of sexual harassment, and was open about what topics would be discussed, the risk of re-traumatisation was considered to be low. In addition, a list of services available were shared with the participants should they require additional support after their participation was concluded. All researchers involved in this data collection were experienced in conducting qualitative research on sensitive topics.

There was also a possibility that perpetrators of sexual harassment could attend the focus group discussions. There is very limited research conducted with this target

group, driven by complications with reaching the population and engaging them in research [5]. Services for those who could be contemplating sexual harassment or harm to others were, however, also included on the information sheet distributed to the participants.

Secondary trauma can refer to the trauma experienced by researchers or counsellors who are direct or indirect witnesses of trauma through, for example interviewing or conducting qualitative research with victims [136]. In this research, the focus group discussions were not aimed at individuals who had direct experiences of sexual harassment (although they were not excluded either) and the researchers engaged in peer debriefing to discuss any issues that could arise. The risk of secondary trauma was considered minimal.

With regards to protecting against disclosure, every effort was taken to ensure the confidentiality of the respondents and the protection of their data. In the survey, this included using anonymous data collection, choosing not to ask about faculty or institutional affiliation, and protecting the data in offline secure formats. For data collected through focus group discussions, participants were encouraged to avoid personal disclosures during the discussion and to respect the confidentiality of the other participants present. Confidentiality can never fully be ensured in a focus group discussion, but by raising awareness of this issue prior to the start of the discussions, it is possible to allow participants to choose what to share in light of this fact [137].

Conducting research as an insider

Being both a PhD student and an employee at Lund University could raise a number of ethical and methodological issues. Research conducted as an 'insider' raises questions around role conflict, confidentiality and access to privileged information, as well as power dynamics and informed consent, and potential researcher bias [138]. When designing the Tellus project, having all researchers involved (including the Principle Investigator (PI)) employed at the university was an issue that was raised both during the process of anchoring the project with the different faculties, but also when applying for ethical approval for the studies.

During the revision process of the ethical approval application, additional safeguards were put in place to ensure that the 'internal' role of the researchers did not pose a threat to the research participants, or the scientific rigour of the data collected. Existing research into the potential benefits and limitations of conducting research among peers and colleagues include research into issue questions relating to recruitment, interviewing and managing dual roles [139]. In the case of the interviews with victims and perpetrators of sexual harassment (not included in this thesis), the decision was made to assign participants interviewers from outside of their own study/employment context, and to provide the interviewee with

interviewer details in advance so that they could actively decide whether they would like to change interviewer due to a previous relationship/collaboration.

Despite these potential limitations, conducting research on one's own organisation can also offer advantages such as an insider knowledge of the structure of the institute. Lund University is a large and diverse organisation. Building on the work of Alvesson [140], this thesis posits that organisational culture is not a static and homogenous entity, but rather a contested space where individuals and groups create and maintain sub-cultures. This allows employees at the university to be simultaneously insiders and outsiders and challenges the binary notion underpinning these ethical concerns. These findings are clearly shown in Paper III where different sections within the organisation are highlighted as having unique cultures.

All researchers must be aware of their own values, emotions, and potential power dynamics in a research situation, often termed reflexivity in qualitative research, especially in the context of research into sensitive topics such as sexual harassment [141]. This is generally regarded as a methodological issue rather than an ethical one. In the context of conducting research at one's own organisation, however, it is important to use reflexivity to consider issues such as researcher presentation, and how this could affect the situation from an ethical perspective. Close discussions with other researchers in the project supported this process.

Conducting research using incentives

The use of incentives for research participation poses questions of both ethical and methodological nature. Although these two are largely intertwined, in this section we will attempt to deal with the ethical aspects in isolation. Ethical concerns around the use of incentives for research participation largely revolve around questions of informed consent and voluntary engagement as discussed in the ethical principle of autonomy [142]. This is especially true in the context of so called 'vulnerable' populations [132].

In considering forms of influence that could challenge one's voluntary engagement or autonomy in a study, Faden and Beauchamp discuss three forms: coercion, persuasion, and manipulation [143]. In discussing these three concepts in relation to informed consent, they assign the use of incentives to the category of manipulation, and state that as long as the incentive is welcomed and free from controlling influence, it does not affect the autonomy of the act [143]. This is also supported by findings from other authors examining this relationship, for example Wilkinson and Moore's work on inducement in research who conclude that, except for the narrowest of situations relating to dependency, the use of incentives does not pose ethical complications for research [144]. In this study, participants who completed the survey, used in Papers I and II, were offered a cinema ticket as thanks for the time they had expended on the survey. Considering the incentive was not directly

financial in nature, and the target population of the studies as university students, we do not consider this to pose any ethical complications that would challenge autonomy of participation.

Main results

This chapter provides an overview of the main results of this thesis, presented by Paper. The chapter begins with a brief presentation of the sample characteristics before presenting the results of Papers I and II. The chapter ends with a presentation of the results of Paper III.

Survey sample characteristics (Papers I and II)

The survey was distributed to 30244 students with a response rate of 32%. When comparing the respondents to the total population, women were slightly overrepresented in our sample, as were the youngest age group and fee paying students [69]. In general, however, the two populations were considered comparable. Once respondents with key missing data had been removed, the sample for analysis yielded 8960 valid cases.

