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ORIGINAL ARTICLE

Maternity Protection at Work and Safety Climate: The Perceptions of Managers and Employees in Three Healthcare Institutions in Switzerland

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The literature on the application of legal maternity protection measures in the workplace reveals that many organizations are failing to develop and maintain an in-house safety climate that manages to accommodate work and pregnancy. This study sought to understand managers' and employees' perceptions vis-à-vis different ways of managing pregnancy in healthcare settings. Further, the study aimed to identify pathways towards establishing a safety climate that makes pregnant employees feel protected and able to continue their work without discrimination or danger to their health or that of their unborn child. We investigated three healthcare institutions in Switzerland, carrying out 30 interviews with different stakeholders involved in maternity protection at work and analyzing their transcripts thematically. Managers and employees in the same healthcare institution can have divergent perceptions of maternity protection measures and their effects. Elements associated with pregnant employees perceiving a positive safety climate included their direct superiors' perceived commitment to safety, shared perceptions of risks, the perception of adequate levels of information, the presence of an occupational health unit, and formal institutional procedures for managing and supporting pregnant employees. Incorporating and considering different stakeholders' experiences is essential to understanding and improving the institution's safety climate and women's overall experience of pregnancy at work.

Keywords: pregnant workers; maternity protection measures; healthcare settings; perceptions and attitudes; safety climate; cross-case study; qualitative research; thematic analysis

1 Introduction

In most industrialized countries, a large proportion of women continue their professional activity while pregnant. The healthcare sector, which is the focus of this study, is no exception. Specific occupational exposures (e.g., radiation, microorganism, toxic agents) and activities (e.g., physical work, long shift) may endanger the health of pregnant employees and their future children (e.g., miscarriage, pre-term birth, and preeclampsia) (Cai et al., 2019a, 2019b; Goldman & Wylie, 2021). To prevent the potential adverse effects of these exposures, the International Labor Organization has introduced provisions for maternity protection (*C183 – Maternity Protection Convention, 2000*; *R191 – Maternity Protection Recommendation*). European Union (EU) legislation ensures such protection through Council Directive 92/85/EEC of 19 October 1992. Switzerland has also passed specific legislation to protect the health of pregnant employees while enabling them to continue their professional activities (see Section 1.3). Proper implementation of the measures provided for by these pieces of legislation would not only efficiently protect pregnant workers from several of the risks that they face (Croteau, Marcoux, & Brisson, 2006, 2007) but also reduce rates of absenteeism during pregnancies (Kristensen et al., 2008; Pedersen et al., 2020). Several studies have identified organizations' shortcomings in the implementation of maternity protection measures, including the absence of a risk assessment and the absence, or inadequacy, of workplace accommodation (Adams et al., 2016a, 2016b; Lembrechts & Valgaeren, 2010; Rudin et al., 2018). These shortcomings were also observed in the healthcare sector (Abderhalden-Zellweger et al., 2021; Henrotin et al., 2018). As a result, some employees face a dilemma: ask for sick leave to withdraw from a perceived dangerous work environment, with its potentially negative consequences on their career, professional relationships and salary, or work in an environment that is potentially dangerous to their health and that of their unborn child (Malenfant, 2009).

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Maternity protection is an important concern for healthcare organizations because healthcare workers face many occupational exposures. These include organizational constraints (e.g., shift work, prolonged standing), physical exposure (e.g., lifting, postural constraints, vibration, radiation), biological exposure (e.g., microorganisms) and chemical exposure (e.g., toxic products and medications) (Connor et al., 2014; Warembourg, Cordier, & Garlantezec, 2017). Healthcare workers also face numerous psychosocial risks (e.g., long hours, short recovery times) and may experience verbal or physical abuse from patients and their families (McLinton, Dollard, & Tuckey, 2018). A study in France by Henrotin et al. (2018) revealed that 43% of pregnant healthcare professionals had been exposed to at least three occupational risks to their pregnancy. Yet an accumulation of exposures is known to raise the negative health outcomes for pregnant employees (Lee et al., 2017).

Moreover, the healthcare sector employs a high proportion of women (74% in Switzerland as per our calculations using Federal Statistical Office data, March 2017). Therefore, the likelihood of having pregnant employees is great. This makes it particularly important to have effective pregnancy protection procedures.

Finally, the economic, organizational, and human resources contexts specific to the healthcare sector may create an adverse setting for the implementation of maternity protection. Indeed, Switzerland's hospitals suffer from a chronic lack of qualified personnel (Federal Council, 2019). The growing cost pressures on Switzerland's public and private sector hospitals (Rafferty et al., 2019) have led to understaffing, heavy workloads, and burnout among care teams (Robbe-Kernen & Kehtari, 2014).

This shows the necessity to ensure that healthcare institutions promote and encourage ways to accommodate pregnancy safely. We will examine this challenge through the concept of *safety climate*.

1.1 Management and the safety climate

The concept of a workplace *safety climate*, that is, "workers' shared perceptions of their organization's policies, procedures and practices as they relate to the importance of safety within the organization" (Huang et al., 2017, p. 38), has long been used in the fields of organizational psychology and workplace safety (Zohar, 2010) as a construct for understanding employees' workplace experiences (Loh et al., 2019). As a component of organizational culture, an institution's safety climate helps create a workplace in which employees share congruent perceptions about occupational risks and feel legitimate in engaging in behaviors beneficial to their safety. The validity and robustness of an organization's safety climate in the prediction of safety outcomes have been demonstrated across industries and countries (Zohar, 2010). Indeed, a positive safety climate may improve safety performance, such as lower accident or injury rates (Kalteh et al., 2019) and organizational productivity (Griffin & Curcuruto, 2016). Some studies have distinguished between the psychosocial safety climate, which reflects workers individual perceptions of their working environment and its effect on their psychological health and safety (Dollard & McTernan, 2011), and the organizational safety climate, which refers to employees' shared perceptions of what an organization prioritizes in terms of safety, while emphasizing the behaviors and attitudes expected and rewarded in the workplace (Loh et al., 2019). However, in this paper we refer to safety climate as a whole to reflect employees' perceptions of the tangible workplace environment, including its policies, procedures, values and practices (Loh et al., 2019).

