

Interventions as the centrepiece of psychosocial risk assessment – why so difficult?

Psychosocial
risk
assessment

61

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Abstract

Purpose – Due to the “European Union Framework Directive on Safety and Health at work” (Directive 89/391/EEC, 1989), every employer is obliged to avoid psychosocial hazards when designing work. Little is known empirically about the barriers that workplace actors experience while developing and implementing OSH measures that prevent psychosocial hazards. The purpose of this paper is to explore barriers, causes and attempts to overcome them and discusses them with reference to relevant theoretical concepts and models that help to explain how these barriers hinder the development and implementation of OSH measures.

Design/methodology/approach – Semi-structured interviews with workplace actors in charge of psychosocial risk assessment (PRA) were conducted in 41 business cases, and transcripts were analysed using a thematic analysis approach. Barriers, causes and attempts to overcome them were extracted inductively and discussed with reference to relevant theories and explanatory models.

Findings – The complex nature of psychosocial risks, hindering general beliefs, lack of a perceived scope for risk avoidance, lack of assumptions of responsibility among players on all hierarchical levels, discrepancies between formal responsibility and decision authority, and low reflexivity on processes of development and implementation of interventions were described as barriers. Causes and attempts to overcome these barriers were reflected upon by workplace actors.

Practical implications – Recommendations on the organisation of PRA will be given with respect to the reported results and relevant research in this field.

Originality/value – This qualitative study explores the barriers to developing and implementing OSH measures to eliminate psychosocial hazards, from the perspective of actors in charge of PRA, and why they might fail.

Keywords Workplace health, Qualitative research, Barriers, OSH interventions, Psychosocial risk assessment (PRA)

Paper type Research paper

Introduction

There is strong evidence that work-related psychosocial hazards are risk factors for a wide range of somatic and mental health outcomes (e.g. Leka and Jain, 2010). Furthermore, psychosocial hazards, such as high psychological demands, low decision latitude or high emotional demands, continue to have a high prevalence in working populations (e.g. Niedhammer *et al.*, 2012; Parker *et al.*, 2017; Vargas *et al.*, 2014). Thus, eliminating or at least reducing work-related psychosocial hazards through adequate work (re)design remains an important challenge for securing health and safety at work. One important legal instrument in this context is the obligation for employers to take appropriate action to reduce risks by conducting psychosocial risk assessment (PRA) (§5 ArbSchG, EU-OSHA, 2008). Nevertheless, survey data show that assessments of psychosocial hazards (PRA) are far from being implemented across the board (Ahlers, 2016; Sczesny *et al.*, 2014; van den Heuvel *et al.*, 2018). Moreover, even if enterprises assess psychosocial hazards, developing and implementing adequate measures and interventions,



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ie., “taking action”, remains challenging (e.g. Hasle, 2011). To offer adequate support to initiatives that seek to make workplaces safer and healthier for employees, it is especially important to understand what makes it so difficult to design measures that reduce or eliminate psychosocial risks in the context of PRA. Therefore, based on the experiences of actors on the operational level (such as OSH professionals and managers) during the process of PRA, this paper investigates the barriers to designing appropriate measures.

Theoretical framework

Cox and Griffiths (2005) defined psychosocial (risk) factors as aspects of the design and management of work and its social and organisational contexts, such as work content (e.g. decision latitude), organisation of work (e.g. quantitative work demands, working time), interpersonal relationships at work (e.g. social support from supervisors), or work environment (e.g. extra-aural noise, poor lighting) (e.g. GDA, 2018; Leka *et al.*, 2008; NAK, 2018). If these aspects are designed in a way that will potentially harm employees physically or mentally, they become psychosocial hazards (Leka and Jain, 2010). The most influential models that describe relations between psychosocial risk factors and health outcomes are the job-demands-resources model (Bakker and Demerouti, 2007), the job-demand-control(-support) model (Karasek, 1979; Johnson and Hall, 1988), the effort-reward-imbalance model (Siegrist *et al.*, 1997) and the action regulation theory (e.g. Hacker, 2003). Drawing on these concepts, relations among a multitude of psychosocial risk factors and a wide range of health outcomes, such as cardiovascular diseases (e.g. Dragano *et al.*, 2017; Jood *et al.*, 2017), mental disorders (e.g. Harvey *et al.*, 2017; Madsen *et al.*, 2017; Rau *et al.*, 2010), sleep disturbances (e.g. Hanson *et al.*, 2011; Van Laethem *et al.*, 2013) and other health-related outcomes, such as rumination (e.g. Cropley *et al.*, 2006; Querstret and Cropley, 2012), detachment (e.g. Sonnentag and Bayer, 2005; Wendsche and Lohmann-Haislah, 2016) and sickness absence (e.g. Labriola *et al.*, 2006) are well documented (e.g. Leka and Jain, 2010; Rothe *et al.*, 2017).

Following the “European Union Framework Directive on Safety and Health at Work” (Directive 89/391/EEC, 1989), the German “Safety and Health at Work Act” (2013) obliges every employer to design work “to avoid, as far as possible, any risk to life and physical and mental health and to keep the remaining risk as low as possible” (ArbSchG §4). To eliminate or at least reduce psychosocial hazards, appropriate action must be taken by conducting risk assessment (§5 ArbSchG). Risk assessment is a “systematic examination (a) of all aspects of work that could cause injury or harm; (b) whether hazards can be eliminated and, (c) if not what preventive or protective measures need to be in place to control the risks” (EU-OSHA, 2008).

