

Chapter 13

An Approach to the Further Development and Application of the PSC Tool by Applying Cognitive Interviewing in Germany



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Abstract In this chapter, we present results from the qualitative phase of an ongoing research project at the Federal Institute for Occupational Safety and Health (BAuA) in Germany which aims at developing the PSC tool further by applying cognitive interviews in a first step. The main research questions we have investigated are: Do respondents in Germany—in another political and cultural context than in Australia where the PSC tool was developed—understand the items as intended? Are there items which cause comprehension problems for respondents and therefore need rewording? The original English PSC items were translated into German and revised considering differences in legislation (e.g. industrial relations, occupational safety and health infrastructure), in the meaning and in the practical use of terms (e.g. “psychological health”) to increase comprehensibility of items. Cognitive interview techniques (think-aloud and probing) were applied on this enhanced version of the PSC instrument in two consecutive steps with 4 + 25 employees of different occupations, tenure and age. Drawing on the results of these cognitive interviews, a preliminarily revised version of the PSC tool was compiled that is currently being used in the quantitative study phase to empirically test its reliability and validity. Our findings demonstrate the benefits of pretesting the PSC questions using cognitive interview techniques in instrument development and adaptation, thereby promoting the discussion on the cross-cultural use of the innovative PSC concept.

Keywords Psychosocial safety climate tool · Cognitive interviewing · Germany · Cross-country · Cross-cultural

13.1 Introduction: Background and Research Aim

This chapter describes a study that aims at further developing the established PSC tool and testing its content validity in another language—and culture—(Germany)

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than where it was originally developed (Australia). We discuss the qualitative phase of an ongoing research project at the Federal Institute for Occupational Safety and Health (BAuA). Our project promotes the cross-country use of the innovative PSC concept, which draws upon research on work-related stress and on safety climate. The research idea emerged from discussions at the BAuA and takes up suggestions and challenges for future directions of PSC research, considering also cross-country aspects, as voiced by its founders: “Future research could assess whether dimensions are generic and universal and if the dimensions are valid and may be replicated across different occupational settings, industries and countries” (Hall, Dollard, & Coward, 2010, p. 377). Whenever an instrument is translated into another language, its comprehensibility needs to be tested because due to different legal and cultural backgrounds, comprehension problems are possible that may threaten the instrument’s validity.

In Germany, the issue of “mental health” or “psychological health”¹ in the workplace is at the top of the occupational safety and health (OSH) agenda, and the great burden of mental health disorders in terms of reduced productivity, sickness absence, and early retirement is recognized by key OSH players. This is evidenced by the fact that in 2013, the Federal Ministry of Labour and Social Affairs, the Confederation of German Employers’ Association, and the German Federation of Trade Unions signed the “Joint Declaration on Mental Health in the Workplace” (Federal Ministry of Labour and Social Affairs, 2013). In this declaration, these key OSH stakeholders agreed on common efforts to preventing mental illness, promoting mental health, and improving the return to work of employees with mental health disorders. In the same year, following an intense political debate on how to improve the protection of employees against work-related stress, the German Occupational Safety and Health Act was amended. It now explicitly states that employers have to conduct a risk assessment including psychosocial risks (§5) and that measures implemented to follow up risk assessment have to consider physical and mental/psychological health as well (§4; see also Ertel, 2014). The PSC tool could be applied as an instrument for workplace risk assessment and for national surveillance.

Legally, in Germany as in all countries of the European Union (EU), the EU OSH Framework Directive² requires the employer to ensure the safety and health of workers in *every* aspect related to work which involves avoiding risks, evaluating them, and combating them “at source”. In this context, worker participation plays an important role. Therefore, particularly the relevance of the PSC dimension “Worker participation and involvement” has to be interpreted in the light of the respective regulatory framework in Germany. The works council³ has a key role in representing workers on occupational safety and health issues, for example, it sends representatives to the joint (i.e. labour-management) health and safety committee.

¹In Germany, the terms “mentale Gesundheit” and “psychische Gesundheit” are used.

²EU OSH “Framework Directive” (89/391/EEC: Directive on the introduction of measures to encourage improvements in the safety and health of workers at work).

³In Germany, the works council can be set up in all workplaces with at least five employees and is elected by the employees.