The sample was mainly female identifying (62.5%), young in the 18-25 age range (77.8%), and Swedish by birth (79.9%). Over half of the sample were in their first or second semester of study (54.9%), and a small number of respondents identified as neither female nor male (0.7%). 21.1% of the total study population reported having been exposed to sexual harassment during their time as students at the university, a figure slightly higher among females (26.6%), and higher again for those who identify as neither female nor male (31.8%). Key socio-demographic characteristics are presented in **Table 3.**

Table 3. Socio-demographic characteristics of survey respondents among a sample of Lund University students (n=8960)

Variable	All (%)	Female (%)	Male (%)	Neither (%)
Gender				
Female	5596 (62.5)			
Male	3301 (36.8)			
Neither female nor male	63 (0.7)			
Exposed to sexual harassment				
Yes	1890 (21.1)	1490 (26.6)	380 (11.5)	20 (31.8)
No	7070 (78.9)	4106 (73.4)	2921 (88.5)	43 (62.3)
Age				
18–25	6966 (77.8)	4347 (77.7)	2574 (78.0)	45 (71.4)
≥26	1994 (22.3)	1249 (22.3)	727 (22.0)	18 (28.6)
International student				
Yes	1069 (12.0)	703 (12.6)	359 (10.9)	7 (11.1)
No	7875 (88.0)	4882 (87.4)	2937 (89.1)	56 (88.9)
(Missing)	*(16)*	*(11)*	*(5)*	
Country of birth				
Sweden	7161 (80.0)	4446 (79.5)	2673 (81.0)	42 (66.7)
Nordic country (not Sweden)	209 (2.3)	147 (2.6)	59 (1.8)	3 (4.8)
Europe (not Nordic)	769 (8.6)	496 (8.9)	261 (7.9)	12 (19.0)
Outside Europe	816 (9.1)	504 (9.0)	306 (9.3)	6 (9.5)
(Missing)	*(5)*	*(3)*	*(2)*	
Parents country of birth				
At least 1 parent born in Sweden	6916 (77.2)	4305 (77.0)	2565 (77.7)	46 (73.0)
Both parents born outside of Sweden	2042(22.8)	1289 (23.0)	736 (22.3)	17 (27.0)
(Missing)	*(2)*	*(2)*		
Semesters studied				
0-1	2721 (30.4)	1734 (31.0)	968 (29.4)	19 (30.2)
≥2	6236 (69.6)	3862 (69.0)	2330 (70.7)	44 (69.8)
(Missing)	*(3)*		*(3)*	

Validating a DCS instrument for study environment (Paper I)

The original instrument utilised by Schéle et al. to measure Demand-Control-Support among dentistry students in Sweden [78] was adapted for a general student population through the removal of two items specific to clinical work. An additional two items were removed through discussions with student representatives and researchers as they were conceptually unclear in the academic setting. Combined results from the initial analysis conducted with exploratory factor analysis and Cronbach's alpha led to the removal of two final items (Clear expectations, and Often complete assignments before classmates) from the instrument. The remaining

DCS instrument contained 22-items, distributed as follows, Demand (7-items), Control (8-items), Supervisor support (4-itmes), student support (3-items).

Construct validity was tested through the use of exploratory factor analysis with principal factor extractions and varimax rotation on the 15-items of the Demand and Control scales. A 3-factor solution was produced with all items on the Demand scale loading adequately onto Factor 1. Factor 2 grouped items under the skill discretion sub-scale of control, except for 'requires skills' that loaded onto Factor 1. Two of the items that loaded on to Factor 3 corresponded to items on the decision authority sub-scale of control and showed strong factor loading. The third item expected here (Opportunities for opinion) loaded onto Factor 2 instead of the expected Factor 3. Results of the 3-factor exploratory factor analysis can be seen in **Table 4**.

Table 4. 3-Factor Exploratory Factor Analysis using varimax rotation for 15-items of the DCS-instrument adapted for Study Environment at Lund University (n=8960). Only factors with loading >0.3 are shown.

		Factor Loading		
Dimension	Item	Factor 1	Factor 2	Factor 3
Control	Repetitive tasks§		0.54	
	Requires creativity		0.52	
	Decision freedom			0.81
	Requires knowledge/skills	0.61	(0.21)	
	Limited freedom§			0.65
	Variety in studies		0.78	
	Opportunities for opinion		0.58	(0.25)
	Develop own abilities		0.67	
Demand	High workload	0.84		
	Require efficiency	0.78		
	Excessive effort	0.66		
	Enough time§	0.52		
	Intense concentration	0.75		
	Conflicting tasks	0.55		
	Stressful studies	0.77		

§ - Item score reversed. Bold text – Items on decision authority sub-scale

Cronbach's alpha coefficients were used to examine internal consistency of the three scales (Demand-Control-Support), based on the interrelatedness of items within the scales. Results from the item-rest correlations for the demand scale, supervisor support and student support showed good correlation, while those in the control scale showed weaker correlation when compared to the rule of thumb of 0.4 [145]. Results of the Cronbach's alpha were acceptable for control and student support scales, and very good for demand and supervisor support, when compared to the rule of thumb of 0.6-0.7 as acceptable, and 0.8 as very good [146]. These results can be seen in **Table 5**.

Table 5. Item-test and Item rest correlations and Cronbach's alpha coefficients for items in the modified 22-item DCS-instrument among students at Lund University (N=8960)

Item	Item-test	Item-rest	Alpha
Control			**0.60**
Repetitive tasks§	0.42	0.21	0.60
Requires creativity	0.54	0.32	0.57
Decision freedom	0.52	0.30	0.57
Requires knowledge/skills	0.38	0.15	0.62
Limited freedom	0.40	0.16	0.61
Variety in studies	0.63	0.44	0.53
Opportunities for opinion	0.61	0.40	0.54
Develop own abilities	0.65	0.49	0.52
Demand			**0.81**
High workload	0.78	0.69	0.76
Require efficiency	0.68	0.57	0.78
Excessive effort	0.70	0.57	0.78
Enough time§	0.66	0.53	0.79
Intense concentration	0.68	0.56	0.79
Conflicting tasks	0.64	0.50	0.79
Stressful studies	0.81	0.72	0.76
Supervisor support			**0.84**
Lecturers care	0.85	0.72	0.78
Lecturers listen	0.85	0.73	0.78
Lecturers support	0.83	0.68	0.80
Lecturer encourages collaboration	0.78	0.60	0.84
Student support			**0.72**
Fellow students good at studying	0.74	0.46	0.71
Fellow students interested in me	0.82	0.54	0.63
Fellow students helpful	0.84	0.62	0.53

Study environment characteristics and sexual harassment (Paper II)

Due to the small number of participants identifying as neither male nor female, this group were excluded from all analyses beyond descriptive characteristics. Individual characteristics that showed associations with exposure to sexual harassment included being female as compared to male, being in the younger age group (18-25) as opposed to over 25, being Swedish born, having at least one parent born in Sweden, and studying full time. **Table 6** shows the bivariate associations for selected socio-demographic factors with exposure to sexual harassment in this sample with 95% confidence intervals.

