Constructing maturity: Safety and homosociality at construction sites

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Abstract

This article highlights the interplay between safety and homosocial practices in the construction sector. By analysing workplace culture as gendered and containing safety culture, a focus on practices maintained. A sequential mixed-methods design was used, featuring semi-structured interviews at four construction sites and cross-sectional use of the NOSACQ-50 survey to address the aim. Results developed from thematic analysis and independent t-tests are contrasted through abduction.

Four key aspects were identified through this analysis: (i) that homosociality interplays with safety through men seeking to align safety practices with other men; (ii) pursuing masculine maturity shapes the alignment on safety practices; (iii) changing notions of care, mastery and autonomy among men shapes their safety practices; and finally (iv) that while managerial attempts to strengthen safety culture can transform masculine norms at workplaces, this development is limited by ambivalent conceptions of care among men. This article contributes to research on the dynamics between safety and gender by highlighting the importance of stressing both collective and individual care as key to improve safety culture, and the role the pursuit of maturity plays in safety practices among men.

Key words

Construction work, Safety, Safety Culture, Gender, Homosociality, Workplace culture

Introduction

The construction industry remains one of the most hazardous occupational sectors in Sweden. In 2024 alone, eight construction workers lost their lives, and 10.5 per 1,000 workers experience workplace accidents (Samuelsson, 2025). One key factor often blamed for the accident-prone nature of construction sites is its culture, regarding which it has been difficult to implement reforms (Berglund et al., 2023).

Managerial difficulties in shaping the safety culture are highlighted by the persistence of a homosocial workplace culture at construction sites. Scholars such as Stergiou-Kita et al. (2015) and Iacuone (2005) have highlighted that practices aimed at displaying physical strength, risk-taking and aggressive behaviour towards male peers shape safety practices at construction sites. It has been shown that construction site workplace cultures tend to have a highly competitive aspect between colleagues (Hanna et al., 2020, Paap, 2006). As a result, homosociality at construction sites gatekeeps inclusion and career progression to men who display status-bringing practices to ensure that only trustworthy actors gain informal support (Galea et al., 2023). This supports research in other sectors that indicates that homosocial workplace cultures shaped by male preference for other men through gendered status-bringing practices are linked to the reproduction of a gendered workplace culture (Lindgren, 1999).

The Swedish context provides a distinctive case for examining gendered workplace cultures at construction sites, as it combines extreme gender segregation (Byggföretagen, 2020) with a regulatory framework where employers must maintain a systematic working environment policy that continually investigates and remedies workplace environmental problems (Berglund et al., 2017). Within this context, construction companies actively sought to recruit female carpenters partly to improve safety based on the assumption that more female carpenters would counteract the masculine dominance of the workplace culture (Johansson et al., 2021). These recruitment drives have not eliminated this dominance, with around 50% of craft worker and site management union members viewing their workplace as dominated by a masculine macho culture in 2024 (Byggnads and Byggcheferna, 2024).

Moreover, studies of safety and gender in the construction sector do not frequently focus on how gender is constructed and reinforced through everyday practices at work (Berglund et al., 2017). Analysing construction sites as a homosocial workplace culture offers a promising strategy to counteract this tendency by focusing on everyday interactions and practices (Galea et al., 2023). Nevertheless, little research exists concerning how homosociality and safety intersect and its impact on the workplace culture.

This study addresses this gap by examining the interplay between safety and homosocial practices and its implications for workplace culture at construction sites.

While previous research links masculinity, safety and workplace culture (Nielsen et al., 2015), little attention has been given to how homosociality and safety influence men's interactions with other men in the construction sector. To provide a robust answer capable of exploring such complex dynamics a mixed-methods approach with two research questions was developed.

Question 1: How is safety perceived and practiced by construction workers and site management in their daily workplace culture?

Question 2: What implications does homosociality have on safety rule compliance and performance of work tasks at construction sites?

The questions are designed to facilitate an exploration of this interplay by examining practices and the workplace culture through qualitative methods, while situating the context of these practices using the Nordic Safety Climate Questionnaire (NOSACQ-50) to gain insight into how safety is understood. By combining these approaches, we seek to contribute to ameliorating the research gap.

Addressing the gap is particularly important because homosocial workplace cultures often feature strong resistance towards organisational changes (Abrahamsson, 2009), potentially limiting the effectiveness of safety interventions. Jensen et al. (2014) indicates that it may be necessary to ensure that safety interventions are not perceived as conflicting with established gendered practices. Analysing the dynamics between safety practices and homosocial practices is therefore important to improve our understanding of the forces that constrain the effectiveness of safety interventions at construction sites.

Theoretical framework

The study examines the interplay between safety and homosociality as expressed through workplace practices and culture. This relationship flows from an understanding of culture as enacted and transformed through practices (Alvesson, 2017). Homosociality is therefore conceptualised both as a set of practices and as a gendered workplace culture. This culture is viewed as shaped by safety practices, developing a distinct safety culture partly through everyday practices aimed at maintaining social relations at work. Two high-status traits associated with men and masculinity, mastery and autonomy, are explored as expressions of the homosocial workplace culture and the safety culture.

Workplace culture as a gendered phenomenon

Inspired by Schein (2010), the study analyses culture as having three intersubjectively shared layers: artifacts, espoused values and underlying assumptions. This conceptualisation allows an analytical approach in which workplace culture, which includes safety culture, is examined through reoccurring practices to reveal underlying assumptions that are enacted.

Workplace cultures are often gendered, reflecting wider societal gender norms (Jensen et al., 2014, Somerville, 2005). In masculine-dominated workplaces, practices aimed at embodying masculine ideals can be central to inclusion in the workplace culture (Pöllänen, 2021, Somerville, 2005). At construction sites the prevailing workplace culture incentivises men to prove their masculinity through practices such as deliberately taking risks, competing with colleagues and demonstrating physical strength to reinforce their manliness (Thiel, 2012, Paap, 2006).

Safety practice & safety culture

Discussions on risk-taking as a form of practice highlights that safety is a situated practice, grounded in both practical and theoretical knowledge (Gherardi, 2006). Safety practices are embedded in social relations with practitioners in the vicinity, and among those dispersed across wider professional and industrial networks sharing a similar language to describe safety (Gherardi, 2006).