According to EU-OSHA (2008), the PRA process should include the following steps: identify the hazards and those at risk, evaluate and prioritise the risks, decide on preventive action, take action, and monitor and review. These process steps are supposed to be suitable for a successful psychosocial risk management process. However, assessments of psychosocial hazards (PRA), including the development and implementation of adequate measures and interventions, are challenging to implement in operational practices (Ahlers, 2016; Hasle, 2011; Sczesny *et al.*, 2014; van den Heuvel *et al.*, 2018). Studies using expert interviews (Langenhan *et al.*, 2013; Sivris and Leka, 2015) and quantitative data from the ESENER survey (Milczarek *et al.*, 2012) provide an overview of barriers to implementing psychosocial risk management (PRM) in general. A lack of resources (such as financial constraints, knowledge deficiency, lack of technical support, time pressure), competing priorities, lack of awareness, fear (because of the sensitivity of the issue) and cultural gaps have been shown to impede the implementation of PRM in general. More specifically, evaluation research on occupational health and safety interventions emphasises important challenges for the successful implementation of measures on an organisational level, such as gaining the commitment of management (e.g. Noblet and LaMontagne, 2009; Polanyi *et al.*, 2005), establishing participative processes (Mikkelsen *et al.*, 2000; Sagie and Koslowsky, 1996; Toker *et al.*, 2015) and fostering readiness for change

(e.g. Nytrø *et al.*, 2000). There are two aspects missing in previous research on barriers to PRA and PRM. At first, the “taking action” phase requires not only to implement but also to develop work (re-)design measures and is therefore likely to be associated with other challenges than the implementation of PRM in general or specific OSH measures. This stage, the actual centrepiece of the “systematic, evidence-based problem-solving strategy” (Milczarek *et al.*, 2012), has been paid little attention in the literature concerning the PRA and PRM (Hasson *et al.*, 2014; Parker *et al.*, 2017). Therefore, focussing on barriers to the development and implementation will contribute to understand why the actual work (re-)design processes in the context of PRA/PRM fail. Second, the perspective of those actors who are – on an operational level – responsible for putting legal requirements and policies into practice, has been underrepresented in previous studies. However, to develop needs-based support and guidelines for the successful implementation of PRA processes a profound understanding for the barriers that operational actors face in their respective contexts is needed. Therefore, this paper aims to explore and understand the barriers these actors face while developing and implementing measures and interventions to eliminate or at least reduce psychosocial hazards; it will therefore hopefully make a significant contribution to filling the “knowledge/policies vs real-life practices” gap. The research questions are as follows:

- RQ1. Which barriers do actors on an operational level experience while developing and implementing measures to eliminate or at least reduce work-related psychosocial hazards?
- RQ2. To which causes do they attribute these barriers?
- RQ3. Which attempts to overcome these barriers do they describe?

Methods

This study was part of a larger qualitative research project where business case studies were conducted to investigate the processes and procedures of PRA in operational practices. For this purpose, a qualitative approach based on semi-structured interviews was used because of its potential to provide insights into procedures and actors’ reflections and experiences. The aim of the sub-study presented here was to explore the experiences of workplace actors during the stage of developing and implementing OSH interventions in the context of PRA (by re-analysing the interviews). This qualitative approach allows the linking of different perspectives of workplace players to be mapped onto the complex nature of barriers that hinder them from developing and implementing interventions.

Sample

To acquire the enterprise sample, standard communication methods for OSH professionals were used (internet, professional journals). Through these channels, enterprises responded that addressed psychosocial hazards in the context of OSH strategies. Further, professionals from governmental supervising authorities and (occupational) accident insurance institutions were asked to arrange contacts with enterprises that had already implemented measures to deal with psychosocial hazards that – from the authorities’ point of view – were equivalent to PRA[1]. The total sample included 41 enterprises of different sizes and branches. During the process of close analysis of the cases, we sharpened the case definition to exclude cases in which psychosocial hazards were a by-product of other processes, aimed more at raising efficiency. Thus, four cases were excluded because activities were not organised or not intended to protect employees’ health. Three further cases had to be excluded because no transcripts were available for technical reasons. Thus, the final sample contained 34 enterprise cases, 14 of which were SMEs (see Table I).

Table I.
Sample characteristics
(distribution over
enterprise sizes
and branches)

size	Number of cases	1	2	3	4	5
1–9 employees	2	2				
10–49 employees	9	2	1	2		4
50–249 employees	4	2		1		1
Sum SME	15	6	1	3	0	5
250–499 employees	4	1				3
500+ employees	15	3		5	2	5
Sum (total)	34	10	1	8	2	13

Notes: 1 – manufacturing (excluding construction); 2 – construction; 3 – wholesale and retail trade, hotels, restaurants, transport, information and communication; 4 – financial and insurance activities, real estate activities, administrative and support service activities; 5 – public administration, education, human health and social work activities

Data collection and analyses

To gain information about processes and procedures of PRA that were carried out in practice, semi-structured interviews were conducted *in situ* by three trained interviewees with one (20 cases) or more stakeholders (14 cases) in charge of PRA (OSH officers, top and middle management, employee representatives) (see Table II). Overall, following the suggested structure of the PRA process, interviewees were asked about occasions and motives for conducting PRA; methods to assess psychosocial hazards, contents of PRA and work (re-)design measures; experiences of actors with their PRA processes; and operational context (e.g. main tasks, main risks, enterprise size and organisation). With the help of these central questions, interviewees were invited to report and reflect on their PRA processes. The interviews were audio-taped and transcribed. Interviewees were further asked to bring documents that helped to better explain the enterprise and the procedures used to address psychosocial hazards (e.g. reports, brochures, etc.).

The first step was to become familiar with the material by (re)listening to the audio-material and by reading through the transcripts and additional materials case-by-case. Case summaries were written in a table form. Then, the material was (re-)analysed with different analytic strategies depending on the respective research questions that were to be answered (for further details see also (Beck *et al.*, 2017; Schuller *et al.*, 2018)).