The works council has a general responsibility to ensure (monitor/control) that the safety and health provisions on behalf of workers are observed by the employer. It has the right to participate in safety and health inspections by the labour inspectorate. With respect to risk assessment in the workplace—in general and particularly with regard to psychosocial risks and aspects of psychological health—the works council has wide-ranging co-determination rights. This involves identifying and evaluating risks and developing and implementing solutions to counteract these risks. In terms of supporting organisations in how to implement psychosocial risk assessment, the BAuA actively participates in developing recommendations (Management of the GDA Mental Health Working Programme, 2014).

Beyond the participation of workers by elected bodies, workers also have individual participation rights with respect to occupational safety and health. For example, they have to be informed about risks at work, about the measures of prevention and protection that are in place, they have the right to be heard by the employer and the right of complaint (cf. Brück, 2014; Fulton, 2013).

Moreover, at the national level, the German government, the federal states, and the occupational accident insurance institutions cooperate within the framework of the German Occupational Safety and Health (OSH) Strategy towards jointly agreed goals. The National Occupational Safety and Health Conference (NOSHC) is the central decision-making body for the planning, coordination, and evaluation of the measures provided to implement the joint German OSH strategy. The General Office of the NOSHC is located at the BAuA in Berlin (Joint German Occupational Safety and Health Strategy, 2015).

The discourse on “mental/psychological health”, “psychosocial factors”, and “risk assessment” takes place within this well-established legal and institutional framework; however, there are still difficulties in the understanding of relevant terms as well as uncertainties about the associated employer responsibilities. This was also apparent from practical experience: in seminars for workers—particularly for elected members of works councils—addressing the prevention of stress and the protection of employee psychological health, participants sometimes understood psychological health just as a personal matter that is not to be addressed in the workplace. In general, the different understanding of the term “mental health” stresses how important it is to investigate the understanding of the PSC concept among employees before applying this concept in workplaces in Germany (particularly for the purpose of risk assessment).

Our overall research aim was to further develop the PSC tool for application in the German context. The focus was on investigating the following research questions:

- (1) Do respondents in Germany—in another legal and cultural context than where the PSC construct was originally developed—understand the items as intended?
- (2) Are there items which cause comprehension problems for respondents and therefore need rewording?
- (3) Finally—as a long-term goal—is it possible to shorten the PSC instrument to facilitate its application for surveillance in workplaces without a substantial loss of information?

When pursuing this line of thought, it could be hypothesized, for future research, that the PSC concept and the scales to measure PSC may not be universally valid, but bound to a specific (e.g., cultural, political, economic) context; or, more specifically, that the understanding of the PSC concept and of its items varies cross-culturally. This is in keeping with previous research on the importance of contextual factors, in particular regulatory frameworks and practices and political, cultural, and social environments at the national level (Dragano, Siegrist, & Wahrendorf, 2011; EU-OSHA, 2012; Janetzke & Ertel, 2017; Liu & Spector, 2005). Therefore, in the qualitative, first phase of our project, we investigated the understanding of the PSC tool in Germany using cognitive interviewing. Drawing on the results of these cognitive interviews, a preliminarily revised version of the PSC tool was compiled. In the quantitative and second phase of the project, the validity of this version will be tested. As a result of the second phase, a shorter German version of the tool applicable for screening might be created. In addition, it is also conceivable to create tool versions of different lengths according to the purposes they will serve, e.g., national surveillance or risk assessment in workplaces.

13.2 Research Strategy and Method

To answer our research questions, we pursued a stepwise and iterative approach that included discussions in our research team, exchange with external experts, and two stages of a pretest with cognitive interviews (see below).

13.2.1 Translation and Expert Discussions

As a first step, the English PSC items were translated into German. In addition to solely translating the items, they were also thoroughly revised considering the meaning and the practical use of terms (e.g. “psychological health”) to increase comprehensibility of items. This revision process was accompanied and supported by discussions with experts on safety climate research and questionnaire development.