Despite the great number of empirically tested safety climate scales, it is possible to identify the common elements which are likely to encourage a positive safety climate within an organization (Zohar, 2010). Firstly, studies carried out in numerous occupational settings (Christian et al., 2009; Hoivik et al., 2007; Torner & Pousette, 2009), including the healthcare sector (Flatau-Harrison, Griffin, & Gagné, 2020; Yanar, Lay, & Smith, 2019), have shown that in addition to the obvious physical characteristics of working environments, the attitudes and support of the management play key roles in creating a safety climate. Indeed, when productivity is prioritized over safety employees will adapt their behavior accordingly (Zohar, 2010). Thus, managers' attitudes play an important role in creating a healthy working environment where employees feel that it is legitimate to behave in a manner that ensures their health and safety (Hoivik et al., 2007; Kapp, 2012; Prussia, Brown, & Willis, 2003).

Secondly, shared perceptions between employees and managers about the value and meaning of safety within the organization provide a frame of reference about expected behavior and possible outcomes related to safety (Griffin & Curcuruto, 2016). If this sharedness is constitutive of safety climate, managers and workers might have different perceptions regarding the safety procedures, practices and kinds of behaviors that get rewarded and supported within the organization. Although the management may perceive the occupational environment and its operational rules to be sufficient to ensure its employees' safety, the latter may have a very different appreciation of those measures (Prussia et al., 2003). As presented by Mendez, Donato, Sandoval, and Smith (2009), as the number of differences between workers' and supervisors' perceptions increased, the perceived safety climate decreased. Finally, an organization's safety climate may deteriorate if workers perceive inconsistencies between its safety policies and procedures and its effective practices (Zohar, 2010).

To the best of our knowledge, the concept of *safety climate* has never been examined in association with maternity protection in the workplace. However, this concept seems particularly well-suited to understand the processes that can develop and maintain professional environments in which pregnant employees feel safe, where they can legitimately continue to fulfil their professional role, and where they are comfortable with standing up for their rights.

1.2 Differences in perceptions about pregnancy at work

Several studies have indicated that employees' and managers' perceptions about occupational risks and maternity protection measures play an important role

both in the application of protective measures within organizations and in the effects that those measures can produce. According to Malenfant, Gravel, Laplante, Jetté, and St-Amour (2009), differences between employees' and managers' perceptions about occupational risks may hinder the implementation of concrete measures for accommodating maternity and work. Indeed, if the company does not consider professional activities to be "at risk", it will not put in place the necessary measures to protect its employees. Moreover, skeptical attitudes about the existence of occupational risks to maternity and suspicions that employees will try to avoid working can also lead managers to doubt the usefulness of putting protective measures in place (Malenfant, 2009; Malenfant et al., 2011). On the contrary, other studies have shown that employees tend to prefer to continue working during their pregnancy and may hesitate to assert their legal maternity rights either because they fear being judged by their colleagues and managers (Adams et al., 2016b) or because they feel that they are taking advantage of the social insurance system (Lembrechts & Valgaeren, 2010).

Different perceptions have also been observed about the attitudes and support given to pregnant employees. Pregnant employees can face numerous discriminatory behaviors in their working environment (Lembrechts & Valgaeren, 2010; Lojewski et al., 2018). In the United Kingdom, most of the employers interviewed by Adams et al. (2016a, 2016b) thought that their pregnant employees rarely encountered negative attitudes towards their condition, and 89% of employers thought that protecting employees from those attitudes was easy. However, in the same study, 58% of employees stated that they had encountered at least one negative or discriminatory work-related experience linked to maternity—such as being discouraged from attending antenatal classes during work time, receiving unpleasant/offensive comments from employers or colleagues, and not feeling equally valued as an employee. Lojewski et al. (2018) highlighted that the most frequent cause of stress evoked by pregnant employees in Germany was the negative attitude they felt from their management. Furthermore, an unsupportive working environment can lead some employees to try to hide their pregnancy, which can increase the risk of conflict within the organization or raise the probability of negative pregnancy outcomes (Little et al., 2018).

1.3 The legal protection framework for pregnant employees in Switzerland

Just like the ILO's Maternity Protection Recommendation (No. 191) and EU directive 92/857CEE, Switzerland's Maternity Protection Ordinance (OProMa) (2001) states that any organization whose workers' activities may be strenuous or dangerous for the health of pregnant workers and their unborn child must assess the risks inherent in the work and put in place protection measures for its pregnant employees. The OProMa presents a list of occupational activities and exposures that might prove dangerous or strenuous for pregnant employees, including biological, chemical and physical exposures, but it does not consider any psychosocial risks. This ordinance reflects the employer's general duty to provide and maintain working conditions that will protect their employees' health (art. 6, *Employment Act (EmpA)*, 1964), with particular respect to maternity (art. 35 EmpA). To properly fulfil their obligations, organizations must have a pregnancy-specific risk analysis carried out by a qualified occupational health (OH) specialist before even hiring a woman and provide any female employee carrying out a dangerous or strenuous activity with information on the risks specific to her workstation and on the prescribed protection measures for it (art. 63, *Ordinance 1 to the Employment Act (General Ordinance)*).

1.4 Study Aims

This study explored the perceptions of the managers and employees of three healthcare institutions in Switzerland with regards to different ways of managing maternity protection (the assessment of occupational risks, information sharing, and maternity protection measures implemented within their institution). By examining pregnant workers' experience of maternity protection measures, we sought to identify the elements that contributed to producing a safety climate that made them feel protected and able to continue their work without discrimination or danger to their health or that of their unborn child. On a broader level, the study might provide new ways of thinking about how to develop better maternity protection conditions in the workplace.