To answer the research question for the sub-study presented here the interview transcripts were (re-)analysed using a thematic analysis approach (Braun and Clarke, 2006). With the main research question in mind, “What made the processes around development and implementation of measures to eliminate or at least reduce psychosocial hazards difficult?”, in a second step, transcripts were (re)read against the background of the preliminary understanding of the respective business case as a whole. Text passages were marked by the

Table II.
Overview about the
actors in charge of
PRA and interviewees
(in total)

	Actors in charge of PRA	Interviewees (in total)
OSH officials (e.g. OSH specialist, OSH officer)	13	26
Coordination/staff members (e.g. quality management, occupational health management, organisation development)	8	12
Owner/managing director	7	11
HR-manager	3	5
Work council member	2	9
Middle managers	1	8
Others (e.g. apprentices)	0	3
Total	34	74

author as soon as interviewees reflected on (psychological) aspects that created barriers during the processes of developing and implementing interventions, causes of these barriers, and descriptions of attempts to overcome these barriers. Then, marked text passages were read again and coded to highlight the main idea of the respective passage. These codes were grouped, regrouped and partly renamed to identify themes while increasingly condensing the information. The resulting barriers were analysed regarding their impact on the processes that occurred in between the stages of “knowing the psychosocial hazards” and “getting interventions implemented”. The results were discussed within the research team to obtain agreement among the involved researchers. Nevertheless, even if barriers were analysed and coded inductively, the author’s theoretical background (W/O-psychology) naturally influenced the coding process (see also Braun and Clarke, 2006). Therefore, finally, commonalities between these inductively coded barriers, their causes and attempts to overcome them with theoretical concepts and models were identified and discussed.

The computer-assisted qualitative data analysis software MaxQDA (version 11, 2015) was used to analyse and organise the text passages and codes.

Results

Barriers were identified at different levels of the PRM process (see Figure 1). Starting from barriers due to “psychosocial risks” as the subject of the PRM process, then moving on to barriers resulting from characteristics of central actors during the PRM process, and concluding with barriers resulting from structural issues of the PRM process, barriers will be presented and illustrated on the basis of the case material. If interviewees reflected on causes, those causes will be described under the respective barrier. Attempts to overcome these barriers will be presented under the respective paragraph depending on whether they were aimed at overcoming the barrier or to reduce causes of the barrier.

Characteristics of “Psychosocial risks” as the subject of the PRM process

Barrier 1: high complexity of operational problems behind psychosocial risk factors. In many of the interviews, interviewees highlighted that when developing measures, the nature of psychosocial risks themselves was a barrier. In contrast to “classical” hazards, psychosocial hazards were described as complex and ambivalent and therefore difficult to handle:

Well, for the topic: “Could you work in a focused way, without interruptions?”, it’s worth questioning this. You know, then, a colleague comes and brings some news. Or it’s someone’s birthday and an unexpected visitor comes. Sometimes it’s like Grand Central Station here. And this

Level of PRM process	Barriers for developing and implementing measures that prevent from psychosocial risks
Subject	Characteristics of “Psychosocial Risks” as the subject of the PRM process (1) High complexity of operational problems behind psychosocial risk factors
Actors	Characteristics of central actors during the PRM process (2) Hindering general beliefs and attitudes of central actors (3) No perceived scope for eliminating/reducing psychosocial hazards (4) Missing assumption of responsibility
Structure	Characteristics of the PRM process in general (5) Mismatch between distribution of formal responsibility and decision authority (6) Lack of organisation, guidance and reflection on actual work design processes

Figure 1.
Barriers for developing and implementing measures on different levels of the PRM process

is nice, on the one hand, because then you have a [...] nice sense of coherence. On the other hand, it could become too much and then strenuous. [...] Or, time pressure, this has of course also to do with the variety of tasks and how work is organised. (OSH engineer, > 500 EE, public services)

More specifically, interviewees described psychosocial risks as less tangible, less clear compared to “traditional” risks and made up of many mutually connected aspects that could be starting points for interventions. This complexity left players doubting whether they had found the right parameter to handle the risks:

Because, this is exactly the problem, that those psychosocial hazards are just, I would say, fed by diffuse sources. (Work council member, > 500 EE, technology)

This situation made the process of understanding the underlying operational problems and finding solutions much more complicated. One further issue referred to incompatible time frames and dynamics:

And the difficulty is simply that there is not an arrangement that you agree on today and that holds true for the next ten years. It just takes one child that leaves us and a new child that enters and we'll have a totally different situation here, and this has to be adapted constantly. And this is actually what makes it so complicated. (Head of department, 10–49 EE, social institution)

The formal PRA process due to the “Safety and Health at Work Act” was described as rather time-consuming. Therefore, a measure that was developed to avoid a specific risky situation at some point might not be appropriate anymore after finally being fully implemented. In a couple of cases, defining clear objectives for interventions – an important step in developing measures – became a time-consuming balancing act. There were many possible objectives that were conflicting and not shared by everyone who was in charge of these processes.

Interviewees depicted two general ways of dealing with the complexity of psychosocial risks: first, reducing perceived complexity by focusing on very specific risks that seem to be less complex (e.g. dealing with interruptions at work rather than with social relations); simplifying problem analysis (e.g. explaining overtime work by attributing it to an employee's inability to complete their work); or looking for less complex solutions (e.g. offering training instead of changing work design). Some interviewees described how they organised the PRM process in the same way as they would manage “traditional” OSH risks: defining cut-off values for psychosocial hazards, identifying psychosocial hazards, comparing results with the cut-off value, defining a need for action, then “choosing” a measure that was supposed to reduce the defined hazard. Nevertheless, they questioned the appropriateness of this approach. Second, a second way of dealing with these characteristics was to accept complexity by organising the process as a continuous and reflected learning process, where decentralised players acted quite autonomously (in contrast to an understanding of PRA as a quite static and closed process). Players in those cases seemed to adapt their expectations to preliminary outcomes, in the sense of “if we do not find a good solution on the first try, we will work on it again”.