13.2.2 Cognitive Interviews

The second step in the further development of the PSC tool was cognitive interviewing. According to Willis (2005), cognitive interviewing is a pretest method that can be used “to critically evaluate the transfer of information” (p. 3), e.g. of survey questionnaires. Cognitive techniques (e.g., think-aloud, verbal probing) are used to understand how respondents understand, process, and reply to items. The respondents’ verbalizations indicate in which way items have to be modified in order to

enhance clarity (Willis, 2005). Hence, cognitive interviewing has an advisory quality in that it helps identifying potential problems without delivering the solution at the same time (Willis, 2005). In a similar way, Buers et al. (2014) pointed out that “cognitive interviewing provides insight into the type and cause of questionnaire problems as experienced by the study population and provides leads for revising problematic items” (p. 26). The great potential of cognitive interviews regarding insights into how (sometimes complex) concepts and items are understood by respondents has recently been demonstrated by Berthelsen, Hakanen, Kristensen, Lönnblad, and Westerlund (2016) for the “Social Capital” scales in the Copenhagen Psychosocial Questionnaire (COPSOQ).

Cognitive interviews—mainly based on think aloud and probing—were conducted in two consecutive steps. The first step involved interviews with two female and two male employees with many years of professional experience in their respective organisations, and who were between 42 and 48 years of age. The interviews were conducted face-to-face by the first author in February and March 2016. They took place in private settings and lasted 30–60 min. Responses were recorded on the basis of informed consent and confidentiality was assured. The interviews were then analyzed by us in March 2016 along our research questions (see introduction). In a second step, the revised questionnaire version was discussed in a workshop with the editors of this book (Maureen F. Dollard and Christian Dormann) in April 2016, leading to an agreed-upon version of the PSC items to be used for the main qualitative pretest, which was commissioned to gesis,⁴ a German research institute specialized in cognitive pretests. In order to ensure a broad coverage and to enhance the reliability of the results of the initial pretest, 25 workers (15 female, 10 male, both managerial and non-managerial) of different tenure and age, and from a broad coverage of occupations from sector/branches including information technology, production/manufacturing industry, hotel and restaurant industry, public service (office workers), and health service, were selected to participate. The interviews were conducted on the premises of gesis from July until September 2016 in an iterative testing approach, based on four rounds of testing. After every 6th interview, preliminary results were given to us to allow for a stepwise adaptation of item formulations. In November 2016, gesis submitted its internal pretest report to us that included suggestions as to why and how to reword items (Otto et al., 2016). These suggestions formed the basis for discussing all aspects of item wording in detail before deciding on the reformulation of items. Maureen F. Dollard as a developer of the PSC tool was contacted in cases where a clarification for the exact formulation of an item was needed.

13.2.3 Probing Questions

When conducting cognitive interviews, both *concurrent probing*—where probing questions were administered directly after the respective item was answered—and

⁴<http://www.gesis.org/en/institute/>.

retrospective probing—where a probing question was administered after all items had been answered—were applied.

The following probing questions were used for concurrent probing:

- *What did you think about when answering this item?*
- *How did you arrive at this answer?*
- When appropriate: *I noticed that you hesitated when answering this item. Why was this item difficult to answer?*
- When the intermediate category was used: *Why did you choose the intermediate category (“neither agree nor disagree”)?*
- To assess the reference considered: *Did you answer this item from your personal perspective or from the perspective of your team/senior management?*—This question was asked against the background that PSC “as a climate phenomenon is theorized to be the property of the group or organization” (Hall et al., 2010, p. 357).
- When appropriate: *What comes to your mind when you think about the term “senior management” in this item (your line manager or the top management)?*

In addition, the following retrospective probing questions were asked:

- *Have all important aspects regarding “psychological health” been addressed in this interview or would you like to add an extra item about that?*
- *Which items are most important to you?*

For reasons of clarity, we will not present all (intermediate) versions of PSC items in this chapter, but only those items for which cognitive interviewing provided indications for changing the wording to improve comprehensibility. The suggested reformulations of PSC items are based on the two-stage cognitive interviewing process and our discussion of the pretest results.⁵ The German version of these items will be used in a quantitative pretest in the next stage of the research process.

13.3 Results

In the following, results are presented summarizing the translation of PSC items and expert discussions as well as both stages of the qualitative pretest (i.e. the initial pretest with four participants and the enlarged pretest with 25 participants). The section starts with summarizing the results of expert discussions of the PSC instrument. Then the findings of the cognitive interviews are presented, beginning with issues regarding the overall understanding and comprehensibility of the PSC tool and followed by issues regarding single items. We then present a (preliminary) revision of the German PSC instrument in response to the problems encountered in the cognitive pretest.

⁵The cognitive interviews were conducted with a German version of the PSC questionnaire with German participants. For this contribution, the latest version of reworded PSC items has been translated into English by two English native speakers.