Table 6. Bivariate associations between socio-demographic factors and exposure to sexual harassment at Lund University, stratified by gender. Odds ratios (OR) and 95% confidence intervals (CI).

	All	Female (%)	Male (%)
Variable	OR (95% CI)	OR (95% CI)	OR (95% CI)
Gender			
Female	**2.79 (2.47-3.15)**		
Male	1 (Ref)		
Age			
18–25	**1.69 (1.47-1.93)**	**1.97 (1.68-2.31)**	1.13 (0.86-1.47)
≥26	1 (Ref)		
International student			
Yes	**1.26 (1.07-1.49)**	**1.32 (1.10-1.60)**	1.28 (0.88-1.84)
No	1 (Ref)		
Country of birth			
Sweden	**1.46 (1.20-1.77)**	**1.48 (1.18-1.85)**	1.44 (0.95-2.19)
Nordic country (not Sweden)	1.03 (0.68-1.56)	0.99 (0.63-1.56)	0.78 (0.26-2.33)
Europe (not Nordic)	**1.33 (1.02-1.72)**	1.21 (0.90-1.64)	1.61 (0.94-2.77)
Outside Europe	1 (Ref)		
Parents country of birth			
At least 1 parent born in Sweden	**1.27 (1.12-1.45)**	**1.41 (1.21-1.63)**	1.00 (0.77-1.29)
Both parents born outside of Sweden	1 (Ref)		
Semesters studied			
0-1	1 (Ref)		
≥2	**1.96 (1.73-2.21)**	**2.14 (1.86-2.47)**	**1.69 (1.30-2.20)**

Bold font indicates statistical significance

With regards to psychosocial study environment characteristics as measured by the modified Demand-Control-Support model, experiencing high demands because of one's studies, as well as perceiving low control over one's studies were independently associated with higher odds of exposure to sexual harassment for both male and females in the study. In addition, when looking at the Study strain variable (composite of Demand and Control elements), students experiencing high demands and low control (termed high study stain) had odds of experiencing sexual harassment twice as high as those in situations of low demands and high control (termed comfortable study environment). Perceiving support from teachers as being low was significantly associated with increased odds of sexual harassment for females, but not for males. These results are seen in **Table 7**.

Table 7. Bivariate associations between psychosocial study environment and exposure to sexual harassment at Lund University, stratified by gender. Odds ratios (OR) and 95% confidence intervals (CI).

Variable	All OR (95% CI)	Female (%) OR (95% CI)	Male (%) OR (95% CI)
Demand			
High	**1.51 (1.36-1.68)**	**1.41(1.25-1.60)**	**1.55 (1.25-1.93)**
Low	1 (Ref)		
Control			
Low	**1.34 (1.21-1.49)**	**1.26 (1.12-1.42)**	**1.34 (1.08-1.66)**
High	1 (Ref)		
Study strain			
High strain study environment (high demands and low control)	**2.00 (1.72-2.32)**	**1.76 (1.48-2.10)**	**2.06 (1.51-2.81)**
Active study environment (high demands and high control)	**1.49 (1.27-1.76)**	**1.37 (1.13-1.66)**	**1.58 (1.14-2.19)**
Passive study environment (low demands and low control)	**1.32 (1.12-1.56)**	**1.22 (1.01-1.48)**	1.36 (0.98-1.89)
Comfortable study environment (low demands and high control)	1 (Ref)		
Supervisor support			
Low	**1.38 (1.22-1.56)**	**1.36 (1.18-1.56)**	**1.28 (1.00-1.64)**
High	1 (Ref)		
Student support			
Low	0.90 (0.81-1.00)	0.89 (0.79-1.01)	0.92 (0.74-1.14)
High	1 (Ref)		

Bold font indicates statistical significance

In the fully adjusted model of the multivariable logistic regression, the association between high strain study environment and exposure to sexual harassment remained significant for both females and males. Likewise the association between younger age and sexual harassment, but only for females. **Table 8** shows the results of the multivariable logistic regression, with covariates added in three clusters: cluster 1 (age); cluster 2 (age, international student and country of birth); and cluster 3 (age, international student, parents' country of birth, lecturer support, and student support). Population attributable fractions were calculated to examine the proportion of sexual harassment cases that could be attributable to study strain. Results were 14.0% among males, and 15.4% among females. Synergy indexes were also calculated to examine any potential modification of the association between high strain study environments and exposure to sexual harassment and support. Small synergistic effects were found for support from supervisors/lecturers on study stain, and a small antagonistic effect for support from fellow students.

Table 8. Multivariable regression showing the adjusted association between study strain and exposure to sexual harassment among students at Lund University (N=8897). Odds ratios (OR) and 95% confidence intervals (CI).

	Crude		Model 1		Model 2		Model 3	
	Female	Male	Female	Male	Female	Male	Female	Male
Study strain								
High strain study environment	**1.76** (1.48-2.10)	**2.06** (1.51-2.81)	**1.73** (1.45-2.07)	**2.08** (1.52-2.84)	**1.76** (1.47-2.10)	**2.06** (1.51-2.81)	**1.67** (1.38-2.01)	**1.98** (1.44-2.74)
Age								
Low (18–25)			**1.95** (1.66-2.29)	1.15 (0.88-1.51)	**1.92** (1.63-2.25)	1.14 (0.87-1.49)	**1.88** (1.60-2.21)	1.11 (0.85-1.46)
International student								
No					0.94 (0.73-1.21)	1.38 (0.88-2.16)	0.93 (0.72-1.20)	1.35 (0.86-2.12)
Parents' country of birth								
≥1 parent born in Sweden					**1.46** (1.20-1.78)	0.91 (0.66-1.24)	**1.44** (1.18-1.75)	0.89 (0.65-1.23)
Lecturer support								
Low							**1.19** (1.02-1.40)	1.18 (0.90-1.55)
Student support								
Low							0.90 (0.79-1.03)	0.87 (0.69-1.10)

Model 1: Adjusted for age; Model 2: Adjusted for age, international student, and parents' country of birth; Model 3: Adjusted for age, international student, parents' country of birth, lecturer support, and student support.