Characteristics of central actors during the PRM process

Barrier 2: hindering general beliefs and attitudes of central actors. Interviewees expressed some of their general beliefs and attitudes towards work, its organisation, its relation to health and the role of PRA in this context; these beliefs and attitudes seemed to curb or at least influence the development of interventions. One example was the belief that well-being and health have their roots in the private sphere of employees, rather than in work design:

I mean, sure, psyche is everywhere, isn't it? I have it in private and at work. Stressed everywhere. Either positively stressed or less positively stressed, negative stress or positive stress. Yeah. If

I don't look for a compensation or holiday plans or the family or whatever, [...], the private life plays an important role, doesn't it? (OSH officer, > 500 EE, public service)

This belief prompted players to develop measures that facilitated the handling of private situations rather than measures aimed at (re)designing work. Another consequence of this basic belief was that players thought that these private issues were out of their sphere of influence and responsibility. Another example was the belief that the task of someone in charge of PRA is to promote the development of interventions that promote mental health. This belief led the focus to be on health-promoting measures rather than on (re)designing work to avoid psychosocial hazards. No ways of dealing with those general beliefs were described. It seemed that interviewees were not aware of their consequences.

Barrier 3: lack of perceived scope for eliminating/reducing psychosocial hazards. Some interviewees explained that they did not see any way to avoid central psychosocial hazards. Risky situations seemed unchangeable, and they found it difficult to think of ways to protect employees from these risks. Interviewees named different reasons for this belief:

- (1) One reason was that players perceived the respective hazard as something that belonged to that work and, therefore, could not be avoided. For example, in a setting where social workers worked with children showing deviant behaviour, this behaviour itself was seen to be a potential hazard for social workers, although it is the main task of the organisation. Players did not develop ideas about how to reduce this hazard. Nevertheless, in some cases where they faced a similar hazardous work situation, players showed a different approach: they developed measures that did not eliminate the actual hazard (working with patients who might show deviant behaviour) but they still protected employees from negative consequences, e.g. by taking enough breaks, offering supervision on a regular basis, developing emergency plans – measures that helped them to deal with and recover sufficiently from stressful work situations.
- (2) Working conditions that have their roots in one fundamental pillar of the organisation were perceived to be almost unchangeable. One OSH manager of a large hospital described the situation as follows: how work was organised in a single ward was very much dependent on how bed management in general was organised, and bed management was one of the “pillars” that determined how this hospital worked. Psychosocial hazards, such as high work intensity and time pressure, were described as emerging from that pillar. Changing bed management was seen as a very deep intrusion into the basic functioning of this hospital. Staff might find solutions on the ward level to prevent psychosocial hazards, but the OSH manager was doubtful whether these solutions could truly touch the underlying causes.
- (3) Little scope for interventions was seen when players described the attitudes and behaviours of employees as causes or reinforcers of psychosocial hazards. This was especially the case with problematic leadership behaviour and social support, and also with some aspects of the organisation of work as soon as, e.g. communication took on a crucial role:

And, well, I actually find that this is one main problem, you cannot change the managers themselves, can you? And then, if a manager hires the manager, well, (laughing) what can one say more? (HR professional, 10–49 EE, technology)

For these hazards, staff rarely developed solutions aimed at (re)designing work. At most, individual trainings were offered to employees.

- (4) Another issue that restricted the (perceived) scope of measures to eliminate or reduce psychosocial hazards was when risky work took place in environments outside the circle of influence of the enterprise. This was the case, e.g. in an outpatient

assisted-living division for psychiatric patients. No strategies of dealing with this difficulty were reported:

Well, this is the problem in outpatient facilities, you go home to the people, sit down in questionable hygienic surroundings, get a coffee in dirty cups, the question Where to go to the toilet?, Where to park your car?, weathering influences, that you are exposed to, and, and, and. Those things do not play a role when inspecting a building, of course not, do they? (quality manager, 250–499 EE, social institution)

Barrier 4: missing assumption of responsibility. In many cases, interviewees described how actors at different enterprise levels did not actively assume responsibility for the processes of developing and implementing OSH measures to prevent psychosocial hazards. This was seen as one reason that processes became stuck. Actors at different organisational levels (higher management, middle management, employees) were to different degrees involved in the different stages of the process depending on how processes were organised. The lack of clear responsibility manifested itself in many different ways.

Higher management. The commitment of higher management was described as being very important. In some cases, higher management was fairly disinterested or even counterproductive according to the interviewees. One interviewee mentioned that quite general beliefs regarding the tasks of management and a certain image (the employee, not the employer, is responsible for his or her own health) might explain this lack of management commitment. In those cases, it became unlikely that adequate measures would be developed and implemented:

Things like: “I discuss the interface” or “The processes are not running well”, there I just note it, I [person in charge of PRA] try to analyse it, I hand it over [to the higher management] and nothing happens. Unfortunately, it is probably still too associated with the individual or the single person or with assumptions about a particular group of people: that it is obvious that they are just not able to cope with the situation. (HR professional, 10–49 EE, technology)

Conversely, in cases where interventions were developed and implemented, the higher management seemed to be rather committed and supportive.

Strategies to convince non-committed higher management were not reported during the interviews.

Middle management. Interviewees described the role of middle management as crucial during the stage of developing and implementing OSH measures to prevent psychosocial hazards. In divisions where middle managers were not committed, no measures were developed and implemented according to interviewees. Nevertheless, depending on how PRA processes were organised, the degrees of involvement of middle managers differed. This might partly explain why middle managers were more or less committed. The involvement ranged from cases where middle managers were not involved because the PRA processes were primarily seen as being the responsibility of the OSH manager over cases where they merely had to transmit and implement interventions that had been developed by other actors, up to cases in which they were seen as responsible for discussing results from the PRA and developing interventions together with their team. In these latter cases, the middle managers had a very active role and needed to assume responsibility. Some interviewees supposed that another reason why middle managers refuse to actively foster discussions on psychosocial hazards was fear, as they could not know in advance the magnitude of the problems that would be revealed by the process:

But to address this issue, for some of them it is virtually like opening Pandora’s box. Or to go into a dark room without knowing how big the room is. Is the room pretty small or is it a huge one? [...] This is an issue that you like to push away, I can imagine, because it seems so big and complex. (HR professional, 10–49 EE, technology)

Furthermore, an open discussion might have questioned the behaviour of the middle managers, thus causing fear and disengagement. Convincing middle managers to assume responsibility was described as a very difficult task.