13.3.1 Results of Expert Discussions

Expert discussions in December 2015 resulted in recommendations to adapt the terminology of the PSC questionnaire as follows: First, instead of using differing terms for “psychological health”, the same wording was used throughout the questionnaire, avoiding different terms like “psychological safety and health” or “occupational health” so that respondents could be sure that the same aspect is being referred to. Second, the items were rephrased such that those referring to the dimensions “management commitment and support for stress prevention” as well as “management priority to psychological health” would consistently use the term “senior management” whereas the items referring to the dimensions “organisational communication” and “organisational participation and involvement” would consistently use the phrase “in our organisation”. Finally, to ensure a focus on the workgroup instead of the single worker, items were reworded such that they used the phrases “we”, “our” or “us” instead of “I”, “my” or “me”.

13.3.2 Results of Cognitive Interviews

The following section focuses on problems as experienced by the participants of the cognitive interviews regarding the overall understanding and comprehensibility of the PSC tool.

13.3.2.1 Understanding of the Term Psychological Health and Communication on Psychological Health Within the Organisation

The comments participants made on the term “psychological health” imply that this term is not well understood by German employees. Some participants indicated a negative connotation of the term, such as in the sense of being mentally ill. Other participants interpreted “psychological health” as being overtaxed by and being confronted with excessive demands as well as suffering from work-related health problems due to stress and excessive workload. The interviews revealed that difficulties and uncertainties by participants in understanding the term were further amplified by insufficient knowledge of activities in the organisations related to psychological health. This was particularly the case in hierarchical organisations and in organisations with a diverse workforce structure (e.g., hospitals). At the same time, participants emphasized that communication on the sensitive issue of psychological health seems to require an overall good communication culture within the organisation. In stage two of the cognitive interviews, 12 out of 25 participants voiced that there was no good communication on psychological health issues in their organisations; being asked in a follow-up probing question as to why they had given this answer, 7 out

of these 12 participants reported that there was no good communication at all within their organisation.

13.3.2.2 Shift of Reference (from Individual to Group Perspective)

When responding to the PSC items, participants were often referring to their personal view and did not shift their reference to the perspective of their team or their entire organisation—even though phrases referring to the personal perspective had been omitted. This is and remains a challenge as PSC is a climate concept, which demands items to be answered from the perspective of one's team or the organisation instead of from one's individual perspective. A related issue is the observation that participants in the pretest had difficulties in describing actions of senior management on psychological health—they often referred to actions of their respective line managers instead. In addition, some subjects were unsure about to whom the term “senior management” in their organisation actually referred.

13.3.2.3 The Intermediate Response Option as a Possible Hidden Missing Value

The interviews revealed that participants who had problems in answering an item (e.g. due to lack of knowledge or uncertainty) sometimes chose the intermediate response option (“neither agree nor disagree”), presumably because there was no answering option like “I do not know” available (e.g. for item 2 and item 10). In these cases, the intermediate answer is actually a missing value.

13.3.2.4 No Consistent Approach Towards Psychological Health Within the Whole Organisation

Some participants mentioned that there was no consistent approach on psychological health within their organisation. For example, in one hospital, the management responsible for the nursing staff took a proactive approach on this issue in contrast to the management responsible for the doctors, which did not.

13.3.2.5 Length of the Questionnaire and Perceived Overlap of Items

The cross-references between items that participants pointed out imply that they could not differentiate between the (hypothesized) four distinct domains theoretically underlying the PSC questionnaire. Instead, they perceived a considerable overlap of items (e.g. item 2 in relation to item 1 and item 6 in relation to item 4), leading to “questionnaire fatigue” when answering the twelve-item tool. This observation calls for a shortening of the scale.

13.3.2.6 Beyond Cognitive Aspects: Assessment of Organisational Awareness Towards Psychological Health

When analyzing the initial four cognitive interviews, we noticed that all participants were aware of a discrepancy between the need for preventive and proactive action on psychological health by the organisation (i.e. the management) and the reality where reactive patterns (i.e. acting on problems that have already occurred) were prevalent. This is an additional insight on the social context of cognitive interviewing in a workplace context: while the focus of the cognitive interviews clearly was on gaining knowledge on how the participants understood and reasoned in relation to the items, they did so not in an artificial “laboratory” situation, but against the background of their workplace experiences which elucidated their reasoning.