Understanding and conceptualising sexual harassment (Paper III)

Twenty-eight students participated across seven focus group discussions that lasted between 55 and 80 minutes. Eighteen of the participants identified as female, and 9 as males, with one participant identifying as neither female nor male. The smallest group discussion was 3 participants and the largest 6. The grounded theory analysis resulted in a theoretical model consisting of one core-category, and four categories. Sub-categories represented properties and dimensions to provide specificity to the categories developed.

The core category developed from this data was *Aware but confused: Conflicted between individual and collective responsibility*. This category captures the uncertainty connected to students' awareness of the occurrence of sexual harassment, and to some extent the mechanisms for reporting. It further illustrates how they simultaneously felt torn between viewing sexual harassment on a continuum from individual to collective responsibility. How students conceptualised, explained, and responded to sexual harassment in this setting was therefore dependent on them locating the different activities on the individual to collective responsibility scale, with many narratives containing confused or contradictory positions. The four categories developed show this process of defining sexual harassment, locating it in power relationships, being aware of their own position with relation to these elements, and deciding whether and how to respond. These categories are supported by subcategories that specify the narratives on the continuum of individual to collective responsibility.

The first category, *Finding it hard to define sexual harassment,* explored the different conceptualisations of sexual harassment discussed by the students. This category included discussed 'who' was responsible for defining an action as sexual harassment, the person exposed to the harassment, or broader interaction with individuals and systems, as well as questions regarding whether events needed to be repeated or explicitly unwelcome to count as sexual harassment. In the second category, *Differentiating between formal and informal power*, participants reflected on the web of relations that formed the context in which sexual harassment could occur, be maintained, and be hidden in the university setting. While students expressed agency and control over some aspects of their student life, they were well aware of the multiple situations where they were not in positions of power. Formal power in terms of positions in the university hierarchy, and informal power in terms of access to social networks, knowledge and spaces were complicated by the invisibility of privilege that renders power unconscious for those who have it.

Students see themselves as belonging to two separate, but intertwined worlds, that of being an independent adult with a social life who happen to be studying at a university, and that of being a learner with all the responsibilities that entails. *Having to adapt to two worlds* was the third category that discussed the difficult balance this sometimes encompassed. Participants expressed a sense of ownership over the university space, seeing it as a responsibility to create safety and security for themselves. At the same time, sexual harassment in the student social life could easily have dire consequences in their studies, causing participants to see themselves as students 24/7, unable to escape from this role. Participants also expressed a fear that the university valued its reputation as an elite institution so much that it could downplay cases of sexual harassment as a way to protect its image. The final category, *Contemplating consequences and deciding on actions*, explored the difficult path students have to navigate in cases where they have been exposed to sexual harassment. Questions about wanting to fit in and deciding not to report to 'make it through' their studies and for fear of not being believed were challenged by ideals of collective responsibility and solidarity for other students at the university. Finally, participants expressed a distrust in the current university systems, citing failures in transparency and accountability as being responsible for their lack of confidence. At the same time, participants saw strengthening the university systems as the only way to secure the necessary changes in the university, both in terms of the preventative work and in improving systems for redress.

A visual overview of the main findings of Paper III are presented in **Figure 5**.

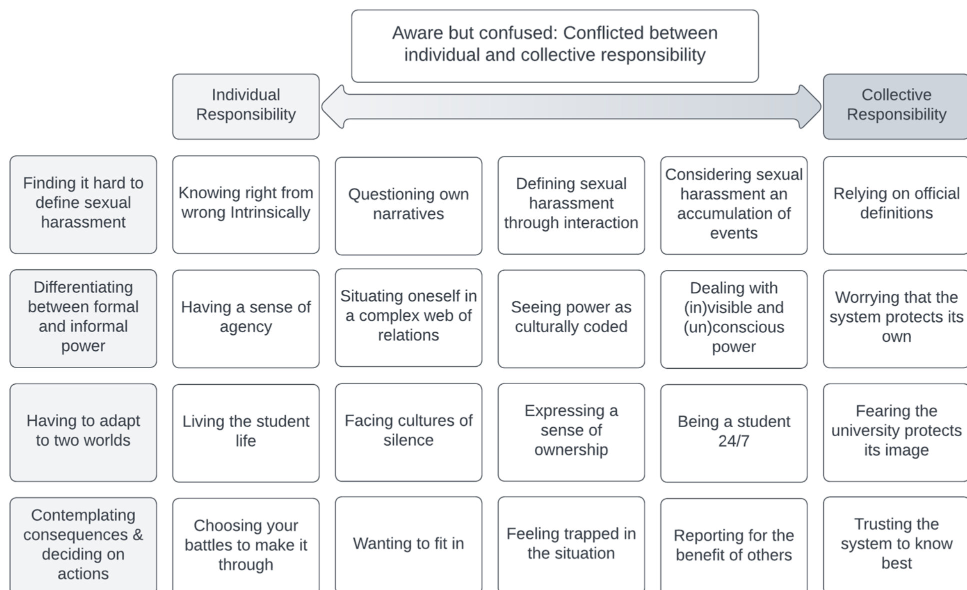

Figure 5. Main findings of Paper III – Core Category Aware but confused, supported by categories and sub-categories.

Discussion

General discussion

The overall aim of this thesis was to examine individual and organisational factors associated with exposure to sexual harassment among students at Lund University, to contribute new and up-to-date knowledge in this area. This was achieved through the use of qualitative and quantitative research approaches to capture and explain these different factors.

The thesis shows that although students at Lund University are aware of sexual harassment, they are confused as to how it should be understood, and where the responsibility lies for preventing and responding to it. Individual characteristics related to gender, age, and country of origin, were associated with exposure to sexual harassment, as was the psychosocial study environment where students experienced high strain studies. This psychosocial study environment can be assessed using a modified DCS instrument validated for the university setting. We also found that certain parts of the university's organisational structure disincentivised and obfuscated reporting and that this, in turn created cultures of silence among the students.

This discussion is structured around the conceptual framework presented in the thesis, with guiding questions used as headings, and references made to literature where relevant. This will be followed by a discussion of methodological considerations linked to the papers included in this thesis.

How do students at Lund University define and understand sexual harassment?