The practice-based understanding of safety provides a foundation from which to explore how shared understandings of safety are established and transformed (Gherardi, 2006, Dyreborg et al., 2022). Safety culture, understood as a subdimension of workplace culture, encompasses shared assumptions, values and norms towards safety within workplaces (DeJoy et al., 2017). Such assumptions can be unconsciously held (Guldenmund, 2000). Following Edwards et al. (2013), safety culture can be understood from a normative, anthropological and pragmatic perspective. The normative perspective portrays safety culture as shaped by managerial policies and

procedures. The anthropological perspective analyses safety culture by looking at collective attitudes and values at work. Finally, the pragmatic view links everyday practices to safety culture.

Understandings of safety culture vary by position (Sundström, 2025, Berglund, 2011), reflected in local practices that diverge from normative safety culture intended by management. These divergences can be the result of how power relations shape safety culture (Edwards et al., 2013, Sundström, 2025). Efforts to reduce this divergence through formalisation and increased use of safety rules risk weakening safety culture by limiting worker autonomy. Trust in workers' ability to manage their own safety is essential to a robust safety culture, and over-use of rule enforcement can erode this capacity (Dekker, 2014, Hale and Swuste, 1998, Berglund, 2011).

To provide context to safety practices and safety culture in general in relation to aspects such as employee risk priorities and views on the safety system, the study uses the Nordic Safety Climate Questionnaire (NOSACQ-50) to explore collective perceptions of safety. It measures "shared perceptions" of safety-related practices, procedures and policies at workplaces amongst employees (Kines et al., 2011). These perceptions, albeit individually embodied (Zohar, 2000), express intersubjectively shared perceptions (Xia et al., 2023). Perceptions of safety can vary, as workplaces may have distinct subcultures with different norms and practices. Consequently, variations emerge in how safety is interpreted and practiced across different groups at workplaces (Zohar, 2000).

Homosociality and masculinity

This study analyses gender as an age-related process, as specific masculinities are particularly associated with life stages. Social age is likewise understood as gendered (Marchant, 2013). Central to this analysis is the notion of maturity, which is understood as a high-status position achieved through practice in lieu of a biological age (Janssen, 2008). Accordingly, masculine maturity is achieved and sustained through status-bringing practices, as those who hold high status are not viewed as too young nor too old (Janssen, 2008, Hearn and Sandberg, 2009).

Traditionally mature men in their "prime" are expected to embody invulnerability and be physically active (Hearn and Sandberg, 2009). Since age is associated with physical decline, increased frailty and infirmity, being "old" is often viewed as losing status (Thompson, 2006). Often, older men seek to resist such status loss by remaining active (Hearn and Sandberg, 2009). This indicates how maturity represents status for men of all ages that must be actively maintained (Janssen, 2008, Tjeder, 2003).

Age and the pursuit of maturity influences construction work, where maturity is linked to efficiency (Marchant, 2013). As physical decline sets in, older construction workers tend to either double down on competitive practices or redefine their masculinity by

highlighting their role as skilled mentor to colleagues (Marchant, 2013). Strategies to resist aging and retain status can backfire, however, as older construction workers who overtly mimic practices associated with younger men risk being viewed as immature (Paap, 2006).

The use of age-based expectations to categorise men can be deeply intertwined with homosociality. Older men who have participated in a homosocial group for a long time can hold particular influence on the overall atmosphere and co-optation process (Wahl et al., 2018). Age itself may serve as gatekeeping within homosocial groups, as practices associated with younger forms of masculinities are rejected (Pietilä and Ojala, 2021).

Men and Maturity

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Mastery, and variances of autonomy

Two high status traits frequently positioned as markers of manhood are mastery and autonomy (Tjeder, 2003, Elliott et al., 2022).

Mastery entails a masculine ideal of exerting control over oneself, machines or others that men tend to aspire to embody through their practices (Tjeder, 2003, Mellström, 2004). Through this embodied sense of control, individuals phenomenologically feel manly (Mellström, 2004, Paap, 2006). As such, mastery can be associated with practical knowledge (Brandth and Haugen, 2000, Gherardi, 2006). Construction workers describe mastering a task as being capable of falling into an enjoyable state of flow and rhythm, exerting control over their immediate working environment to work efficiently (Thiel, 2012, Paap, 2006). Learning from experienced colleagues is often positioned as essential to developing mastery in construction work (Gherardi, 2006). The capacity to employ shortcuts that are safe often symbolises this mastery. As a result, developing robust safety practices can be expressions of mastery (Gherardi, 2006). However, access to such learning opportunities is often mediated by conformity to masculine workplace norms (Thiel, 2012).

Mastery in construction work is associated with the capacity to execute a task autonomously (Hanna et al., 2020). Autonomy is celebrated as a masculine ideal of self-sufficiency and independence at construction sites (Thiel, 2012). Long valued as an ethos of freedom and taking personal responsibility for the project's success (Johansson 2006, Thiel 2012, Stiegler and Form 1991), autonomy also reinforces expertise among older workers despite being viewed as having a frail and weak body (Marchant, 2013). Nevertheless, the ideal of masculine autonomy can lead men to neglect self-care and caring practices towards others to show independence (Creighton and Oliffe, 2010a, Elliott et al., 2022). Accordingly, these practices can reproduce a homosocial workplace culture where men take risks to prove their autonomy to other men (Ely and Meyerson, 2010, Stergiou-Kita et al., 2015, Kimmel et al., 2005).

Masculine autonomy can be contrasted with relational autonomy, which recognises that independence emerges through interdependence (Elliott et al., 2022). From this perspective care for others can enhance rather than diminish autonomy (Kenny et al., 2020). Within male-dominated environments, however, tendencies towards relational autonomy tend to be concealed or carefully negotiated, as mutual recognition of interdependence may be penalised by male peers on the basis that it shows vulnerability (Kenny et al., 2020).

Methods

Data Collection

Quantitative methods and data collection

The quantitative methods employ a cross-sectional research design at two construction companies to survey how safety tends to be understood organisationally. Due to time constraints the questionnaire study could not be distributed to the second case organisation. The NOSAQ-50 was used to measure safety climate. It is a statistically validated questionnaire available in 45 languages with over 100,000 benchmarked responses from different questionnaires. The questionnaire has been used in different sectors, occupations and national contexts and has produced reliable results (Ajslev et al., 2017, Lindahl et al., 2022). The questionnaire captures stated safety perceptions on the basis that safety climate perceptions are individually situated while intersubjectively constructed. A key advantage of utilising the NOSAQ-50 in this paper is that it was specifically developed for the construction industry.