2 Methods

2.1 Participant selection and data collection

This study was part of a broader research project (Krief et al., 2018) investigating the application of maternity protection measures in Switzerland. In the project's initial phase, managers of 107 healthcare institutions answered a telephone questionnaire investigating their implementation of the OProMa (Abderhalden-Zellweger et al., 2021). As case studies, we decided to focus on experiences of the maternity protection measures in a convenience sample of three healthcare institutions. To recruit them, the investigator asked the managers answering the questionnaire whether they would be interested in participating in a qualitative study of their institution's experiences in managing their pregnant staff. Among the 49 who responded positively, institutions with fewer than 50 full-time equivalent employees were discarded, as were those that had had few instances of pregnant employees in the last five years. The three selected institutions showed suitable diversity in their activities (rehabilitation hospital, general care hospital and homecare services) and in how maternity protection measures had been implemented (with and without established procedures, risk assessments, etc.).

Table 1 presents the institutions that participated in the study and the number of interviews carried out.

First, we organized meetings with institutional management teams to discuss the study, collect information on their institution's organizational chart and record the

Table 1: Institutional characteristics and number of interviews carried out by institution and type of actor.

	Rehabilitation hospital	General care hospital	Homecare services	
Legal structure	**Semi-public**	**Private**	**Public**	
Size in Full-Time Equivalent employees	**>50 to <250**	**>250**	**>250**	**Total**
Interviews with institutional representatives and employees				
Director of the Clinic	1	–	–	**1**
Human resources manager	–	1	1	**2**
Occupational health physician or occupational health nurse	–	2	1	**3**
Ward manager	2	4	4	**10**
Member of staff committee	1	–	–	**1**
Employee who had been employed and pregnant in the past 5 years				**13**
Nurses	4	2	3	
Physiotherapists	–	2	–	
Community healthcare assistants	–	–	2	
Total	**8**	**11**	**11**	**30**

contact details of those responsible for the occupational safety of pregnant employees. Second, we organized 17 semi-structured interviews with different institutional stakeholders across the three institutions (director, human resources manager, occupational health (OH) physician or OH nurse, ward manager, and member of staff committee). Third, we invited the employees to contact the study team via posters describing the research, and other participants were recruited orally or by email via staff committees, OH nurses or human resources departments. Of the 13 employees recruited for the interviews, 9 were nurses, 2 were physiotherapists and 2 were community healthcare assistants.

In total, we carried out 30 semi-structured interviews with employees and institutional stakeholders across the three institutions (**Table 1**).

The interviews took place in those institutions, in reserved rooms and during working hours, or in employees' homes if this was more convenient for them (outside working hours). Interviews lasted approximately one hour each, they were led by one or two members of the team and were recorded with the agreement of the participants. We developed two interview topic guides (one for employees and one for institutional stakeholders) based on our research questions, authors' clinical experience and the literature. We made small adjustments to adapt the guides to the institutions' characteristics. The interview guide for managers and occupational nurses investigated the themes of workplace exposures, dangerous or strenuous activities, planned procedures and implemented maternity protection measures, difficulties and resources in the management of pregnant employees. Following a general opening question concerning their experience of their pregnancy in the workplace, the interview guide for employees investigated the themes of workplace exposures, dangerous or strenuous occupational activities, experience of announcing pregnancy and subsequent implemented maternity protection measures, perceptions of the effectiveness of these measures, and difficulties and resources available in accommodating pregnancy and employment.

2.2 Analyses

A cross-case study (Miles, 2015) provides concrete, context-dependent knowledge (Flyvbjerg, 2011), and this seemed particularly suited to developing new ways of thinking about how to improve the safety climate for pregnant workers. Our study followed the steps recommended by Braun and Clarke (2006) for qualitative data analysis: familiarization with the interview data, generation of initial codes, development of an initial analytical framework by iteratively grouping codes and refining categories, indexation of themes and sub-themes, and report production once investigators have reached an agreement. We treated the anonymized *verbatim* transcripts using MAXQDA 18 software, separating them by institution (to conduct a cross-case analysis) and by stakeholder type (employees or institutional stakeholders). The first author labelled extracts from participants' discourses using MAXQDA, and the labels on that first version were discussed in a team meeting with the co-authors. The first and second authors reworked the labels and created conceptual themes and sub-themes emphasizing participants' points of view to understand how pregnancy was managed within the three healthcare institutions and, most importantly, how employees perceived the protection offered to them. Finally, all the authors agreed with the themes and sub-themes that were developed through our analysis.

3 Results

Table 2 presents a summary of the results. Column one shows procedures for protecting pregnant employees within the organization. Columns two to four present the perceptions of managers and employees regarding their institution's management of maternity protection, and column 5 presents the employees' perceptions about the institution's safety climate.

Table 2: Institutional procedures and perceptions of the management of maternity protection and the institutional safety climate.