Employees. Not only did higher and middle management play an important role during the PRA process. Interviewees also said that these development and implementation processes were largely dependent on the active assumption of responsibility from employees, especially when processes were organised as participative processes:

Generally, it is like that: Employees open up and say: "Everything is awful, everything is terrible". But when it comes to developing solutions together: "Oh sorry, I don't have time for that right now". (Occupational health professional, > 500 EE, hospital)

In some cases, according to interviewees, it was hard to convince employees to take part in workshops to discuss psychosocial risks and develop ideas about how to avoid them. One interviewee further described how in informal conversations, employees told her about their experiences with psychosocial hazards. However, as soon as it came to formal discussions of psychosocial hazards, they were unwilling to take part. In other cases, interviewees described how employees refused to implement measures.

Some players named the following factors as being responsible for their employees refusing to assume responsibility for developing and implementing measures: first, the pessimistic belief of employees that their involvement was not worthwhile, based on previous negative experiences with similar processes, was seen to have impeded their willingness to get involved. Some interviewees described strategies for building trust in PRA processes, for example, by pushing the implementation of interventions and fostering open communication about the processes around development and implementation of interventions. Even interventions that could not be implemented reasonably should be communicated for the sake of transparency and trust, according to interviewees. Employees should experience that their involvement matters and thus develop a feeling of control.

Second, some actors noted that employees were hindered from becoming involved not only by a lack of trust but also by the fact that processes of discussing psychosocial hazards and developing measures to avoid them were time-consuming. When such discussions were organised as an add-on to normal work tasks employees withdrew from the additional tasks. One approach to facilitate the participation of employees was to make participation organisationally easy. In one case, players set up the workshop for discussing psychosocial hazards and developing measures as an obligatory vocational training during work-time. In another case, a managerial head put some pressure on middle management and employees by formulating binding instructions to regulate breaks. Teams had two weeks to come up with their own suggestions. If they did not come up with their own ideas, they had to accept the instructions. In this case, putting some pressure helped to motivate employees to find effective solutions for breaks.

Third, according to some interviewees, the psychosocial nature of these risks in itself could have hindered employees from actively participating in developing and implementing interventions:

Interviewee: Well, I think, that this makes it so difficult with the psyche, because, all these physical things are external measures that you can add, build around. With psyche there are many [...], well, internal measures. A person who has like fifteen interruptions at work and feels that this is too much could actually already go to the manager and say: [...] With my work, that's not okay. Because I get constantly interrupted by the telephone. Is it okay to switch of the telephone for half a day?" They could do it. Theoretically. (Laughing) Interviewer: And practically, what hinders them from doing that? Interviewee: Because we do not speak about that. We do not speak about our psyche because it is a weakness. We feel not allowed to look vulnerable. (Occupational health professional, > 500 EE, public service)

According to one interviewee, employees might not be sensitised enough to reflect on psychosocial working conditions. One interviewee supposed further that raising psychosocial issues at work was seen to be closely connected to recognition and acceptance of the limits of their own performance capacity, even if that is – by definition – not what is meant by the term psychosocial hazards. One interviewee further assumed that employees were not accustomed to participatory processes of work (re)design. In another case, an interviewee assumed that employees might not have been interested in optimising operational procedures because they associated the discussion of psychosocial risks with attempts to reduce the workforce.

Some interviewees attributed differences in reflecting on psychosocial issues to age. Younger employees seemed to reflect more openly on psychosocial issues and called more actively for change.

Characteristics of the PRM process in general

Barrier 5: mismatch between formal responsibility and decision authority. Several interviewees described a tension between the distribution of formal responsibility and the distribution of decision authority. In some cases, the actor in charge of processes around the development and implementation of interventions also had full decision authority. This was especially the case in small enterprises where the business owner was in charge of PRA. In these cases, barriers regarding the distribution of responsibilities and decision authority were (therefore) not discussed. In the majority of cases, responsibilities for the PRA processes and decision authority were distributed among different actors. The decision authority of responsible actors varied. In some cases, actors could have a rather broad scope for decision-making:

We could do what we think that's right. This is a big advantage, of course. Well, that means, we have the possibility to find solutions that fit our specific situation and do not need to discuss this with others that have a totally different working situation. (Middle manager, 250–499 EE, social institution)

In other cases, they could have a moderate amount of decision authority:

Interviewer: Do you have a budget for that [measures/interventions] or how does it work?
Interviewee: This is automatically included in my [little] budget. You just calculate a bit more here and there, and then, you take it from there. That's okay. Interviewer: So, you organise yourself a little room to move. Interviewee: Yes. (OSH officer, 10–49 EE, gastronomy/hotel industry)

And in other cases, responsible players had no decision authority regarding the implementation of interventions. The less decision authority the responsible players had, the more important the negotiation process became between those who had decision authority and those who were responsible for organising the process. If the negotiation process was obviously driven by similar values and beliefs regarding health and safety at work, interviewees were optimistic that interventions should not be too difficult to get implemented. However, if other interests of players were pushed to the foreground, this was seen as a strong barrier to getting interventions developed and implemented.