Paper III highlighted the myriad ways in which students at Lund University defined and understood sexual harassment along the spectrum of intraindividual to ideological levels [90]. These multiple and sometimes contradictory conceptualisations of sexual harassment reflect the methodological challenges often faced by quantitative research in this topic and can be related to the different theoretical standpoints for defining and explaining sexual harassment discussed in the introduction.

Gender and power dynamics were evident in the data from the group discussions. Although respondents argued that anyone could be a victim of sexual harassment, they also claimed that sexual harassment victims that reported were primarily female, and perpetrators, primarily male, a finding echoed in the results of the quantitative data [69]. This distinction was partly explored through narratives about understanding and responding to sexual harassment that were often framed in the context of gender, with male perpetrators and female victims. This finding supports the results of other qualitative studies among university students in Sweden. In a recent study conducted among 30 students at universities in Sweden, Hagerlid and colleagues identified the preconceived notion of sexual harassment as a form of gender hierarchy performed by men against women as one of four salient notions held across the interviews [63]. Another study conducted with 2134 students at universities in Greece highlighted the view of women as victims of male aggression, and went as far as defining sexual harassment as an example of gender-based violence due to this asymmetry [147]. These interpretations could correspond to sex spill-over theories of sexual harassment as primarily being a manifestation of gender inequalities entrenched in society and 'performed' in the context of universities [148].

In addition to viewing sexual harassment as a gender hierarchy, FGD participants also discussed the potential of differences in interpreting situations as sexual harassment between female and males. Far from being gender essentialist, these narratives were discussed through the context of an ongoing accumulation of sexism and gender harassment events to which more females were exposed. These 'low severity' forms of harassment are sometimes termed micro-aggressions. In a review and synthesis of the literature into gender microaggressions among youth, Gartner and Sterzing developed a conceptualisation of youth sexual violence that saw gender microaggressions, sexual harassment and sexual assault as overlapping elements characterised by continua of severity and chronicity [149]. In addition to this, sexual microaggressions were framed as a potential gateway to sexual harassment. This thesis points to microaggressions as having an important role in framing sexual harassment, and in creating environments that tolerate such harassment. The results do not, however, frame them as a perquisite or gateway but more as a part of the environment that can prime individuals to interpret situations in a given way.

The role of power relations was also discussed as being key to defining sexual harassment. Participants in the group discussions described how they would potentially interpret the same situation differently (as sexual harassment or not) depending on the power relationship between perpetrator and victim. This power was discussed both in terms of structural power often seen as formal, and informal power in the form of social network access, and knowledge advantages. The role of power was also discussed as having invisible and unconscious expressions where the perpetrator was not always aware of the power asymmetry.

A critical review examining research conducted into organisational characteristics that facilitate gender-based violence and harassment in higher education identified three power-related characteristics: male-dominated hierarchies, neoliberal managerial ethos, and gender-incompetent leadership [150]. Building on a critical power lens that adapts Lukes' conceptualisation of power as three dimensional [151], these researchers discuss power and sexual harassment in three distinct ways. Firstly, power as overt or visible is seen as the capacity of individuals to directly influence others to do things or to abstain from doing things. In the context of sexual harassment in universities, this has been linked to low case numbers in terms of organisational structures that disincentivise reporting, and victim-blaming [150]. The FGDs in this thesis support this idea and speak to a perceived system that does not provide enough clarity on reporting processes, or protection from powerful individuals.

The second power dimension is the hidden or agenda-setting one that focus on the ability to shape agendas and influence decisions. This has been identified in academic setting as the framing of sexual harassment as an individual's problem, thus exculpating the university structure from blame [152]. In the FGDs, participants discussed this in terms of the university protecting its image, as well as individual staff members protecting each other as colleagues and friends.

The third dimension of power in this thesis is the insidious power that portrays the events of harassment as inevitable. This can be described as power operating on an ideological level, a latent power seen as legitimate (if seen at all) [151]. In this thesis this is the form of power that is a reflection of gendered structures and hierarchies in society at large, that are performed in university settings [150].

The role of power relations were also discussed in terms of defining whether actions were 'serious enough' to report. The decision whether to act or not was described as being affected by the perceived power relationship between victim and perpetrator and the potential consequences this could entail. In a study conducted in the USA, Aguilar and Baek utilised a survey (n=2343) and sentiment analysis of narrative statements about sexual harassment to examine predictors of non-reporting behaviours among students in higher education [153]. Although the authors acknowledge the potential for selection bias in their study considering its use of crowdsourced data, the findings support the notion that sexual harassment in academia often occurs via power asymmetries, and that these power asymmetries directly affect reporting. Their findings showed that students were more likely not to report experiences of sexual harassment when compared to staff, and that students in the physical sciences were also less likely to report. In situations where the perpetrator was an employee, students were less likely to report compared to respondents who identified the perpetrator as a fellow student [153]. The narratives captured in the focus group discussions in this thesis offer some potential pathways for explaining these discrepancies, with power asymmetries directly affecting situational interpretation, as well as fear of consequences should reporting occur. At

the same time, seemingly in contradiction to these results, participants in the group discussions discussed how sexual harassment between employees and students was easier to define, due to the clearer expectations on the relationship and codes of conduct, findings that are also reflected in other qualitative research into this population [63].

During the FGDs, discussions around the role of power often lifted the explanation of sexual harassment away from exclusively sex spill-over theories, into the area of organisational understandings, where structures, cultures, and climate control both risk of sexual harassment, and likelihood of reporting [154].

Combining gendered power and institutionalised power and examining their intersections, bears many similarities to the work of Liz Kelly on conducive contexts. Kelly's work has primarily analysed situations in which violence against women and girls can occur, offering up the idea of a 'conducive context', where structures that allow minor transgressions to occur that can create opportunities for more serious violations [155]. These contexts are influenced by social, political and cultural conditions that reinforce power asymmetries. In the university space, these 'conducive contexts' are further complicated by the dual roles of students in education and in their social life, and the cross-over between these roles.