Type of institution	Procedures for protecting pregnant employees	Managers' and employees' perceptions about the management of pregnancy protection in the workplace			Employees' perceptions about the safety climate during pregnancy
		Perceptions about occupational risk assessment	Perceptions about the level of information given/received	Perceptions about the pregnancy protection measures implemented	
Rehabilitation hospital	No RA. No specific procedures. Informal meetings between the pregnant employees and their ward manager. Adjustments to work schedules (max. 9 hours/day; a move to 8-hour shifts from 12-hour shifts; an end to night shifts; extra breaks). Adjustments to employees' tasks (relief from strenuous tasks; reorganization of pregnant employees' work by pairing them up with another colleague). Reassignment to more administrative tasks.	Divergent perceptions between managers and employees about occupational risks. Most employees thought that their managers failed to consider activities which they viewed as strenuous.	Managers considered that providing informal information was adequate. Most employees were disappointed about the level of information received.	Managers perceived the protection of pregnant employees to be well managed through a case-by-case and on-demand approach. Managers perceived colleagues to be an essential resource. Most workers highlighted a lack of anticipation and proactivity from their organization. Employees found it difficult to ask their colleagues for help.	Employees perceived a lack of foresight in their protection and that pursuing on-demand protection measures was exhausting. Guilty feelings with regards to colleagues led some employees to potentially put their health at risk. Most employees experienced tensions between the protection of their health, their work and safeguarding their jobs.
General care hospital	RA for pregnant employees. On hiring, staff attend an OH briefing which includes a part dedicated to the OProMa. Interview with the HR department as soon as employees announced their pregnancy. Consultation with the institution's OH nurse after the announcement of the pregnancy. Regular meetings with the direct superior. Adjustments to work schedules (max. 9 hours/day; a move to 8-hour shifts from 12-hour shifts; an end to night shifts; extra breaks). Adjustments to employees' tasks (relief from strenuous tasks, a ban on working in operating theatres or with teratogenic agents). Reassignment to more administrative tasks. Access to a rest area.	Managers' and workers' perceptions of what constituted a dangerous or strenuous activity were very similar. Some of the managers did not know whether their organization had done an RA.	Managers were satisfied with information procedures. The OH nurse was considered a valuable resource. Employees designated the OH nurse as their point of access to information. However, they sometimes met her at an advanced stage of their pregnancy.	Most managers perceived that their organization had put in place the legal safety measures. However, some of the protective measures were perceived to be difficult to implement because of a lack of personnel and resources. The extra workload had to be taken on by the pregnant employee's colleagues. Most employees perceived that the measures proposed only kicked in after a certain amount of time or that they failed to consider their actual working environment. Some employees perceived that certain work adjustments ended up adding to their colleagues' burdens. Some employees perceived that occupational risks were well managed, mostly thanks to their colleagues' help.	Guilty feelings with regards to colleagues led some employees to not take their allotted extra breaks. Employees perceived a lack of enforceability in the planned measures. This failing contributed to creating a safety climate which made it difficult to accommodate work and pregnancy.

(Contd.)

Type of institution	Procedures for protecting pregnant employees	Managers' and employees' perceptions about the management of pregnancy protection in the workplace			Employees' perceptions about the safety climate during pregnancy
		Perceptions about occupational risk assessment	Perceptions about the level of information given/received	Perceptions about the pregnancy protection measures implemented	
Homecare services	RA for pregnant employees. Consultation with the institution's OH nurse after the announcement of the pregnancy. Adjustments to work schedules (max. 9 hours/day; a move to 8-hour shifts from 12-hour shifts; an end to night shifts; extra breaks). Adjustments to employees' tasks (relief from strenuous tasks; removing employees from contact with patients who pose a risk of infection or for whom cytostatic must be handled). Other procedures require the employees' active participation, such as in the identification of the risks faced.	Managers and workers' perceptions of what constituted a dangerous or strenuous activity were very similar. Some managers perceived that working in homecare services was more dangerous than in hospital settings. The majority of employees perceived that occupational risks were well taken into account by their managers.	Managers mainly evoked the HR department as the source of information for pregnant employees. They perceived that their organization properly informed pregnant employees about occupational risks. Employees mainly evoked their immediate supervisors as their source of information. Most of them perceived an appropriate level of information.	Most managers thought that their organization did what was necessary to protect pregnant workers. Some managers felt that it was difficult to protect their staff because of the very nature of homecare services. The fact that homecare services do not take place in a fixed location obliges pregnant employees to be strongly committed to identifying potential dangers and, at the same time, requires the management to be flexible to ensure protection. Employees were satisfied with maternity protection measures. They felt well listened by the hierarchy.	Employees perceived support from their direct supervisors; they valued being involved in the identification of dangerous situations and benefitting from protection measures that were equal for everyone. Workers felt considered and valued, which fostered a corporate climate in which it felt legitimate to speak with their managers and to benefit from their rights.

RA, Risk analysis; OH, occupational health.

3.1 Case 1: Rehabilitation hospital

3.1.1 Perceptions of occupational risk assessment

Managers and employees from the rehabilitation hospital had divergent perceptions with regards to the occupational risks faced. Even managers' perceptions were not homogeneous. For example, some of them identified toxic products as a risk, whereas others thought that work might be strenuous but not dangerous because employees were not handling toxic products. Employees perceived far more dangerous or strenuous activities than their managers, including the handling of toxic products. Three of the four employees interviewed also thought that their managers failed to consider activities that they experienced as strenuous.

> To them, we're pregnant, but in fact we do the work just like the others. I think it's complicated, especially when your tummy starts to stick out. In the end, there are things that you can't do properly anymore. Half crouched-down to put on somebody's tights... that's complicated! (Nurse)

3.1.2 Perceptions about the level of information given/received

Three of the four employees interviewed said that they had been disappointed regarding their expectations of their manager's knowledge about the maternity protection measures that needed to be taken. They felt that they themselves had had to find the necessary information on occupational risks and on their rights as pregnant employees.

3.1.3 Perceptions about the protective measures implemented

Managers evoked a certain number of measures implemented to protect pregnant employees' health (**Table 2**). Managers described a case-by-case and on-demand approach to pregnant employees. For example, the Director of the Clinic affirmed that:

> If we are talking about managing the maintenance department, then we are not really going to worry because it is made up of four men, and a man might only be replaced by a woman there in a couple of years. [...] But let's be pragmatic, [...] when we know that a woman is pregnant, we think about her work as a whole and then we deal with the situation. [...] And I mean to say that that is early enough.

This case-by-case approach is perceived to be the best way to proceed to ensure that each employee and each pregnancy is treated as unique. They emphasized the pragmatic side of managing pregnancy at work. Some managers also stated that they adjusted working conditions based on their personal experience and the employee's point of view—the person best placed, according to those managers, to identify the risks inherent in her daily activities.

> [...] it's common sense and it's the pregnant employee who can give the most information. A procedure can't give me information. It's a good idea, having a procedure. Why not? But it's so individual. (Ward manager)

Managers also said that they relied heavily on solidarity and help from pregnant employees' colleagues to help them with the more strenuous tasks.