A further issue that was mentioned by interviewees was that due to the complexity of the underlying problems that made up psychosocial hazards, it was difficult to identify the right players that should be involved. Furthermore, this set of players was not a given for the entire process but was dependent on the specifics of the intervention in question and its scope:

Everything that you've mentioned makes the whole thing totally complicated. At first, the difference between operational organisation and the organisation of the enterprise as a whole [multinational, matrix organisation]. And then, teamwork versus project-related work, because the hazards could stem from all these levels. And accordingly, we have to search for the one who

could remedy, right, whom to address? And this is problematic, sure. (Work council member, > 500 EE, technology)

Only some interviewees suggested general ideas on how to act in this area of tension between the distribution of responsibilities and decision authority. They highlighted the importance of a well-reasoned formation of the steering committee so that the “right” players in charge and the “right” decision-makers work together to make decisions on interventions. One interviewee noted that to support the success of the process, it is crucial to invest time and energy to help the “steering committee” act as a team, thus sharing the interest in health and safety at work and including players who “bring passion” to the task:

And second, it comes to my mind, [...] that from those people that you have in your enterprise and that you put in charge of this task, independently of their positions, of course ideally you find those, who fulfil this task from their heart, who really make it their business. (Quality manager, 250–499 EE, social institution)

Barrier 6: lack of organisation, guidance and reflection on actual work design processes. Last (but not least) another more general barrier became obvious during the interviews. Players at an operational level reflected on their ways of identifying psychosocial hazards in a highly differentiated manner. In contrast, descriptions of the processes around the development and implementation of interventions were shorter, less detailed and rather superficial, even when interviewees were asked explicitly to describe their experiences with this stage. On the one hand, interviewees justified this situation by explaining that at the time of the interview, the PRA process had not reached the stage of developing and implementing interventions, the processes were only in the planning stage, or processes were delayed. Therefore, they could not describe these processes in more detail. Another reason mentioned by the interviewees was that development and implementation of interventions were organised decentrally. Obviously, players in charge did not stay informed about ongoing processes involved in intervention development. In other cases, no reasons were reflected at all. Overall, the central players in charge of PRA seemed to reflect on the development and implementation in less depth compared to the processes of identifying psychosocial risks. The results show that while indeed there have been successful processes of developing and implementing interventions, but they were less organised, less guided and less reflective than processes of identifying psychosocial hazards.

Discussion

There is strong evidence that psychosocial hazards at work are risk factors for a wide range of somatic and mental health outcomes. PRA is an important OSH instrument to protect employees' health and safety. As suggested by EU-OSHA (2008) and GDA (2018), PRA is supposed to work well when these five steps are followed: identify the hazards and the people at risk, evaluate and prioritise the risks, decide on preventive action, take action and monitor and review. The centrepiece of the PRA process is the stage of developing and implementing measures that eliminate or, if that is not possible, at least reduce psychosocial hazards, thus “taking action”. We know from research that this actual work (re)design process remains challenging in operational practices. The aim of this study was to highlight actors' perspectives on barriers that hinder the development and implementation of measures in the context of PRA (or equivalent processes). Through strengthening our knowledge of barriers in operational practices, the causes of those barriers, and attempts to overcome them, this study sought to identify possible points of contact where organisations can foster PRA processes that result in work (re)design that minimises psychosocial hazards.

Players at the operational level who are in charge of PRA experience several barriers during the stage of developing and implementing measures/interventions to prevent psychosocial hazards. The interviews revealed barriers that have already been empirically

documented as relevant in the context of PRM (missing commitment of higher and middle management). Other barriers that interviewees identified have already been discussed and empirically proven in the context of other kinds of change processes (hindering general beliefs, no perceived scope for risk avoidance, lack of decision authority). In addition, some rather PRM-specific barriers were described during the interviews that have rarely been discussed in this context (complexity of operational problems behind psychosocial risks, low reflexivity on processes of developing and implementing measures to avoid psychosocial hazards). Actors at the operational level are aware of these barriers, reflect on their causes and try to overcome them in some cases. In the following section, the reported barriers will be discussed more in detail in the context of theoretical concepts and models that might help to explain why these barriers hinder the processes of development and implementation of measures.

*Barrier 1: complexity of operational problems that underlie psychosocial hazards
(subject of PRM)*

During the interviews, operational players expressed the high perceived complexity of psychosocial issues as a hindering factor for developing interventions. These descriptions of the complex nature of psychosocial risk factors not only match the characteristics of complex (ill-defined) problems according to Dörner *et al.* (1983) but also show parallels with the theoretical work by Jespersen *et al.* (2016), who described psychosocial hazards as “wicked”, drawing on Head and Alford’s concept of “wicked problems” (e.g. Head and Alford, 2015)[2]. These results empirically support Jespersen *et al.*’s theoretical work and show the practical importance of research on complex problems and complex problem-solving (CPS) (e.g. Dörner *et al.*, 1983) for the management of psychosocial risks in operational practices. The (perceived) complexity of psychosocial risk factors becomes a barrier when players try to apply strategies for solving well-defined (“tame”) problems. The process steps that are suggested for an effective psychosocial risk management process (identifying risks, evaluating and prioritising risks, deciding on preventive action, taking action, and monitoring and reviewing) might be suitable for well-defined problems. However, complex problems call for CPS abilities and strategies. Whereas Jespersen *et al.* (2016) discuss implications of the “wicked character of psychosocial hazards” for regulatory and public enforcement strategies (macro-level), research on CPS processes focuses on individual abilities and strategies (micro-level) (e.g. as important leadership skills: Mumford *et al.*, 2000; Neubert *et al.*, 2015; or for defining cognitive and non-cognitive components of problem-solving abilities: see Funke *et al.*, 2018). Nevertheless, PRA in operational practices is usually neither an individual problem-solving process nor a macro-level process. Rather, it involves different actors, both inside (e.g. higher management, middle managers, employees, employee representatives, OSH managers) and outside an organisation (e.g. labour inspectorate, employers’ liability insurance association) that interact to solve these complex operational problems (meso-level). Therefore, it seems appropriate to apply research on team-based (complex) problem-solving (TBPS) (e.g. Hung, 2013) to PRA processes. Hung (2013) argues that in contrast to individual CPS, “the complexity of TBPS not only comes from the scale of the problem itself, but also the intricate cognitive, psychological, social and behavioural interactions among individual members during the problem-solving process”. Despite its complexity, it seems worthwhile to apply research on team-based CPS to PRA to investigate the abilities, knowledge and skills that players at an operational level need to address the complex operational problems that make up psychosocial risk factors and how the interactive processes have to be organised to successfully solve these work-design problems.