Participants in the FGDs expressed difficulties in defining sexual harassment precisely, with narratives highlighting a need for more support from the university to determine what could be considered inappropriate behaviour, and what could be sexual harassment. Many participants discussed sexual harassment as part of a continuum that also contained bullying and generalised harassment. This is a finding echoed in other research in this field. In a study conducted among 1395 students and employees at a university in northern Sweden, the author concluded that the organisation of work in this setting was related to harassment and sexual harassment and that distinguishing between the different forms of harassment was complicated [156]. While distinguishing between sexual harassment and other forms of harassment could be very important from an operational and legal perspective [157], victims may care less about the exact definition of what they have experienced, and more about finding redress and protecting others from their experiences. The survey instrument attempted to balance this confusion by providing behavioural and situational examples that exemplified sexual harassment as defined by the researchers, while simultaneously framing the question in terms of events experienced as sexual harassment, to allow for subjectivity in interpretation [97].

While not providing a definitive definition of sexual harassment, this thesis contributes to the body of literature by exploring how sexual harassment is defined among university students along the continuum of individual to collective responsibility. These results also frame the concept through social cognitive theories and highlight a desire from the students for more clarity from the university around this question of definition and responsibility. Comparisons with previous research

show this to be a finding that can most likely be translated into other workplaces and study contexts.

What individual and organisational factors are associated with sexual harassment among students at Lund University?

With regards to individual factors associated with sexual harassment, the survey data published in the overview article showed that female and non-binary identifying students were more likely to be victims of sexual harassment than males, and that fellow students were most likely to be perpetrators. Among females, being younger (18-25) was associated with exposure to sexual harassment compared to older students. Most perpetrators of all sexual harassment were male [69]. These findings are comparable to those of a large-scale study conducted in Norway among 50054 students that showed a similar prevalence of sexual harassment (last 12 months) among women at 21.6%, and slightly lower among men (5.7%). Younger women were also the most likely victims of this harassment, and the forms of expression were similar between the two populations [158]. The results of Paper III reinforced our understanding of some of these results.

The study environment was examined using the Demand-Control-Support model. The DCS model has been widely used in a variety of workplaces and has been examined across a variety of research approaches. Results of these previous studies have validated the instrument both in terms of its internal consistency and construct validity across a broad range of workplaces [116]. Previous studies have also examined the predictive value of work environment as measured by the DCS model, for depressive symptoms and sick leave among Belgian employees at 11 large companies (n=9396) [159], increased risk of mental health disorder among public sector workers in Denmark (n=13423) [160], and major depressive symptoms among a representative sample of 4717 French workers [161]. In each of these cases, DCS was a good predictor of the negative outcome. Research conducted across a variety of different workplaces also shows substantial evidence for an association between study environment and bullying [75].

Less research has applied this model to context of university students. The research that does exist primarily focuses on internships or work placements as opposed to the general study environment or are limited in sample size. One prospective cohort study examined the association between psychosocial work environment and intention to leave nursing studies among 363 third-year nursing students on clinical placement in the Netherlands. The results of this study showed that high psychological demands were associated with distress and intention to drop out of studies, and that colleague support could buffer this association [76]. Another study among 176 students at an Australian university used a modified instrument to

measure DCS and found that high demands and low control were linked to distress among students, and negatively impacted student grades [162].

A study conducted among dental students doing their clinical training in Sweden (n=805) found that a poor psychosocial study environment defined as high demands and low control negatively affected students stress levels and could account for 40% of the perceived stress faced by this group. The results were gendered, with female students more affected by bad working environments than male students [78]. This study concluded that addressing the structural components of the work/study environment were key to seeking to alleviate stress and its negative outcomes, a finding supported by a study conducted among 146 psychology students at two German universities [163].

In seeking to better capture the psychosocial study environment for students, therefore, Paper I validates a new instrument for DCS. The results are a 22-item instrument that shows good internal consistency, and construct validity. As discussed above, few comparable studies have been conducted that allow the values of reliability and validity to be examined in context. The DCS instrument used in the study among German psychology students was examined for internal consistency, resulting in Cronbach's alpha values for 0.80 and 0.77 for control and demand dimensions respectively, somewhat higher than the value achieved for control in Paper I (0.60 and 0.81 respectively) [163]. Considering the broader range of student profile encapsulated by Paper I, this finding is perhaps not surprising.

Results from the FGDs show that students discuss a dual role at the university as both learners in an education programme, but also as adults living an independent life as a student. The modified DCS instrument for measuring study environment reflects only one of these aspects. It is therefore possible that this instrument measures only one aspect of study environment and misses out on these important cross-over effects. Students in the FGDs also discussed the interconnectedness of these two worlds, quoting fears of effects from their social life affecting their studies, and vice versa, as reasons for not always reporting sexual harassment.

The DCS instrument validated in Paper I is a more universally applicable instrument than those used in previous studies, and thus contributes a new instrument relevant for assessing psychosocial study environment across a variety of different student populations.

In Paper II, the instrument was used to examine associations between this study environment and sexual harassment in the university context. The main result showed that high study strain was significantly associated with exposure to sexual harassment even in the fully adjusted model. This is the first study to examine the association between psychosocial study environment assessed using the DCS, and sexual harassment. This study proposes therefore that the occurrence of sexual harassment among students in a university setting can in part be attributed to the psychosocial study environment.

Although no previous research exists into psychosocial study environment and sexual harassment for students in a university setting, research does exist in other workplaces. Research conducted among 1062 workers in Australia showed that workplace bullying, including sexual harassment, was more common for women than for men, and that job strain (high demands and low control) was significantly associated with this bullying. Job strain combined with low support (known as iso-strain) was found to be the strongest predictor of sexual harassment and bullying in this group [164].

The results of Paper II also showed that high demands and low control were independently associated with exposure to sexual harassment, a result comparable to studies conducted among police officers in Australia [165], and blue-collar workers in Belgium and Spain [166].

One potential pathway to understand this association is through the 'work environment hypothesis' WEH [72]. Empirical research conducted over the past three decades at various workplaces in Europe indicate that bullying and sexual harassment is a major factor affecting stress and strain among employees [167]. At the same time, this research also indicates that poor working environment may increase the likelihood of bullying and harassment. For example, a recent study among 2215 Norwegian workers showed a significant correlation between psychosocial study environment and harassment, although it did not account for all of the harassment observed [168]. A separate exploratory study conducted among 401 graduate engineers highlighted role ambiguity and role conflict as the factors most strongly related to bullying and harassment [169]. These factors can, in some ways, be approximated with measures of demand, control and support as they deal directly with clarity of role and leadership.