> In practical terms, what happens is that the pregnant nurse is going to have a chat with her colleague, and they are going to swap some tasks between them. That means that if, for example, there's a [...] 150-kg patient to lift, she is going to say to her colleague, "I can't do that. Can you do it? In return, I'll bandage your patient." So that works very well; there is very good collaboration. (Ward manager)

Rehabilitation hospital employees mentioned the workplace adjustments that were offered to them (**Table 2**). However, they also perceived failures in these protective measures. Notably, some of them highlighted a lack of planning from the person in charge of scheduling working hours, and they perceived that nothing would get done unless the pregnant employee requested it.

> In fact, the way I understood it, nothing was really implemented [in advance]: it was on a case-by-case basis every time. Things would get put in place depending on what the future mother asked for and on whether it was possible to do it, at that moment, in the clinic. (Nurse)

3.1.4 Perceptions about the safety climate

Employees perceived that the management of their pregnancy lacked foresight and that pursuing on-demand protection measures was exhausting. Several of them stated that they had had to battle to obtain adjustments to their work or to have their rights respected.

> I had to justify myself constantly, and that, that bothered me a bit because I was there and I said to myself, "I've got to fight, I don't feel too good, I want to work, and I get the impression that I have to justify everything." (Nurse)

Managers said that their pregnant employees' colleagues were supportive when it came to taking on some of the strenuous tasks and ensuring that the institution's services would continue to function. However, some employees found it difficult to ask their colleagues for help and to put an extra burden of work on their shoulders. Therefore, so as not to overload their colleagues, some employees decided to continue working, some even resorting to overtime, thus potentially endangering their health or the health of their unborn child.

Finally, for most employees, the experience of pregnancy within their institution was characterized by the tension caused by protecting their health on the one hand and fulfilling their work objectives on the other, and this was also linked to their goal of keeping their job.

> You're just an employee. [...] it crossed my mind, you know? Do I want to risk my job after my pregnancy by telling them that they have to get my

> workplace analyzed to see whether it's too risky for a pregnant woman or not? (Nurse)

3.2 Case 2: General care hospital

3.2.1 Perceptions of occupational risk assessment

Managers' perceptions of what constituted a dangerous or strenuous activity for pregnant employees were very close to those expressed by their staff. However, some managers did not know whether a risk analysis had been done within the institution or whether pregnant employees could consult it.

3.2.2 Perceptions about the level of information given/received

According to managers, the procedure in place concerning the information given to pregnant workers was satisfactory (**Table 2**), and the OH nurse was considered a valuable resource when it came to managing pregnant employees. However, the OH nurse sometimes found it difficult to systematically consult with every employee who announced that she was pregnant: the activities of different hospital units and the stakeholders' temporal availability made organizing meetings complicated.

The employees who were interviewed also designated the OH nurse as their point of access for information about maternity protection. Some of them, however, noted that sometimes these consultations only occurred at an advanced stage of their pregnancy.

> I was called in for a consultation about my second pregnancy after I had given birth... (laughs) [just to tell me] which working conditions were suitable for pregnant women; it was a bit late! (Nurse)

3.2.3 Perceptions about the protective measures implemented

Managers mentioned several protection measures implemented within their institution (**Table 2**). However, despite the formal procedures in place, managers perceived the concrete application of planned protective measures to be difficult. In particular, the changed working hours proposed to pregnant employees (moving from 12-hour to 8-hour shifts) generated a lack of staff in care teams that had to be filled by their colleagues. Some managers were conscious of the possibility that tensions might arise within care teams.

> Sometimes you'll hear the care team making negative comments, yes! Like, "Their breaks have been extended, too." That type of thing, or "She is sitting down all the time!" Yes, you hear that sometimes. (Ward manager)

However, those managers felt that they had no other alternatives as they only got a replacement for pregnant employees if they went on full sick leave, signed off by their gynecologist. Indeed, some managers preferred that their employee stopped work completely by being put on sick leave.

> That's why we have this kind of perverse effect: at a certain point, it's easier to manage if she is not there at all! It's easier to manage than if she's there 4 hours a day, you see? [...] When she is no longer working at 100% effectiveness, all the work she can't do has to be spread out among her colleagues, that's for sure. (Ward manager)

Soliciting help from colleagues was mentioned several times. For example, one of the managers perceived no margin for adjusting the work schedule yet saw the pregnant employee's colleagues as the only possible resource with which to accommodate maternity protection and "work output".

Concerning the adjustments implemented for them, employees mentioned that they had been removed from patient care duties when there was a risk of infection and that there was a rest area available for them within the institution. However, most of them perceived that the measures proposed only kicked in after a certain amount of time, which led them to question their effectiveness.

> *So, you were moved on to 8-hour shifts?*
> Yes, but I didn't get them straight away. [...] I announced my pregnancy at three months; I got my 8-hour shifts at five months. I still did two months of 12-hour shifts that I shouldn't have done. (Nurse)

Some employees also felt that certain work adjustments (fewer working hours) ended up adding to their colleagues' burdens.

> *[...] when there are [pregnant employees]..., aren't they replaced?*
> No, it's *absorbed*. [...] you know that after about four months, you don't do any more nights, so the others get stuck with more. (Physiotherapist)

Finally, several employees believed that the measures aimed at protecting them did not actually do so because they failed to consider their true working environment. For example, one employee described how she only used the rest area once during her pregnancy because the time needed to walk there and back took the entire 15 minutes allocated for her break. Other employees also thought that the extra 15-minute break allotted to them when pregnant was a good idea, but that it was often inapplicable in practice because of how busy the ward was.

3.2.4 Perceptions about the safety climate

For the employees, the fact that their institution did not plan for replacement staff induced feelings of guilt regarding their colleagues. This led to some of them not taking their allotted extra breaks so that they could stay with their colleagues.

The perceived inadequacies of the implementation of maternity protection measures led to some employees staying at work under dangerous conditions or consulting their gynecologist to ask for a reduction in their working hours via full or part-time sick leave.