The questionnaire features 50 statements, where some statements are positively formulated and others feature reversed statements. The statements offer four potential responses structured as a Likert Scale, where each signals their level of support for the statement (1 = Strongly disagree, 4 = Strongly agree for positive statements, whereas these values were reversed for the reversed statements). These are detailed in Table 1 below.

Table 1. Safety climate dimensions.

Dimension	Name	Description
(i)	Management Safety Priority and Commitment to Safety	Nine statements on whether management prioritises safety over production goals.
(ii)	Management Safety Empowerment	Seven statements focusing on whether management is perceived to support involving workers in solving safety issues.
(iii)	Management Safety Justice	Six statements which assess whether management handles safety incidents and listens to everyone involved.
(iv)	Workers' Safety Commitment	Six statements concerning whether workers adhere to safety rules and maintain safety for themselves and others.
(v)	Workers' Safety Priority and Risk Non-Acceptance	Six statements gauging views on whether workers prioritise safety while working and avoid taking risks under pressure.
(vi)	Trust in Co-Workers' Safety Competence	Eight statements addressing confidence that workers have the capacity to work safely and learn from other workers.
(vii)	Trust in the Efficacy of the Safety System	Seven statements on whether the safety system is effective and provides benefits for those who work.

Mean scores for each dimension were calculated and interpreted in accordance with the instructions from the National Research Centre for the Working Environment of Denmark.

The questionnaire also measured background information of the responder, such as age, gender (Male = 0, Female = 1) and position (0 = Leader, 1 = Worker). For the sake of analysis age was broken down into age cohorts (0 = 20–35 Years Old, 1 = ≥36 Years Old).

The questionnaire was digitally distributed to all employees of Safe Solution Builders via email to provide broader organisational context. A digital format was chosen to facilitate participation, albeit that it limited researcher–respondent interaction. The questionnaire data was stored via a secure server, ensuring only project researchers had access to the data. As such, the company only distributed the link to the questionnaire and had no data access.

210 out of 327 employees responded (55% response rate), with one incomplete response excluded from further analysis. The questionnaire remained open from early February to late April 2025.

Table 2. NOSAQ-50 Criteria Interpretation Table.

Score	Level	Meaning
>3.30	Good	Maintaining and continuing developments of the safety climate dimension
3.00–3.30	Fairly good	The safety climate dimension is in slight need of improvement
2.70–2.99	Fairly low	The safety climate dimension is in need of improvement
<2.70	Low	The safety climate dimension is in great need of improvement

Qualitative methods and data collection

Interviewee participants included construction workers, safety officers, apprentices and site managers based on a purposive sampling strategy. They were selected for their active role in the production process and subject to safety initiatives aimed at improving their safety. Based on these criteria, site management suggested a list of candidates for interviewing. Site management being involved in suggesting candidates is a limitation to the study, as they might discard candidates with more negative views of management.

This was mitigated partly through a mixed-methods design that was employed to triangulate data from multiple sources, and the purposive sampling strategy ensured the inclusion of varied perspectives. Furthermore, findings were validated during an analytical seminar, where some interviewees were invited to respond to and discuss preliminary results. This provided an additional opportunity for participants to reflect on and refine their views in a setting removed from the workplace context.

A total of 38 semi-structured interviews were conducted across four construction sites operated by two companies, here referred to by the pseudonyms Safe Solution Builders and Central Construction Co. All interviewee quotes featured in this article also have been given pseudonyms.

Table 3 Characteristics of the Construction Sites.

Construction Sites	1	2	3	4

Finished Object	Apartments	Industrial Building	Apartments	Apartments
Size	Small	Large	Middle	Middle
Led By Company	Safe Solution Builders	Safe Solution Builders	Central Construction Co.	Central Construction Co.
Location	Small City, Rural Region	Small City, Rural Region	Big City	Outskirts of Big City
Wage System	Piecework Wages	Monthly Salary	Piecework Wages	Piecework Wages

Including two companies in different regions, varied site sizes and wage systems was done to explore how social and organisational context shapes safety practices and homosociality.

Prospective interviewees were invited to participate in the study after being informed about the study and its purpose. Participation was voluntary and all interviewees provided informed consent before taking part. The interviewees were allocated work time to participate during their shifts. Interviews were conducted and audio-recorded on-site at respective construction sites and tended to last between 35 and 80 minutes. A semi-structured interview format was used to provide interviewees with opportunities to elaborate their views on their workplace while maintaining a focus on safety. The interview guide had 28 questions separated into three domains: (i) daily work tasks, (ii) perceptions of the work environment and (iii) views on gender equality and discrimination at work.

Ethical Approval

Both the qualitative and quantitative data gathering methods were ethically approved by the Swedish Ethical Review Board (2023-04858-01). All questionnaire responders and interviewees were provided with oral or written information on their rights as participants and the overall goals with the data gathering.

Data Analysis

Quantitative Analysis

Analysis focused on examining differences in how safety is perceived between management and workers and between age cohorts. The hypothesis tested was that there would be significant differences in all dimensions between age cohorts as well as between workers and management.

Mean values of each participant's dimension score were calculated following the procedure recommended by the NOSAC-50 website. This entailed reverse coding certain questions which were reverse coded (Kines et al., 2011). Consequently, the

mean scores for each dimension as well as overall mean scores associated with position, age cohort and gender were calculated. In addition, mean scores for the 20–35 Years Old workers and the ≥36 Years Old workers were separately calculated to compare their means. This approach was chosen due to reoccurring age-based expectations on others' safety practices in the qualitative findings.

Additional analysis was conducted through IBM SPSS 30. A Welch independent samples t-test was conducted to analyse differences in overall safety climate scores among groups and to handle violations of the homogeneity of variance assumption. A 0.05 ($\alpha = 0.05$) threshold was used to evaluate statistical significance.

Qualitative Analysis

Reflexive thematic analysis was used to analyse semi-structured interviews through an iterative and abductive analytical process of theme development (Braun and Clarke, 2019). Thematic analysis is compatible with abductive reasoning, as the iterative development of themes can heighten attentiveness to anomalies in the data compared to theoretical assumptions (Khurshid et al., 2025).