One could argue that high strain study environments for students could foster a competitive environment where students place themselves in a social hierarchy. These power structures could then be expressed through bullying and harassment.

A hidden curriculum of sexual harassment?

The term 'Hidden curriculum' is primarily attributed to the work of American sociologist of education Philip Jackson, whose book 'Life in classrooms' explored the role of social and cultural aspects reflected in unspoken norms, beliefs and values that are transmitted alongside the written curriculum in educational environments [170]. The concept has been used to examine how gender norms and power dynamics can be transmitted through education [171, 172], and has been applied to work on sexual harassment [59].

This thesis highlights the role of hidden curricula both within the academic setting, but also among students in their social contexts, where sub-cultures appear to play a role in perpetuating this tacit information. University staff have a responsibility to

create environments that foster gender equal values and norms and encourage the reporting of sexual harassment for those who wish to do so. They must also respond to small transgressions in a way that prevents the creation of cultures that accept forms of harassment. Participants in the FGDs highlighted the absence of positive examples of consequences for perpetrators who have been reported as one of the main reasons they would not feel comfortable to report themselves, a finding echoed in other research conducted among students at European universities [63].

In the context of the student social sphere, traditions, cultures, and sub-cultures in the different student clubs and nations were discussed in the FGDs as being connected to increased risk of exposure to sexual harassment, especially among new and young students who might be more likely to conform to the norms and values in a desire to fit it.

Participants in this research reflected over the role #MeToo had had on their study environment, and the openness of dialogue at the university. Narratives found in the group discussions saw these trends as primarily positive, with participants seeing a more open space for discussion. These positive changes, however, were primarily reported in contexts where only females, or females and individual males were present. In situations where multiple males were present there was still a pressure to 'protect their image' and thus not be so open about the topic. Others reported failure to see true consequences for perpetrators identified in the #MeToo movement as a failure of the system that made them lose faith in reporting.

Overall this thesis contributes to the research area by providing results from a large-scale survey and focus group discussions. The results add a new instrument for measuring Psychosocial study environment through DCS for students, the first of its kind investigation of the association between DCS and sexual harassment in the university student setting, and a conceptual model for sexual harassment that explores social cognitive understandings of sexual harassment on multiple levels.

Methodological considerations

This thesis used a multi-method approach, with both qualitative and quantitative study designs, two distinct data sets (survey and focus group discussions), and different analytical approaches. This variety of methods is an advantage for studying a concept as complex and multi-factorial as sexual harassment as it allows for different aspects of the phenomena to be examined. In this section we first consider some general methodological considerations relevant Papers I and II, before discussing Paper III.

Survey data (Papers I and II)

Internal validity should be considered in relation to the data set upon which the papers are based. Firstly, while the data set has the advantage of being relatively large, the cross-sectional nature places limits on causal inference and directionality of results. This is especially the case when dealing with relationships such as that between psychosocial study environment and sexual harassment. While it is conceivable that, as the WEH posits, bad study environment can lead to harassment and bullying, it is also conceivable that the reverse is also true. Most likely is that there is a form of vicious cycle that perpetuates these negative impacts. Secondly, although the data set is similar to the total population it represents in a number of key ways [69], we do not have data on the outcome variable (exposure to sexual harassment), which could be different among the two populations. This could lead to an overrepresentation in our sample of those who have experienced sexual harassment (see selection-bias).

The response rate (32%) of the survey could be considered a limitation in these studies if it is caused by a systematic bias. It is however comparable to other recent surveys conducted on sensitive topics such as health. The Swedish national Sexual and Reproductive Health and Rights survey published in 2019, for example, reported a 31% response rate [173], and a survey on Gender-Based Violence and Sexual harassment in the Swedish higher education sector co-authored by Karolinska institute, The Royal Institute of Technology, Malmö University and the Swedish Secretariat for Gender Research a response rate of 31.9% for the total population, and 24.3% among students [174].

The risk of selection bias occurs when the individuals in the sample do not reflect those in the total population. While some evidence exists that individuals with experiences of sexual harassment are more likely to respond to research in this area [175], there is no evidence that this would necessarily alter the associations of interest. For those who have answered, all questionnaire data runs the risk of social desirability bias [94]. In the context of #MeToo, participants might be primed to answer questions in a certain way to meet the societal narratives in the media. Questionnaire instruments that ask about past events also run the risk of recall bias, where differential recollection can affect the results recorded [176]. Research suggests that the significance of an event may contribute to recall, however [177]. In this survey, therefore the results could be biased towards an overreporting among those who had perceived their experiences as more ‘significant’ in terms of duration and effect. Recall bias is less likely to be a factor for those responding to the shorter times frame of one year, than those responding to questions of events further back in time. Adopting self-reported surveys has been shown to minimise the harms of selection bias [178], and the short time frame for events used in this questionnaire could minimise recall bias.

Selection bias could also be influenced by the use of incentives. As discussed in the ethical considerations, data collection that occurred via survey utilised incentives in the form of free cinema tickets for those who completed the questionnaire. The ethical issues of this have been discussed, however it is also prudent to consider any methodological issues that might emerge from this practice. Research into why people decide to participate in research surveys describe a host of factors, some survey-specific such as topic and sponsorship, some person-specific such as confidentiality concerns, and some specific to social and physical environment including access and peer influence [179]. Within these factors, research into the role of incentives has been analysed. A large meta-analysis of this research into mail surveys resulted in the following findings: monetary incentives are more effective than non-cash incentives, incentives work better for surveys where the response rate would otherwise be low, and incentives can work in the absence of other persuasion methods [180]. In line with the findings of this research, and the ethical considerations, therefore, while there may be an added incentive to complete the survey for those who have begun to complete it, we do not consider it to be likely that there is a systematic bias that would be introduced by the offer of a cinema ticket. Selection bias can affect both internal and external validity.