> The gynecologist will have to write a justification of why he's signed her off work, and for that, simple

> fatigue and nausea are not symptoms, I mean, they don't justify sick leave! So, what I did was, at six months, I told him, "Hang on! I'm *exhausted*. I've got another kid at home, my job, I'm a physio," and then I told him that I kept having contractions. Because I knew that if I said that—it wasn't completely true—but I knew that if I said that, they'd have to shorten my working hours [...] (Physiotherapist).

The lack in the enforceability of protective measures contributes to creating a safety climate which makes it difficult to accommodate work and pregnancy.

3.3 Case 3: Homecare services

3.3.1 Perceptions of occupational risk assessment

Managers and employees shared similar perceptions towards occupational risks faced by pregnant workers within the institution. Some managers thought that certain specificities in the provision of homecare services made its activities more dangerous and strenuous than working in a hospital.

> In hospital, it's simpler: you press a button, and the bath fills up; you press on a button and the bed goes down and then comes back up. In a home, it's difficult: beds are right down near the floor, people are asleep, and bathrooms are microscopic. (Ward manager)

Most employees perceived that their managers had properly considered occupational risks.

3.3.2 Perceptions about the level of information given/received

Despite the procedures in place within the institution (**Table 2**), the managers mainly evoked the human resources department as the source of information for pregnant employees' rights. The pregnant employees themselves mainly evoked their immediate supervisors as their source of information.

> When I announced my pregnancy, it was my boss who insisted on following the rules, [...] she really insisted, telling me that I had to call up and warn them so that things were followed to the letter! And it was then that I discovered that I had rights that I hadn't known about the first time [I was pregnant]! (Community healthcare assistant)

Both managers and employees mostly perceived that their institution properly informed pregnant workers about occupational risks and planned protective measures.

3.3.3 Perceptions about the protective measures implemented

Table 2 shows the maternity protection measures implemented within the organization. Some procedures were defined automatically, that is, systematic consultations with the OH nurse after the announcement of the pregnancy, and work schedule adjustments. Other procedures required the employees' active participation, such as in the identification of the risks they might meet in their daily activities. Several managers highlighted the fact that employees are and must be agents in their pregnancies. Indeed, according to the head of Human Resources, the fact that homecare services do not take place in a fixed, central location obliges pregnant employees to be strongly committed to identifying potential dangers and, at the same time, requires the management to be very flexible to ensure maternity protection.

> I think that today, our best tool is really the systematic interview [with the pregnant employee], where we can target things; because afterwards there are so many things which we don't know about. We can take a particular look at planning, schedules, things like that, but then there are many things which we don't know about because we are not in a normal company—they are not here. They are out of our sight. I think that [...] what we do well and what we must maintain, is the interview, raising the employee's awareness but telling her that she also has some duties [...]. She must also be an actor in her own care, and in her protection too. (HR manager)

Four out of five employees told of their satisfaction with the maternity protection measures put in place.

> When there were care procedures that I could not carry out [for the patient], they put us down as incompatible [...] and in the same way, if I asked to be relieved of somebody whose place, I didn't feel at ease anymore, they wouldn't put me down for them either. (Nurse)

Employees also felt that the management of their working hours, especially the introduction of extra breaks, was very useful and well adapted to enabling them to continue working. Indeed, all the employees encountered mentioned the fact that they felt well supervised, listened to and protected by the hierarchy.

> My immediate superior really listened to me; she really, really listened to me. [...] at the maternity protection level, it was really, really good! Everything was done; the occupational health nurse had done a protocol. So, the protocol's available; we have a work contract where everything is noted down about pregnancy, so my immediate superior knew everything that had to be done; she took care of me very well too. (Nurse)

3.3.4 Perceptions about the safety climate

The procedure put in place in the homecare services institution was perceived favorably by all its stakeholders, even though some managers sometimes felt that it was difficult to protect their staff because of the very nature of homecare services. The implementation of maternity protection measures that were equal for everyone (adjustments to working hours, extra breaks), coupled with the active involvement of the employees themselves

in the identification of patients and/or situations that they considered strenuous and dangerous, was very positively received. Employees felt that they had been considered and were valued; they felt that they were working in an environment in which it was perfectly legitimate to benefit from their rights and where it was acceptable to speak to their superiors about situations that they perceived to be dangerous.

> Because, right from the start, I was made to feel confident about the fact that, yes, I was pregnant and that I had rights. So, I was less scared of saying, "Yeah, so, tomorrow you've put me down for this [job]. That seems a little too complicated to me." Being allowed to say that was really appreciable. (Nurse)

Employees were also satisfied with the planned procedures and maternity protection measures offered to them.

In summary, the homecare services employees felt as if the institution, and especially their direct superiors, had supported them. Most employees perceived that their managers put maternity protection above productivity.

> From the moment when there really was a problem—I mean, that I was put on sick leave, they were understanding, and they did want the pregnancy to go well more than they wanted me in work! (Nurse)

4 Discussion

Even though the three healthcare institutions were all subject to the same maternity protection legislation (OProMa), the interviewees evoked contrasting experiences of the safety climate surrounding pregnancy. And within the same institution, managers and employees had different perceptions about the risks faced and the effectiveness of the prevention measures proposed.

To begin with, we will discuss from a qualitative perspective our hypotheses about the associations between pregnancy management and safety climate. Notably, we will reflect on how our analyses might open pathways towards better occupational health protection and better accommodation of pregnancy in the workplace. We will then identify two issues in employees' experiences which deserve a more in-depth examination.

4.1 Perceived pregnancy protection measures and the safety climate

4.1.1 The perceived commitment of direct superiors

In the homecare services institution, the direct superiors' involvement in the task of relaying information made employees feel well informed and heard: they felt better informed and more taken into consideration and supported than did their colleagues in the general care hospital—far more, indeed than their colleagues in the rehabilitation hospital. The literature shows that perceptions of managerial commitment to safety are a key influence on the safety climate and workers' safety behavior (Christian et al., 2009; Clarke, 2010; Griffin & Curcuruto, 2016; Kouabenan, Ngueutsa, & Mbaye, 2015;). Huang et al. (2017) highlighted the central role played by direct superiors by showing that their commitment to safety could compensate for an organization's poor overall safety climate. In hospital settings, McCaughey, Halbesleben, Savage, Simons, and McGhan (2013) revealed that the quality of supervisors' leadership on issues of safety was strongly positively associated with employees' perceptions of safety. Our study expands on these previous findings by showing that support from direct superiors and the significance they give to maternity protection make pregnant employees feel legitimate about trying to accommodate their pregnancy with their work.