After transcribing the material verbatim and reviewing the material, initial themes and sub-themes were developed. These themes were refined and revised through the iterative process (Braun and Clarke, 2019). Through this process, some themes and sub-themes became increasingly aligned with theoretical concepts and consequently renamed. NVivo Software 14 was used to code the transcribed interviews. Key themes were (i) hierarchies at work, (ii) homosociality; (iii) place; and (iv) and safety performance (see Table 4 for a detailed description of the themes).

Table 4: Main themes and sub-themes.

Main themes	Content description (summary of sub-themes)
Hierarchies	Includes views on status-bringing practices, views on formal and informal authority structures as well as personal authority.
Homosociality	Describes how men at construction sites positioned themselves to other men, and how their practices shaped workplace culture.
Values	Contains values, norms and gendered assumptions concerning their construction site and the construction sector in general. It also featured reflections on what constitutes excellent work performance.
Safety practice	View on safety priorities, time pressures, the impact of unexpected events on safety and whether piecework-wages shapes safety positively or not.
Place	Perspectives on the work environment, sense of safety and views on a workplace undergoing constant changes.

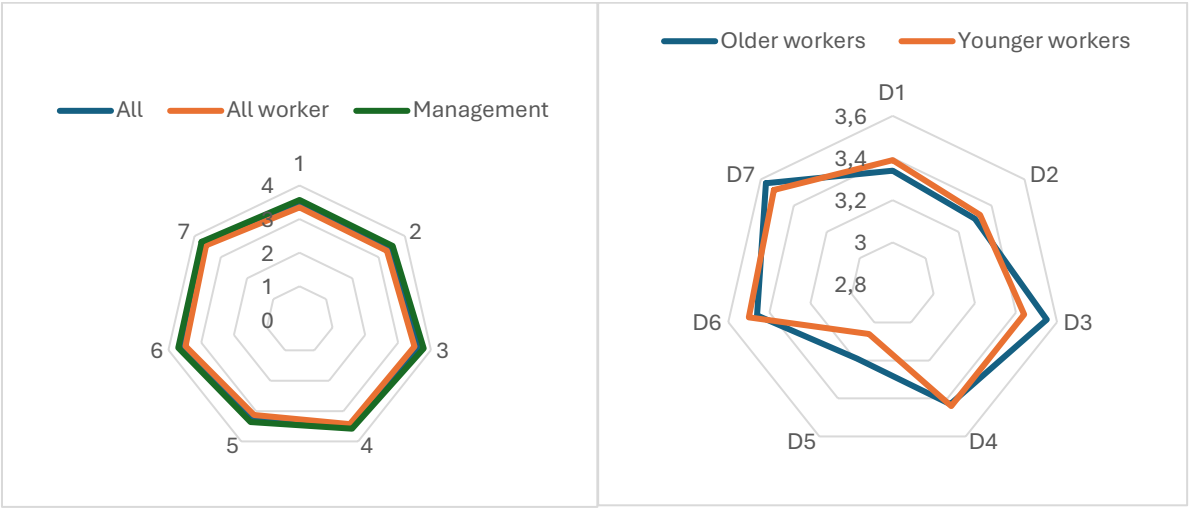
Results

Quantitative Results

Table 5. Safety climate scores.

	D1	D2	D3	D4	D5	D6	D7
All	3,43	3,39	3,6	3,49	3,21	3,56	3,62
Management	3,57	3,54	3,78	3,58	3,36	3,7	3,73
All worker	3,35	3,31	3,5	3,43	3,13	3,48	3,56
≥36 Years Old Workers	**3,34**	**3,3**	**3,55**	**3,43**	**3,19**	**3,46**	**3,57**
20–35 Years Old Workers	**3,39**	**3,33**	**3,44**	**3,44**	**3,06**	**3,5**	**3,52**

Figure 1.Visualisation of safety climate mean scores.



Overall safety was perceived as strong, with trust in the efficacy of the safety system having the highest score (3.62), while workers' safety priority and risk-nonacceptance was the lowest (3.21). Of note is how younger workers tended to have lower scores than older workers.

Table 6. Independent t-tests.

Management (Dataset 1) — Workers (Dataset 2)														
	Dim1	**Dim 1**	**Dim2**	**Dim 2**	**Dim3**	**Dim 3**	**Dim4**	**Dim 4**	**Dim5**	**Dim 5**	**Dim6**	**Dim6**	**Dim 7**	**Dim 7**
Data	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
N	75	134	75	134	74	133	75	134	75	134	75	134	75	133
Mean	3.5712	3.35634	3.53707	3.314328	3.78122	3.499323	3.5788	3,436045	3,356	3,136567	3,70907	3,48806	3,7348	3,556541
StdD	0.37902	0.55449	0.36451	0.50805	0.34104	0.53349	0.45756	0,52885	0,58885	0,71643	0,33309	0,49732	0,29296	0,52341
t	3.311		3.663		4.627		1.962		2.387		3.833		3.149	
p	0.001***		0.001***		<0.001***		0.042*		0.012**		<0.001***		*0.02	
20–35 Years Old (Dataset 1) — ≥36 Years Old (Dataset 2)														
	Dim1	**Dim 1**	**Dim2**	**Dim 2**	**Dim3**	**Dim 3**	**Dim4**	**Dim 4**	**Dim5**	**Dim 5**	**Dim6**	**Dim6**	**Dim 7**	**Dim 7**
Data	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
N	65	140	65	140	65	138	65	140	65	140	65	140	65	139
Mean	3.3871	3.457	3.3514	3.4111	3.4405	3.6806	3.4072	3,5217	3,038	3,2954	3,5057	3,5907	3,5388	3,6524
StdD	0.4414	0.537	0.4397	0.4888	3.4405	0.4725	3.4072	0,5274	3,038	0,6728	3,5057	0,481	3,5388	0,476
t	0.983		0.873		3.262		1.578		2.528		1.313		1.703	
p	0.327		0.384		0.001***		0.117		0.013*		0.191		0.091	
Men (Dataset 1) — Women (Dataset 2)														
	Dim1	**Dim 1**	**Dim2**	**Dim 2**	**Dim3**	**Dim 3**	**Dim4**	**Dim 4**	**Dim5**	**Dim 5**	**Dim6**	**Dim6**	**Dim7**	**Dim 7**
Data	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
N	191	18	191	18	189	18	191	18	191	18	191	18	190	18
Mean	3.4225	3.5500	3.3880	3.4606	3.5815	3.7956	3.4809	3.5550	3.2046	3.3289	3.5539	3.7106	3.6097	3.7378
StdD	0.51441	0.43363	0.48243	0.36310	0.50121	0.33048	0.52300	0.30765	0.69631	0.47670	0.46963	0.25949	0.46490	0.41441
t	-1.1722		-0.7855		-2.4894		-0.9059		-1.0094		-2.2396		-1.2396	
p	0.2538		0.4402		0.001***		0.3729		0.3227		0.033**		0.228	