Implications. The results of this study, in light of research on individual and team-based CPS, implicate two principal strategies for facilitating the development and implementation of interventions to avoid psychosocial risks in the context of PRA. These strategies are not mutually exclusive. The first strategy could be to make psychosocial hazards “well-” or

“better-defined” problems. Then, the known strategies of risk assessment following the suggested process steps would fit and possibly help to find solutions. Recent attempts have been made to focus on evidence-based key factors for PRA (for Germany: NAK, 2018; Rothe *et al.*, 2017). Nevertheless, further specification could be helpful to reduce the problem space. To facilitate the transition from rather abstract definitions of psychosocial risk factors to specific operational work design problems, it could be helpful to give example descriptions of specific operational problems for each of the key factors. Nevertheless, operational problems that make up psychosocial hazards might remain complex and ill-defined to a certain extent. Therefore, a second strategy is suggested: a shift must be made from a mental OSH model that starts from a given set of solutions for a well-defined problem to an OSH model that accepts the complex character of psychosocial hazards. PRA processes should be organised as a continuous problem solving, learning and optimisation process. Expectations about outcomes must be adapted to the continuously ongoing processes of work (re)design, thus, accepting the preliminary character of outcomes. Furthermore, it seems to be important for the formulation of recommendations to not only focus on the (individual) problem-solving process itself but also on the communication and coordination processes among the actors that have to be thoroughly organised to support successful “team”-based problem solving and thus avoid psychosocial hazards.

Barrier 2: hindering general beliefs and attitudes (actors of PRM)

The qualitative analyses revealed some general beliefs and attitudes of players at different levels of the organisation (such as the belief that health is a private issue and beyond the sphere of influence of the employer) that hindered the development and implementation of measures. According to the “Theory of planned behaviour” by Ajzen (1985), general beliefs and attitudes towards a specific behaviour are an important precursor of the intention to exhibit this behaviour and the actual behaviour. If the general beliefs of players in charge of PRA contradict the behaviour that is necessary to develop and implement measures to protect employees from psychosocial hazards, it is very unlikely that a successful process of developing and implementing measures will be initiated.

Implications. During PRA processes, these general beliefs and attitudes of players should be disclosed and worked on (e.g. as part of internally or externally moderated trainings for players in charge of PRA), assuring that players share general beliefs and attitudes that do not hinder active engagement in the work (re)design needed to prevent psychosocial hazards.

Barrier 3: no perceived scope for psychosocial risk avoidance (actors of PRM)

Interviewees reported a wide range of difficulties that hindered them from seeing any way to avoid psychosocial hazards. These descriptions reflect a sense of lack of control over psychosocial hazards in players who are in charge of PRA. According to Bandura (1997), controllability increases motivation and the probability of taking action. Bandura and Wood (1989) showed, for example, that perceived controllability increased the setting of challenging goals and increased organisational performance through using effective analytic thinking. Perceived controllability is seen to be composed of the belief that a situation can be changed in general (locus of control, *ct.* Rotter, 1966), the belief of an individual that his or her behaviour matters in changing the situation (internal locus of control, *ct.* Rotter, 1966) and the belief of an individual that his or her competencies are sufficient to change the situation (self-efficacy, Bandura, 1997).

Janetzke and Ertel (2017b) discuss the sense of changeability/controllability of (psychosocial) hazards as an important enabler of PRM. Low perceived controllability of psychosocial hazards at work could explain why processes to develop and implement measures to avoid psychosocial hazards do not start or even stop, particularly if the actors in charge of PRA who are expected to take action perceive the psychosocial hazards as

uncontrollable, or lack confidence in their abilities or influence to manage these hazard. However, Weiner (2009) argues that to understand organisational processes, efficacy beliefs must exist at a collective level, although there is little research on these collective beliefs.

Implications. To improve the perception of scope for work (re)design that eliminates psychosocial hazards, much more knowledge on appropriate operational measures is necessary, not only to create a “catalogue” of measures but to show OSH professionals that there is scope of work (re)design. Creating possibilities for OSH professionals from different enterprises to exchange their experiences with such measures and their development and implementation might help them to extend the perceived scope. Examples of successful problem-solving processes and their organisation could serve as role models. Again, organising PRA as a continuous learning process and communicating about processes could further help to foster self-efficacy in actors through experiences of mastering some existing operational problems.

Barrier 4: missing assumption of responsibility (actors of PRM)

Interviewees reported that actors not assuming responsibilities at all levels of the organisation were a strong barrier for the development and implementation of interventions. The importance of the commitment of higher management and the role of middle management have already been highlighted in the literature around PRA (Janetzke and Ertel, 2017a; Langenhan *et al.*, 2013; Milczarek *et al.*, 2012; Sivris and Leka, 2015). The role of employees and their commitment to PRA processes has had less attention in the literature, although guidelines emphasise the importance of employee involvement and participation (GDA, 2018; Leka *et al.*, 2008). Assuming responsibility is closely connected with the concept of psychological ownership (Pierce *et al.*, 2003); i.e. a state “where an individual feels as though the target of ownership or a piece of that target is ‘theirs’ (i.e., it is MINE!)”. A person who develops a sense of “this process is ‘mine’” is more likely to assume responsibility (e.g. Avey *et al.*, 2009). Pierce *et al.* (2003) showed that motivational, attitudinal, behavioural and performance effects that are associated with ownership are a consequence of psychological rather than formal possession. This might explain why psychological ownership positively affects organisational performance, extra-role behaviour and organisational citizenship behaviour (Ozler *et al.*, 2008; Pierce *et al.*, 2003). To develop psychological ownership, individuals need knowledge and information about processes, the ability to implement their own ideas, and control over their own work and organisational conditions. Interviewees’ suggestions to foster responsibility taking (e.g. communicating processes around the management of psychosocial risks, pushing the implementation of measures to foster trust in these processes and the experience that one’s own engagement matters) might therefore help to create psychological ownership and, thus, push the assumptions of responsibility. Insufficient psychological ownership and assumption of responsibility remain a problem for the development and implementation stage of interventions to avoid psychosocial risks.