4.1.2 Shared perceptions of risks and adequate levels of information

In the general care hospital and the homecare services institution, managers' and workers' perceptions of what constituted a dangerous or strenuous activity for pregnant employees were very similar. This contrasts with the rehabilitation hospital. We speculate that the implementation of specific maternity risk analyses within those two institutions helped to bring their perceptions into line with one another. Nevertheless, it seems important to mention that similar perceptions about the occupational risks within an institution are not necessarily synonymous with a positive safety climate. Indeed, it could happen that managers and employees agree that pregnant workers are exposed to hazardous working conditions.

Our analyses also showed that the managers and employees in all three institutions identified some occupational activities as being dangerous or strenuous that do not yet appear in the legislation, that is, commuting and overall psychological burden. In addition to expert opinion, employees' experiences—and what is important to them in terms of establishing the right balance between work and pregnancy—should also be used to inform any public authorities seeking to implement more adequate policies and legislation.

The employees interviewed at the rehabilitation hospital felt that their institution had not identified all the occupational risks that might affect their pregnancy. Furthermore, contrary to employees' beliefs, managers seemed to think that they had taken good care of the pregnant workers. A study by Mendez et al. (2009) suggested that, in general, workers and supervisors tended to agree on their organization's overall safety environment. However, where differences do occur, workers' perceptions of the level of hazard, the frequency of exposure, and the frequency of safety practices and their effectiveness are systematically lower than supervisors' perceptions. Moreover, in such institutions, communication was perceived as adequate by managers but perceived as disappointing by employees. Such mismatches between organizations' and its employees' perceptions of what constitutes an occupational risk or an adequate level of information can harm the implementation of maternity protection measures (Malenfant, 2009). They may also affect the perceived safety climate, as in the case of the

rehabilitation hospital, where employees perceived a lack of foresight in their protection and felt there were several conflicts between their work and the protection of their health during their pregnancy.

4.1.3 The role of the occupational health (OH) unit

The existence of a dedicated OH staff member or unit within the organization may promote common representations of occupational risks, knowledge of pregnant workers' rights and the transmission of this information to all employees, and the application of workplace adjustments and/or job reassignments. In the rehabilitation hospital, which had no such unit, several employees were disappointed with the information that they had received. The homecare services institution represented a special case because although it had an OH nurse, she had only been designated as the main point of contact for information for pregnant employees just before our interviews. Thus, the employees interviewed had previously to rely on their supervisors for the relevant information.

Our findings are consistent with other studies (Gravel & Malenfant, 2012) which suggested the importance of being able to count on an in-house resource person or mediator—preferably an OH specialist—to support the implementation of maternity protection measures and to facilitate dialogue between the different stakeholders.

The existence of a dedicated OH unit can also improve employees' perceptions that their occupational health is an important subject, one valued within the institution, and this can have a positive impact on the perceived safety climate.

4.1.4 Formal procedures for managing and supporting pregnant employees

Many of the pregnant employees we interviewed felt that the existence of established procedures compliant with Switzerland's OProMa legislation meant they were supported and protected. The general care hospital and the homecare services institution employed risk analysis, internal maternity protection procedures and had an OH nurse. These elements appeared to reflect management concerns about maternity protection at work and constituted the core of the safety climate.

Nevertheless, a procedure's mere existence is insufficient: the reality of employees' day-to-day working conditions can impede or distort the proper implementation of its maternity protection measures. Managers—and employees even more so—realize that planned maternity protection measures are often difficult to apply, which reflects a lack of consistency between the prescribed maternity protection measures and the demands and constraints of the working environment where they were meant to be implemented. For example, in the general care hospital, adjustments to pregnant employees' working hours ran into problems of understaffing. Because the emergence of a good safety climate depends on employees' perceptions of the *real* safety practices within the organization, the divergence between declared policy and actual practices could be used as a metric for poor management commitment and, more generally, a poor safety climate (Zohar, 2013).

The gap between an organization's plans with regards to safety procedures and what is really implemented at workstations echoes a distinction theorized in the field of ergonomics and resilience engineering. This is the distinction between the concept of *regulated safety*, which refers to the norms and procedures designed by regulatory authorities, the hierarchy, and so on, and that of *managed safety*, which refers to the strategies adopted by the actors concerned in order to adapt those procedures to a particular context (Cuvelier & Woods, 2019). Occupational safety cannot be guaranteed exclusively by the existence of rules and regulations; it also requires the skills of employees and other actors within the organization to adapt these rules to a real-world context to make them effective and efficient (Rocha et al., 2015). To encourage greater flexibility, our results suggest a rethinking of maternity protection measures by incorporating a bottom-up approach to rules that comply with the legislation. Our results should encourage different stakeholders to speak and work together until they share common representations of occupational risks and measures to be taken.

4.2 Issues for further consideration

We identified some difficult issues around employees' experience of maternity at work, and these will require more investigation.

4.2.1 Involvement of pregnant workers and management in the protection process

Swiss legislation states that implementing maternity protection measures in the workplace is the employer's responsibility (art. 35 EmpA). However, in the cases described in this paper, that responsibility often falls upon pregnant workers, who must ensure their own protection by using personal strategies (e.g., asking their gynecologist for sick leave) and collective strategies (e.g., asking their colleagues for help). However, this can undermine professional relationships and cause feelings of guilt when colleagues are obliged to take on extra work. It can negatively affect workers' perception of their organization's safety climate. For example, maternity protection measures in our participating rehabilitation hospital were applied using an on-demand approach requiring employees to be proactive. Although managers felt that this procedure led to a personalized approach to supporting their employees, the workers concerned sometimes felt they were "left alone" and having to fight for their rights and legal protections. Indeed, some measures implemented by organizations, either with the best of intentions or out of habit, can generate unexpected effects and be perceived negatively by their target audience.