The analysis showed significant differences in safety perception across several dimensions between manager and worker groups. Workers reported consistently lower mean scores across all dimensions (all $p < .05$), indicating their less favourable views on safety at their workplace compared to management. Comparisons between older responders (≥36 years) and younger responders (20–35 years) indicated that older responders had statistically significant differences for dimension 3 ($p < .001$) and 5 ($p = .013$). Gender comparisons indicated significant differences between women and in mean scores on dimension 3 ($p = .001$) and 6 ($p = .033$). These results show that position, and to some extent age and gender, shape safety climate perceptions within the organisation. Ultimate perceptions of safety climate tended to be relatively good, with all subgroups reporting mean scores ≥ 3.00, suggesting generally positive evaluations.

Qualitative Results

Managerial Safety Justice and Trust in the Safety System

Interviewees described their sites as safer partly due to a strong safety system with good managerial support. Generally, managerial justice was described as fair, as interviewees argued they felt able to raise concerns over plans with site managers. However, some interviewees expressed ambivalence towards the safety system. While safety rules were viewed as necessary for setting standards, some construction workers felt the rules were overly abstract, constraining their agency and designed by professionals with limited practical knowledge of construction work.

> *Man kan inte ha regler för att man inte ska göra illa sig – för då kan man inte jobba till slut. […] Det ska inte vara åt andra hållet, att det finns alldeles för lite [regler] heller. Men jag tror att dom som sitter och kommer på med mycket regler, dom går på nån statistik. Jag vet inte var dom får statistiken ifrån, och hur sann den är.*
>
> (Gustav, Construction worker)
>
> *Det här med glasögon till exempel, det tycker man borde gå mer på vad jag gör just då. Jag anser mig tillräckligt vuxen för att välja, men jag kan tycka att det blir lite fjantigt ibland. […] Det känns som det i vissa lägen försämrar för att göra ett bra jobb.*
>
> (Knut, Construction worker)

A key concern was that the inflexibility of the rules might make them unsafe at times. For example, mandatory safety glasses even while doing tasks without eye hazards were thought to be for legal over practical reasons, as these glasses could be troublesome to wear while it was raining. Some interviewees felt that the strict safety rules were driven more by corporate policy than by practical concerns.

These factors led some interviewees to express concerns about future refinement of safety systems in the sector. They feared a future where the rules would eventually become so excessive that rule compliance was impossible. From this view, a construction site free from risks was unfeasible since risks can be minimised but are impossible to eliminate.

Workers' safety commitment

Safety commitment was described as an individual and collective responsibility. Capacity to independently resolve problems was valued, since experienced workers should operate safely and autonomously. Yet due to the complexity of construction work it was acknowledged that it was impossible to know all potential hazards. Effective communication and mutual support were highlighted as essential, with interviewees noting that there were no 'stupid' questions. Seeking assistance, particularly during heavy lifts or other demanding tasks, was positioned as essential to maintaining safety.

Discussions on cleaning illustrated how safety commitment was framed as an individual and collective phenomenon. Interviewees noted how arriving at a clean area encouraged continued tidiness, while encountering disorder fostered neglect. Over time, accumulated dirt could render the sites unsafe and require a full day of cleaning from all colleagues. Neglecting cleaning was at times linked to inexperience or stress. As such, younger workers were sometimes viewed as more likely to neglect cleaning, having not yet developed a forward-thinking approach to safety. Those who cleaned as they worked and communicated hazards were seen as being safety-conscious and taking collective responsibility, while leaving disorder or failing to plan movements signaled poor practices. In this way, cleaning was a way to assess colleagues' commitment to both efficiency and having a safe construction site through visual cues.

Beyond using visible cues to evaluate safety practices, construction workers also connect safety commitment to organisational factors such as the wage system. Some interviewees argued that piecework pay encouraged proactive safety practices, since accidents slowed productivity and reduced wages. Accordingly, the system incentivised the construction workforce to align their work priorities to improve coordination and improve safety to allow more autonomy and efficiency in task execution. Others believed piecework wages could produce stress and lead to prioritising speed over safety, which led to accident-prone environments.

> *Jag föredrar väl ackord. […] Det ska ju inte vara att man springer till grejerna. Visst, att man kör på och det flyter på, men det ska ju liksom inte överdrivas så det bara rinner svett eller någonting, det ska ju vara normalt.*
>
> (Dorian, construction worker)

Ultimately many interviewees qualified support for piecework wages by discouraging excessively set rates which produced constant pressure to rush task execution.

Workers' safety priority and risk non-acceptance

Most interviewees described workers safety priorities as generally good, but the chaotic nature of construction limited consistent safety priorities. Reducing chaos through effective planning was therefore posited as essential to sustain risk-non acceptance. In addition, several noted that advancements in tools and machinery had reduced the need for strenuous physical exertion, thereby improving their opportunities to minimize some risks such as heavy lifts. A recurring theme was the shared belief that everyone should be able to return home safely after work:

> *Man vill ju komma hem säkert efter varje arbetsdag, samtidigt som man jobbar efter tidspressar och tidsplaner.*
>
> (Emil, construction worker)

However, it was acknowledged that safety rules were regularly broken. Many described a prevalent "I'll only just" (*Jag ska bara*) rationalisation, which entailed bypassing rules viewed as tedious and complex for seemingly low-risk tasks, such as omitting protective equipment for minor assignments. The rationale was particularly common when prior work experience led interviewees to believe that the task could be safely executed without rule compliance.