To minimise measurement bias, clear definitions were provided for key concepts and questions formulated to be as clear as possible. In addition, the questionnaire was piloted, and small adjustments made following this process. Due to the design of the survey programme, however, participants were able to switch between Swedish and English versions of the instrument at any point during their answering of the questions. This made it impossible for the research team to differentiate responses based on language. Translation of the survey was conducted by native English speakers, and members of the research team also utilised back-translation to ensure fidelity of the questions, and to avoid pitfalls related to back-translations carried out by persons external to the research field [181]. However, without being able to compare the two language samples, it is not possible to examine whether there was any systematic differences in responses (translation bias) that could result in a measurement bias between the two groups. Measurement bias could also have occurred due to differing perceptions of sexual harassment. Research suggests, for example, that females often report experiences more situations as harassing than men [182], and that power differentials between victims and perpetrators could lead to differences in reporting for certain marginalised groups [153]. The choice of instrument that balances situational descriptions and subjective interpretations was designed to minimise these differences, this multiple-item measure for sexual harassment has also been validated and shown good validity and internal consistency [12].

Although every effort was made to keep the survey instrument as short as possible, the final survey instrument used was large, with around 120 questions. It is likely that a number of participants began to reply to the questionnaire but did not complete

it. The system can indicate that this has happened but cannot produce statistics of how many cases it relates to, nor how far the respondent got in completing the survey, nor provide the researchers with background characteristics of these respondents. This dropout attrition could be caused by respondent fatigue or subject attrition if the questions feel inapplicable to them [183]. It could have strengthened this research if we had been able to assess these figures and analyse potential patterns and examine non-response bias.

Finally, existing research shows that LGBTQI+ students are more likely to experience sexual harassment and violence than heterosexual cisgender women in a university setting [184], and are less like to report such events if they do occur [185]. This survey, however, did not record sexual orientation and was therefore not able to contribute to this research.

Focus group discussions (Paper III)

For Paper III, a qualitative approach was necessary to be able to capture the nuance in narratives and the conceptualisation of sexual harassment to gain a deeper understanding of these phenomena.

Several measures were taken to enhance trustworthiness of the findings in line with the procedures of Grounded Theory studies [128].

Firstly, the method of data collection was selected as focus group discussions due to its relevance for studying norms and attitudes [137], and their strengths in supporting the discussion of sensitive topics through abstraction and dialogue [186].

All focus group discussions were conducted by the main author and supported by additional researchers from the project with experience of qualitative research. The researchers practiced reflexivity through journaling and debriefing exercises to strengthen confirmability of the study [95]. The 'insider' role of the researchers at the university contributed to building a rapport and to contextualising the narratives allowing for improved prompting. Trustworthiness was considered using Charmaz's criteria for quality research [128]. Theoretical sampling and the extensive use of quotes to anchor the results enhance the credibility of the findings [128]. Although authors of Paper III agreed that 'theoretical sufficiency' of the categories had been achieved, it is possible that additional participants could have provided different perspectives.

When considering the transferability of the study results, the large sample size and its relative similarities to the study population are strengths of the survey data. In addition, the clear definition of variables and complete methodological descriptions support the adaptation of protocols into new settings. The validation of the main instruments used (LUSHI and DCS) in large and diverse study populations increases robustness of this study and can contribute to the instrument's applicability in new

contexts. The Grounded Theory study adopted a number of considerations to aid transferability. These included theoretical sampling, constant comparison, the use of memos and a reflexive journal, and rich description of the context. Transferability of the contextual model, however, should take into consideration the context and target group of the new research project carefully.

Implications for future research

The results of this thesis present opportunities to deepen our understanding of sexual harassment in the university setting and to design programmes to prevent, and adequately respond to such harassment in the future.

Paper I presents a new instrument for measuring psychosocial study environment for students in a university setting. Although this instrument has been shown to exhibit good construct validity and internal consistency in this setting, future research should focus on examining discriminant validity in relation to other instruments designed for the student study environment, and predictive validity for the association between study environment and physical and psychological outcomes. This would allow the instrument to be better compared with existing models used in traditional workplaces. It could also allow the instrument to be used as a diagnostic tool for the study environment in a university setting.

The results of Paper II suggest that reducing high study strain environments for students at university could be an effective strategy for reducing exposure to sexual harassment, and that lecturers can play an important supportive role in achieving this. Future research could examine this in more details to clarify the causal pathways and to test these ideas through implementation research.

The results of Paper III highlight a need for more research into mechanisms for building trust between students and university structures. In addition, the confusion between individual and collective responsibility should be examined in the context of action/inaction to explore its role in underreporting. Paper III also described potentially serious consequences of sexual harassment in an academic setting. More research should be conducted to examine these consequences for individuals and their study progression, as well as their physical and mental wellbeing.

Future research should also focus on power relations between students in formal and informal settings and their relationship with sexual harassment. This could be done using mediation analysis to examine intersectional modification, and through Structural Equation Modelling to examine both direct and indirect effects.

Finally, the increased exposure to sexual harassment for LGBTQI+ students should be examined in the context of psychosocial study environment to examine predictors and possible opportunities for interventions.

Conclusion

Sexual harassment is an ongoing and potentially damaging occurrence for students in the university setting.

This sexual harassment is complex to define, and is hidden and perpetuated by structures of gendered, institutional, and social power. High demands and low control placed on students in their study environment have been shown to contribute to an environment where sexual harassment can occur, and support from lecturers in challenging this environment may buffer this relationship.

Dealing with sexual harassment requires clarity on definitions and transparency in reporting routines to create and foster cultures of trust among students. Although the #MeToo campaign appears to have had a positive effect on conversation climates among female students, more work needs to be done to empower all students to speak out.

Structures and sub-cultures both in the student's social life and the educational setting may represent hidden curricula that transmit harmful norms and values that make questioning the status quo complicated, and do not sufficiently protect students from the potential harm of reporting sexual harassment.

To work proactively to prevent sexual harassment, and to create systems for redress in the university setting requires a multilevel approach that works to reduce situations of high strain for students and improves support from lecturers. Simultaneously, the approach must generate trust in university systems through establishing common understandings of sexual harassment, clear and accountable pathways for reporting sexual harassment, and transparency of outcome when reports are made.

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