In contrast, in the homecare services institution, employees were responsible for identifying and announcing any strenuous or dangerous activities which they no longer wished to do, but that responsibility was coupled with pre-established, legally compliant protection measures as well as flexible managers who quickly adapted to their employees' requests. This maternity protection strategy

was attentive to the wishes of the employees, who in turn declared their satisfaction with the measures offered to them. These findings suggest that encouraging pregnant employees to participate in their own maternity protection measures is essential, but only once certain conditions have been met. Making them responsible for their own maternity protection without adequately supporting them in this endeavor gives them the feeling that their managers are not concerned about their protection, and this translates into a poor safety climate.

4.2.2 (Ab)use of teamwork and help from colleagues

Several of the managers and employees interviewed estimated that effective maternity protection measures required the help and support of colleagues. However, this type of strategy not only overburdens other members of the team but can also generate tensions within it. It can also lead to the pregnant employee feeling guilty about what she is putting her colleagues through (Malenfant et al., 2011). As noted by Gravel et al. (2017), while the involvement of the team is essential for successfully implementing maternity protection measures, employers should not offload their responsibility onto the pregnant worker and her team. The employees interviewed indeed seemed to be caught in a dilemma between asking for help to avoid potential dangers and seeing their colleagues exhausted. Guilty feelings sometimes led to employees putting their health or the health of their unborn child in danger, either by working overtime or refusing extra breaks. Giving the responsibility to the pregnant employees or their colleagues instead of adapting work conditions through collective prevention strategies will impede the development of a good *safety climate*. It may save money in the short term, but it ignores the potential adverse consequences in the medium term (tension and conflicts between colleagues and hierarchy, burnout, turnover, etc.).

These reflections suggest that relying solely on informally soliciting one's colleagues for support is bound to fail. Pregnant employees and their colleagues need to be able to count on the availability of extra personnel; something which may be particularly true in the healthcare sector. Indeed, current understaffing levels in Switzerland's healthcare institutions mean that teams cannot adequately support their pregnant colleagues. These observations require further exploration. Notably, direct observations in the workplace could enrich the data obtained from these interviews and enable a better understanding of the role of collective regulations in the protection of pregnant employees.

4.3 Strengths and limitations

A methodology using cross-case analysis enabled us to better understand participant's perceptions and experiences of maternity protection measures in healthcare settings. The validity of the research was enhanced by the fact that we interviewed several stakeholders from each institution to get a better understanding of each case studied (Hyett, Kenny, & Dickson-Swift, 2014). The realization that the maternity protection measures adopted by an institution can be perceived differently by employees and managers provides some practical avenues for future investigations that can be extended to other occupational contexts. Finally, considering the experiences of pregnant workers might enable us to redirect future legislation towards a maternity protection approach more in line with their needs and help us to rethink the practices of companies and other actors involved in the protection of pregnancy at work.

With regard to limitations, our decision to work with the concept of safety climate put the study's focus clearly on the interviewees' perceptions. Therefore, the data collected did not provide us with any indications of the different organizations' effective standards of safety. Secondly, the study population was made up of employees with a high level of education who all spoke fluent French and had significant medical knowledge. Thus, they were relatively more knowledgeable and in an advantageous position compared to other categories of workers. However, this hypothesis has yet to be investigated. Thirdly, although OProMa is federal legislation, we only interviewed healthcare organizations in the French-speaking part of Switzerland. This raises the issue of the generalizability of our results to Switzerland's German- and Italian-speaking regions, and to countries other than Switzerland. However, the general mechanisms and challenges faced by pregnant women in Switzerland's healthcare settings seem to be analogous to what is found in other countries. Furthermore, our study was limited to the healthcare sector. The processes at play might be different in other economic sectors. Also, the institutional perspectives presented here were those of managers and departmental heads, and they might not represent the points of view of other staff. Finally, interviews were carried out within organizations that freely accepted to participate in the study and thus might have been more open to dialogue on this theme. We therefore cannot rule out a positive selection bias in our study population.

5 Conclusion

By comparing the management of maternity protection in three Swiss healthcare institutions, our study revealed that workers' perception of a positive safety climate was made up of their direct superiors' perceived commitment to their safety, shared perceptions of risks and adequate levels of information, the presence of a dedicated OH unit, and formal procedures for managing pregnancy. In some cases, managers' perceptions of good maternity protection practices in the workplace differed from the needs expressed by their employees. Furthermore, even the procedures compliant with the law may fail to consider employees' real working conditions, which can lead to some protection measures being perceived as inapplicable or poorly adapted. Occupational safety cannot be based exclusively on the implementation of official procedures; it depends significantly on the representations and behaviors of all the stakeholders in an organization. Thus, besides improving the implementation of formal procedures, our findings also call for allowing enough resources so that working teams may support pregnant

employees, and for a participative approach for the protection of pregnancy at work that includes employees, their colleagues, the management and a multidisciplinary OH team. Finally, a positive *safety climate* surrounding pregnancy and maternity will encourage the retention of qualified personnel and, more generally, open the door to a better work–life balance.

Ethics and Consent

The Human Research Ethics Committee of the Canton Vaud (CER-VD) certified that the research protocol fell outside of the field of application of the Swiss Federal Act on Research Involving Humans. Participation in the study was voluntary. All the participants were informed about the research objectives and the standards of confidentiality regarding data use. All the participants signed written informed consent forms agreeing to be recorded and to have the data used within the framework of this study.

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Competing Interests

The authors have no competing interests to declare.

Author Contributions

IP, PK, MPP and BD jointly designed the research protocol. IP, PK, MPP, BD and AAZ created the interview guide and contributed to data collection. AAZ analyzed and interpreted the data and drafted the manuscript with contributions from IP. All authors edited, critically reviewed, and revised the paper. All authors approved the final manuscript.

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