> *När det gäller fallskydd kan man ju tumma på det lite ibland. "Jag ska bara"... för att man är lat. Man ska bara ta in ett paket med lister som inte har några räcken. Så det kan ju hända. Men man vet ju vad som... man kan ju skada sig, och sen så kan ju arbetsmiljöverket dyka upp. Det kan ju bli kostsamt.*
>
> (Jasper, construction worker)

This reasoning was widely regarded as leading to unsafe practices. Accordingly, interviewees described how they combated the attitude in the workforce by contrasting these safety practices with formal regulations in verbal reminders. Critiques of the reasoning often turned inwards as self-blame, as interviewees sometimes blamed personal accidents on themselves on the basis that they had broken safety rules. However, this self-blame rarely corresponded with blaming other construction workers for accidents.

Safety priorities were also shaped by concern for others' wellbeing, with some interviewees describing how risk exposure was partly allocated to the needs of the individual, such as health status and injuries. For instance, healthier and younger construction workers were described as taking on some of the more physically demanding tasks to protect injured or older workers from tasks deemed harmful.

Age and experience were also linked to differing safety prioritisations. Some interviewees expressed concern that younger workers showed less interest in learning practical skills and cultivate capacity to anticipate future challenges. Others stressed that older workers needed to adapt their behaviour to align more closely to the safety system and the normative values promoted by the firm.

Peer safety communication learning and trust in safety abilities

Workers actively sought to influence other colleagues' safety practices and stressed that safety was a collective responsibility. Warning colleagues of unsafe practice was described as an essential safeguard against accidents as individual errors were inevitable but could be mitigated through peer oversight. Experienced workers often felt responsible for guiding younger colleagues regarding safety. This reflects how experience was associated with confidence about speaking up concerning worksite hazards to other construction workers. However, not everyone felt it was meaningful to challenge others' safety practices over minor issues, as what constituted danger was sometimes disputed.

> *Det är UE [underentreprenörer] som kan vara lite slappa på det där, både skyddsglasögon och hörselskydd kan jag tycka. Det är ibland man ser dom står och kapar nån regel utan hörselskydd. Ja, det… jag vet inte. Man blir bara frustrerad, men vad ska man göra? Säga till? […] Är det någon riktig fara… står dom och skjuter spikpistol, då kan man ju säga till.*
>
> *(Dan, construction worker)*

Ultimately, willingness to contest colleagues' safety practices often depended on the severity of the issue and whether changing behaviours was deemed possible. For example, several interviewees found it difficult to change the social environment, since they felt it was difficult to change colleagues' sociability.

While discussions described as "macho" were rejected, a joking atmosphere was valued, and a lack of humour and social life was seen as making the site less pleasant. Bullying, however, was viewed as unacceptable, and workers said they would intervene if it crossed a line.

Site management, safety representatives and experienced older workers were viewed as influential over safety norms, though older workers' views were sometimes described as too rigid. Nevertheless, interviewees stressed that anyone, regardless of age and position, could get their suggestions to improve safety implemented if they could argue their case well and had previous experience with the practice.

> *Vi har alltid försökt att det inte ska vara så pretentiöst, och att man ska hålla på idéer och sånt – utan alla får uttrycka sig. Har vi nya moment, så brukar vi alltid fråga: "har nån gjort det här förut?" "Ja, det pysslade*

> *vi med för 5 år sen". "Vad bra, hur gör man?" Och sen så tar men det därifrån, oavsett vilken position man har – så man inte försöker skapa nån hierarki, utan man försöker lösa det på bästa enklaste sätt. (Egil, health and safety representative)*

Another strategy was to know the temperament of the person you were talking to. It was noted that berating someone for safety practice was inefficient as it generated animosity. Nevertheless, some older interviewees noted that opting for a softer and supportive approach to peer interventions towards younger workers was more effective.

Discussion

Summary of Discussion

Based on the findings, three key themes are developed: (i) homosociality as a mechanism for safety practices; (ii) age, maturity and safety in construction sites; and (iii) from masculine autonomy to relational autonomy in safety work. Homosociality at the construction sites reflects a strong safety culture grounded in care rather than aggression or competitiveness with other construction workers. In contrast to previous studies (Ibáñez and Narocki, 2011, Esmée Sinéad and Markham, 2019, Iacuone, 2005) which highlighted these competitive practices as central to high status at construction sites, this study suggests that homosociality can persist even as such traditional practices are being deconstructed.

In addition, how age and maturity shape homosociality is also highlighted. Achieving maturity and age-based expectations influences safety peer interventions, supporting research that views maturity as a gendered and temporal phenomenon (Hearn and Sandberg, 2009, Janssen, 2008). These dynamics help contextualise younger workers' lower safety climate scores, which show similar patterns to prior studies (Gyekye and Salminen, 2009, Stergiou-Kita et al., 2015).

Tendencies towards deconstructing gender and the importance of age-based expectations for homosociality are highlighted in the discussions on the changing role of autonomy at these construction sites, where relational autonomy was often expressed. Nevertheless, these notions collided with anxieties that the formal safety system would limit autonomy.

Finally, the section develops a perspective on how safety interventions intersect with homosociality in male-dominated workplaces. While the article shows some support that there is a dialectical relationship between masculinity and safety similar to Jensen et al. (2014), the article highlights limitations in approaches that seek to cultivate a safety culture based on care for the group over individuals. This runs contrary to Ely and Meyerson's (2010) work on men in high-risk professions, where caring practices towards the collective encouraged by management led to changing gender norms.

Homosociality as a mechanism for safety practices

This section shows (i) how homosociality is intertwined with safety as safety practices can entail a homosocial practice (ii) construction workers' safety practices blend care and competitiveness, reflecting shifting status on preventative safety, mastery and collaboration, while navigating ongoing tensions between efficiency and safety.

The findings show how construction workers' safety practices incorporate both care for colleagues and competitive practices. As such, practices emphasising collaboration and care are stressed, while competitive practices against the clock were highlighted and

self-blame when making mistakes is maintained. Competitiveness against colleagues, however, was largely absent. Unlike the findings from Gherardi (2006) and Paap (2006), risk-taking was not posited as a status-bearing practice; instead, preventive measures like cleaning were valued. Likewise, rule-breaking to prove male virility and courage were rejected, contrary to the construction workers analysed by Gherardi and Nicolini (2002). This shift is evident in the quantitative findings, where few saw heroism as essential for success. Nevertheless, the questionnaire also showed that construction workers had more doubts about their safety prioritisation than others.