Implications. To enhance the involvement of players at different organisational levels, processes should be implemented that foster engagement, assuring that the protection of employees’ health dominates the objective. This includes the well-reasoned formation of a steering committee with an appropriate distribution of (formal) responsibilities paired with decision authorities, as well as the training of (all) players in charge of PRA (e.g. OSH managers, middle managers, employees) to master this stage of developing and implementing interventions to avoid psychosocial hazards (see also Hasson *et al.*, 2016). Creating opportunities for employees (and middle managers) to participate during the processes of work (re)design is a necessary but not sufficient condition to actively engage employees, middle managers and higher managers. It is also necessary to work on cultural conditions that might foster psychological ownership and thus the assumption of responsibility for all players in charge of these processes of work (re)design.

Barrier 5: discrepancy between formal responsibility and decision authority for developing and implementing measures to avoid psychosocial hazards (structure of the PRM process)

A further important barrier identified by interviewees was that the processes around work (re)design to avoid psychosocial risks create a space for long-lasting and complicated micro-political processes where other (conflicting) interests than avoiding health risks for employees might pop up and require negotiation. This might be even harder when players with formal responsibility do not have any decision authority. Janetzke and Ertel (2017b) showed that workplace players cited decision latitude as an important enabler of PRM. Also, from the cases that were investigated in this study, it seemed that processes where the actors in charge had (at least some) decision authority were more flexible and efficient with regard to interventions to avoid psychosocial hazards. Furthermore, it seemed that in cases where responsibilities were distributed rather problem-specifically (as opposed to taking on the whole PRA process), processes of development and implementation of OSH measures did not so easily.

Implications. When organising the development and implementation of measures to avoid psychosocial hazards, the distribution of formal responsibilities and decision authority should be considered thoroughly. A strict separation of formal responsibility and decision authority should be avoided. Furthermore, due to the complexity of psychosocial hazards, the effective handling of the respective (complex) problem-solving processes might require different sets of players depending on particular problems.

Barrier 6: low reflexivity on the development and implementation processes of measures to avoid psychosocial hazards (structure of the PRM process)

Whereas interviewees reflected processes of identifying psychosocial risks thoroughly and in-depth, reflexivity on the processes of developing and implementing measures was rather low. Research on (organisational) learning highlights the important role of reflexivity, especially for adapting to changes (e.g. Edwards *et al.*, 2002). The explicit legal obligation to consider psychosocial hazards during processes of risk assessment is still quite new for enterprises (legal accentuation only in 2013). Therefore, organisations are still at a stage of developing and implementing new or adapted procedures to address psychosocial hazards in the context of PRA. Especially during this period, organisational learning has to be strengthened. Thus, there is an urgent need for actors in organisations to thoroughly reflect on the processes surrounding the development and implementation of measures to avoid psychosocial hazards (cf. Vince and Reynolds, 2009); in this way, these processes can be organised and steered just like the processes of identifying hazards, as measures to protect employees from psychosocial hazards are the centrepiece of the entire PRA process.

Conclusions

The empirically based barriers presented here in the context of developing and implementing measures to avoid work-related psychosocial hazards reflect barriers that are partly known from the problem-solving processes of complex or wicked problems and from theories that explain why intentions do not lead to the expected behaviour. The handling of psychosocial hazards in the workplace is more of a social design process than a technical one, that deals with complex “wicked” problems rather than simple “tame” problems. Therefore, approaches to handling psychosocial hazards in operational practices need to accept the complex character of psychosocial hazards and enable continuous flexible, collective CPS processes. This implies formulating recommendations for the management of psychosocial hazards, which are not just about technically following steps to develop measures. Rather, it is about defining standards for a successful work (re)design process that includes on the one hand complex collective problem solving processes and on the other hand the preparation of an environment conducive to developing successful organisational problem-solving processes.

Limitations

The enterprise sample was acquired by considering theoretical aspects (theoretical sampling) and is not representative of a given population of enterprises. Therefore, distributional assumptions are not examined. The design of data collection and analysis does not allow for evidence regarding the relative importance of these barriers. The purpose of this paper was to examine a wider range of barriers to developing and implementing OSH measures that prevent psychosocial risks. To investigate and describe the respective barriers more thoroughly with regard to their complex relations within the operational practices would have gone beyond the scope of this paper.

Another restriction concerns the source of information for this study. The barriers presented here are barriers that have been reflected by interviewees. There might be barriers that interviewees were not aware of and could therefore not be reported here. Finally, not only are the psychosocial hazards themselves complex, but so too are the processes of developing and implementing interventions; aspects which are highly interrelated. Therefore, the reflected barriers presented in this paper are also interrelated in operational practices. Attempts have been made to reveal some of these relationships, but a more thorough presentation of the complex character of processes and their barriers would go beyond the scope of this paper.

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Notes

1. Asking only for PRA according to the “Safety and Health at Work Act” narrows the focus and yields an insufficient picture of occupational activities implemented to identify and avoid psychosocial hazards at work (Beck *et al.*, 2017). Psychosocial hazards are also addressed in other occupational contexts (e.g. as part of collective care). Therefore, it seems important to maintain a wider view that includes all occupational activities intended to avoid psychosocial hazards and maintain employee health.
2. “Wicked problems” are characterised by the following aspects: precise causes and effects are difficult to identify; problem-solving process is fluid; little, if any, consensus regarding problem definition or identification of solutions; multiple stakeholders; diverse perspectives; high degree of interdependence among stakeholders; many trade-offs among competing values; high conflict potential; increased political and social complexity; informal, socially embedded and diverse sources of knowledge; cannot be solved “once and for all”; solutions are provisional and uncertain (Weber and Khademian, 2008).

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