13.3.3 Preliminary Revision of the German PSC Instrument (General Aspects)

In the following sections, we make suggestions on how to preliminarily revise the German PSC instrument in response to problems encountered in the cognitive interviews regarding its overall comprehensibility.

13.3.3.1 Understanding of the Term Psychological Health

The results of the initial pretest showed that it was necessary to explain the concept of psychological health in the introduction of the questionnaire, as participants understood the term in different ways or not as intended. To overcome a disease-oriented negative connotation, the definition was worded in a positive and easy-to-understand way (i.e. not theoretically “overloaded”). Accordingly, we added the following working definition to the introduction of the questionnaire: “In relation to the workplace, *psychological health* means that the employees can manage their daily workload and can work productively in the long term”. This explanation appeared to be well understood by most of the participants in stage two of the qualitative pretest, as was demonstrated over the course of the cognitive interviews. Moreover, the term “psychological health” was used consistently across all items.

13.3.3.2 Shift of Reference from Individual to Group Perspective and Clarification of the Reference “Senior Management” Versus “Organisation”

To support participants in taking a group perspective (i.e. answering from the perspective of their team or the whole organisation) instead of taking an individual

perspective, it is an option to add an explicit instruction to the questionnaire, such as “With regard to the following questions, please take the perspective of your team or your whole organisation when answering”.

To facilitate a similar understanding of “senior management” among participants, we have added a definition of this term in the introduction to the instrument: “Senior management” refers to the highest level of management in your organisation, not to your line manager”. Additionally, after item 8, an instruction was included for participants: “Please refer to your whole organisation when answering the following statements, not only to senior management”.

13.3.3.3 The Intermediate Response Option as a Possible Hidden Missing Value

Based on the cognitive interviews, it was sometimes not possible to determine whether the choice of the intermediate response option (“neither agree nor disagree”) was a “hidden” missing value. In order to prevent respondents from guessing answers instead of retrieving information to answer, we decided to offer an open response format to respondents for the next stage of testing. This next stage will be the pretest ($n = 250$) of the quantitative main study; the latter will eventually comprise about 2500 participants of different organisations and industries. The open response format could enable respondents to specify whether (and why) they have difficulties in giving a precise answer. Depending on the results of this quantitative pretest, it might be necessary to insert an additional response category, such as “I cannot say” for the following stages of the quantitative survey.

13.3.3.4 No Consistent Approach Towards Psychological Health Within the Whole Organisation

Subjects mentioned that there was no consistent approach in organisations toward the issue of psychological health which may be indicative of different organisational subcultures. In this case, an overall value of psychosocial safety climate (PSC) at the level of the organisation would be misleading, and it could be advisable to use work units as the level of aggregation for assessing PSC (see Berthelsen et al., 2016).

13.3.3.5 Length of the Questionnaire and Perceived Overlap of Items

To avoid questionnaire fatigue, which was repeatedly reported by participants over the course of the cognitive interviews, we think it is advisable to focus on core items. This could be done on the basis of conceptual considerations or preferences of participants in cognitive interviews (e.g., their responses to items such as: “Please indicate which items are essential and should be kept in your opinion” and “Please

indicate which items are dispensable and could be deleted”). Items constituting an agreed “PSC core” could be used for screening purposes.

13.3.4 Issues Related to Single PSC Items and Preliminary Revisions

For some items, the cognitive interviews provided indications for changing their wording to improve comprehensibility. The main critiques voiced by participants were perceived redundancy of items (e.g., item 2 and item 1, item 6 and 4), general comprehension problems, and specific comprehension problems regarding item intent (i.e. with regard to the PSC concept).

Item 3:

Senior management shows support for stress prevention through involvement and commitment.

In elaborating on their responses to this item, participants indicated that management at different hierarchical levels does not act consistently. In addition, this item combines the two distinct aspects “involvement” and “commitment”. Moreover, as participants indicated, it is possible that management acts on problems “ad hoc” without really assuming responsibility. Consequently, we propose rewording this item with a clear and active focus as follows:

Senior management participates in stress prevention in the organisation.

Item 4:

Psychological well-being of staff is a priority for this organisation.

Participants voiced that they were unsure about what was meant by this item. Furthermore, they were partially divided over answering this item: Whereas some agreed to it, arguing that psychological health is a prerequisite for being productive, some others were unclear about the reference (priority for staff vs. for senior management), while still others were in doubt whether this was a realistic objective, or they mentioned that such an attitude could be just “propaganda”, that is, psychological well-being of staff being a priority is only a proclaimed catchphrase that is, however, not being enacted in the organisation and hence not really a priority.