Construction workers sought to align their safety practices with colleagues by assessing their actions and intervening when their practices were deemed not safe. In doing so, they seek to construct a shared phantom image of masculinity, using it as a standard against which practices are evaluated and coordinated (Lindgren, 1996). This phantom image contains both caring and competitive practices and ways to balance trade-offs between safety and efficiency.

The quantitative findings reveal generational and positional differences in how safety is perceived and, in turn, how others' safety practices are evaluated. As Gherardi (2006) observes, safety is often depicted as inherently part of competence in construction work. Through a framework that safety practice is always improvable, safety and health become coded as a form of mastery (Somerville and Abrahamsson, 2007, Nielsen et al., 2013). This allows men to do gender through skill and innovation rather than toughness (Brandth and Haugen, 2000), reproducing ideals of autonomy and mastery via caring practices such as stressing interdependence and rejection of unsafe work.

Yet, divergent views on the trade-off between safety and working fast show that the phantom image remains unsettled, especially in its relation to mastery. Similar to Gherardi (2006), taking shortcuts is viewed as an expression of mastery. This is highlighted in discussions on cleaning, where colleagues were critiqued for not being efficient in how they moved and thus overlooking risks of messy workplaces. Nevertheless, use of shortcuts was also associated with the "I'll only just" rationalisation and unsafe practices. This indicates that efficiency in one circumstance could be viewed as part of robust safety practices, whereas it could be positioned as dangerous in excess.

Age, maturity and safety in construction sites

This section highlights the importance of achieving maturity for homosocial practices and how age-based expectations shape these dynamics. Achieving or maintaining maturity through displaying strong safety practices and mentorship is an important driver to homosocial practices.

The findings highlight how status among men and age at construction sites are intertwined with notions of working efficiently and experience. As such, the study

supports the view developed in critical masculinity studies that men and masculinity are mutually constitutive of each other (Hearn and Sandberg, 2009, Janssen, 2008, Thompson, 2006). Likewise, the study supports Marchant's (2013) view that achieving maturity and being seen as a man in the construction sector occurs primarily through being efficient.

This study departs from previous perspectives by showing how efforts to embody mastery through safety practices shape homosocial co-optation. By linking safety to age, both young and old construction workers reproduce maturity as a valued, gendered ideal through notions of mastery and autonomy. Attaining and demonstrating maturity influences not only their self-presentation as novice or mature but also their age-based interactions with colleagues.

Age-based expectations thus are influential in how men approached other construction workers' safety practices. Youth was equated with strength but also inexperience, which could lead to unsafe actions. Although young workers may express health and safety more than older peers (Hanna et al., 2020), in this study they were portrayed as needing mentorship from older workers. For older workers, the mentorship role offered a way to retain status beyond physical strength by increasing efficiency (Hearn and Sandberg, 2009, Marchant, 2013). Taking on the trainee role in turn allowed younger workers learning opportunities for skills necessary for autonomous task performance, thereby indicating their mastery of the task.

Aims to maintain or achieve maturity therefore shape how younger and older men engage in the co-optation. As such, maturity is linked to taking responsibility and openly expressed care for other construction workers' safety. Thus, the study supports the view that open expressions of care can be part of homosocial co-optation (Pietilä and Ojala, 2021).

These qualitative findings contrast with questionnaire results indicating that younger workers viewed themselves and the workforce as more willing to take risks than older construction workers, echoing previous research suggesting young workers tend to hold less positive perceptions of safety (Gyekye and Salminen, 2009, Idrees et al., 2017, Ajslev et al., 2017). One interpretation of these scores found in the qualitative material and other research by scholars such as Choudhry and Fang (2008) is that young workers' limited experience reduces their capacity to recognise danger, reinforcing the importance of co-optation as a means of transmitting practical safety knowledge (Wilson, 1989, Gherardi, 2006).

A second interpretation generated from the qualitative material highlights how young workers were portrayed as taking on physically demanding tasks to protect older colleagues with declining capacity. This aligns with research showing that young men take risks to demonstrate their autonomy and competence (Creighton and Oliffe, 2010a, Stergiou-Kita et al., 2015). Within this framing, such actions can be understood

as homosocial practices through which younger men seek co-optation through demonstrating capacity to become mature.

Together, these interpretations show how age-based hierarchies link risk, efficiency and experience to age. They reinforce an image of older men as experienced but frailer, and younger men as capable yet needing guidance.

These age-based expectations are nevertheless negotiable. Similar to Gherardi (2006), younger workers can suspend these expectations by proposing safety improvements and gain respect. Their pursuit of mastery motivates them to strive to remain close with older colleagues, despite reservations concerning their practices. Older workers, meanwhile, fear that formalisation may lead younger men to rely on formal knowledge over experience, undermining alignment and solidarity. Such age-related anxieties often emerge where homosocial practices are unsettled by organisational or technological changes, making co-optation less attractive (Lindgren, 1999, Andersson, 2003). This study highlights how these concerns are intertwined with safety, as the recognition of problems and the evaluation of best safety practices are learned through interactions with other construction workers (Gherardi, 2006), Ensuring that other construction workers "see" problems and align safety practices thus sustains men's homosocial practices and, ultimately, collective safety.

From masculine autonomy to relational autonomy

This section explores the complex dynamics between autonomy, safety and co-optation at the construction site. It highlights(i) how strong safety systems encourage a conception of relational autonomy at the construction sites where strong collective safety empowered workers agency and (ii) how this securing autonomy entailed responsibilities that shaped homosocial practices at construction sites.

The ambivalence around the safety system is partly driven by tensions in their relation to autonomy at work. This echo concerns found in previous research that formalisation can weaken safety culture by constraining their autonomy (Berglund, 2011, Hale and Swuste, 1998), in turn limiting workers' autonomy in resolving goal conflicts between safety and efficiency (Boskeljon-Horst et al., 2022).

This can be counterposed to the interviewees who portrayed the formal safety system as empowering their safety practices, making the safety culture stronger. This is in line with the quantitative findings, which show strong support for the safety system and a sense that their organisation was safe. Thus, while formalisation was viewed as potentially constraining some elements of autonomy, it could be justified through its role in creating safe working conditions that support and enable autonomy (Elliott et al., 2022). Hence the men in this study follow a tendency identified among previous scholars on men's health where personal health and safety is conceptualised as

empowering their autonomy and supported if it does not conflict with their notion of manhood (Creighton and Oliffe, 2010b, Sloan et al., 2010, O'Brien et al., 2005).

The ambivalent attitude towards the safety system echoes studies in other sectors, such as Aho (2018), where truck drivers viewed stricter regulations as both protection from overwork and a threat to autonomy. In this study, however, autonomy was reframed as interdependence, as workers highlighted their dependence on others to work safely. This reasoning supports Hanna et al.'s (2020) study where strong social relations between workers are posited as vital for personal health. Therefore, in this study the ideal of autonomy resembles a relational rather than a traditionally masculine form of autonomy (Elliott et al., 2022), grounded in mutual dependence for safety and well-being.

This relational autonomy coexisted with aspects of masculine autonomy within the workplace culture, as interventions were at times limited to occasions where a colleague was engaged in a clearly dangerous activity or if mental health problems were clearly visible. Within the logic of masculine autonomy, encroaching on another man´s independence is justified when protecting their decision-making capacity (Elliott et al., 2022, Kenny et al., 2020). Caring practices through peer intervention consequently had to be carefully done in order to not encroach this autonomy (Kenny et al., 2020).

Supporting the ideal of relational autonomy and openly expressing care reflected a sense of collective responsibility and loyalty to the workforce and the project. Therefore, care for the collective was demonstrated through strong endorsement of peer interventions, justified in terms of loyalty and duty to the group. Within this framing, care became a moral duty for the men. This study therefore supports the view that moral duties can legitimise caring practices among men, as proper men are construed as upholding their duties (Kenny et al., 2020). It also highlights that autonomy remains associated with taking responsibilities, consistent with previous research in the construction sector (Stieger and Form, 1991, Ajslev et al., 2013).

As such, this language is key to legitimising care as homosocial practice while maintaining autonomy as an important part of their practices. While moral duty legitimised safety interventions despite potential encroachment of autonomy, workers' reliance on peer intervention also acted to reinforce homosocial co-optation. Key seductive elements to this co-optation were opportunities to learn skills necessary to display autonomy and mastery. Through highlighting strong safety practices as mastery and relational autonomy, their high status is preserved amidst organisational and technological shifts.

Implications for safety interventions in homosocial workplace cultures

The rejection of competitiveness towards colleagues in favour of caring practices and open support for relational autonomy are linked to the strength of the safety system. It

enables construction workers to engage in homosocial practices such as demonstrating mastery by visibly showing full compliance to safety procedures. By limiting venues to display masculinity based on competitiveness against colleagues, these systems have encouraged alternative homosocial practices centred around mastering safety systems and relational autonomy. As such, this study supports the view that changing safety systems can influence gender processes and that this can reshape homosocial practices among men in a dialectical relationship between ideals of safety and masculinity (Nielsen et al., 2015, Ely and Meyerson, 2010).

Despite having a strong safety culture, there are strong indications that old homosocial practices remain at the construction sites, and there is an ambivalence towards the safety system, where some supported the system while others felt that it was constraining. These contradictions were also visible in how maturity was tied to efficiency, which led construction workers to compete against the clock.

Since project-based work with tight deadlines can reinforce masculine ideals such as competitiveness (Lindgren and Packendorff, 2006), deadlines against the clock reinforced the role of competitiveness despite the open support for caring practices in the workplace culture. A central tension lies in how care for others can be rationalised as prioritising efficiency, echoing findings by Ajslev et al. (2013). This framing of care risks transforming care into self-sacrifice, consequently granting these practices status in the homosocial community. The persistence of the "I'll only just" (*Jag ska bara*) mentality exemplifies this dynamic.

As such, this study underscores the importance of balancing individual and collective dimensions of care in efforts to strengthen safety culture. Attempts to cultivate a strong safety culture through increasingly robust safety systems risks providing new rationalisations for risk-taking, as the construed phantom image men orient themselves towards posits efficiency at all costs as an expression of care. While previous research has shown that individualising responsibility for health can have detrimental effects on men's well-being at work (Robertson et al., 2018), this study demonstrates how emphasising collective safety and encouraging help-seeking can reproduce risk-taking behaviours in a homosocial community. Therefore, cultivating a robust safety culture in construction requires integrating initiatives that promote both mutual care and personal responsibility for health and safety.

Conclusions

This study has examined the interplay between safety and homosocial practices and its implications for the workplace culture. Aligning safety practices with colleagues was positioned as a key driver of homosocial practices, where construction workers demonstrated their maturity through embodying masculine traits such as autonomy and mastery. Working safely and efficiently were described as having achieved this maturity. The pursuit of alignment and maturity shaped co-optation based on age-based hierarchies. Although safety was widely supported, there were ambivalences in how safety was interpreted and practiced individually and collectively, and whether care for other men could be a justification for risk-taking. These dynamics were shaped by age-based expectations, where workers of all ages sought alignment with each other on their safety practices. As a result, the study shows how changing safety systems can reshape homosociality, as masculine ideals of autonomy and mastery are rearticulated through notions of care and shared moral duties, while the co-optation process is retained. The study also shows how homosociality mediates how safety rules are enacted.

Accordingly, this study has four main contributions which have theoretical implications for future research on gender and safety, as well as practical implications. First, it shows how homosociality shapes safety practices in the pursuit of aligning safety practices with other men and pursuing co-optation. Second, it demonstrates how the pursuit and maintenance of gendered maturity shapes how construction workers align their safety practices. Third, it contributes to existing research on safety and gender in the construction sector by highlighting how changing notions of autonomy influence safety practices. Fourth, and a key practical implication, it illustrates how a robust safety culture can encourage changing masculine norms, albeit that this development is partially constrained by ambivalent understandings of care. Taken together, these contributions underscore the important role homosocial dynamics of seduction, co-optation and status-evaluating practices to achieve maturity play in shaping safety practices at construction sites.

The article contains several limitations. The size of the construction companies and their substantial investment in developing their safety culture may restrict the applicability of these findings to other organisations of comparable size. Furthermore, the Swedish regulatory contexts which features legal obligations on organisations to maintain a systematic working environment policy is also a limitation. This limits transferability of the results to construction workplace cultures embedded in differently structured regulatory frameworks. Although the questionnaire findings were supported by qualitative insights, the absence of a longitudinal design limited the ability to further analyse how these dynamics transform over time. Collectively, these

limitations constrain the generalisability of the findings to other organisational and national contexts.

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