One of the problems concerning this item may also be due to the lack of an explicit standard of comparison that is unmistakably clear for all participants and so participants were uncertain about psychological health being a “priority.” Hence, we suggest the following rewording for this item:

Employees’ psychological health is an important issue for senior management.

Item 5:

Senior management clearly considers the psychological health of employees to be of great importance.

Participants were uncertain about what the practical implications might be of senior management attaching “great importance” to psychological health. Therefore, we suggest formulating this item in a more precise way:

Senior management also shows through its actions that employees’ psychological health is an important issue.

Item 6:

Senior management considers employee psychological health to be as important as productivity.

Several participants pointed out that this item was redundant in relation to the previous item 4. In addition, one has to bear in mind that the response options “disagree” and “strongly disagree” cannot be interpreted unambiguously in the sense of the response scale—they could either imply higher OR lower importance of psychological health. Further, the term “productivity” was interpreted in different ways by participants. To allow for higher precision, we suggest reformulating this item as follows:

Senior management clearly considers employee psychological health to be as important as organisational performance.

Item 7:

There is good communication here about psychological safety issues which affect me.

On this item, participants remarked that it does not differentiate between different types of communication, i.e. whether the focus is on “hierarchical” communication from management to employees or on communication among employees. Maureen F. Dollard who originally developed the instrument clarified that the focus of this item should be on open and equitable communication among employees. Hence, we suggest the rewording of this item as follows:

There is good communication among employees about the issue of psychological health in our organisation.

Item 9:

My contributions to resolving occupational health and safety concerns in the organisation are listened to.

Comparable to item 6, this item is formulated in a way that does not allow negative answers to be interpreted unambiguously. Some participants were not able to answer this item, for example, because they had not yet experienced this situation—neither they themselves nor their coworkers had so far contributed suggestions on how to resolve problems of psychological health. So this item could be revised by extending the frame of reference as follows:

Our organisation is open to employees' suggestions regarding the issue of psychological health.

Item 11:

Employees are encouraged to become involved in psychological safety and health matters.

On this item, participants noticed that they were unsure about what was meant by “become involved”. They perceived a large overlap with item 9. Likewise, it was not clear to participants whether “encouraged” only referred to employee communication about psychological health or additionally to active contribution by employees. These uncertainties could be overcome by specifying the item as follows:

Employees in our organisation are encouraged to participate in matters regarding the issue of psychological health.

Item 12:

In my organisation, the prevention of stress involves all levels of the organisation.

Again, the focus of this item was not clear to many participants. For example, they were unsure as to what was meant by “levels”. In discussing the participants' difficulties with Maureen F. Dollard, she underlined that the basic idea behind this item is prevention of stress as a joint responsibility which involves the cooperation of the whole organisation. This line of argumentation would lead to rewording this item as follows:

In our organisation, the prevention of stress is a joint responsibility which involves the cooperation of the whole organisation.

13.3.5 Retrospective Probing

After participants had answered all PSC items with concurrent probing questions being applied, additional retrospective probing questions on cross-cutting issues were asked, namely “Which items are most important to you?” and “Have all important aspects regarding ‘psychological health’ been addressed in this interview or would you like to add an extra item about that?”

Communication on the issue of “psychological health” within the organisation and the necessity of a joint effort of all players within the organisation to address this issue were mentioned as the most important aspects covered in the questionnaire. The relevance of this normative statement has to be considered against the background that a large number of participants perceived a lack of communication on psychological health within the organisation combined with a perceived lack of communication as such. At the same time, 72% of participants of the main cognitive pretest were aware of problems in their organisation that affect employees' psychological health, which clearly calls for addressing this issue in organisations.

13.4 Conclusions and Outlook

Our aim was to test the content validity of the PSC tool in Germany. For this purpose, cognitive interviewing was applied to the PSC tool that had been translated into German. As a result of cognitive interviewing, items were reworded in order to improve their comprehensibility and to clarify item intent. In addition, the interviews pointed to the need for adding definitions of “psychological health” and of “senior management” to ensure similar understanding among participants. In this way, cognitive interviewing proved to be useful to counteract a potential “researcher bias”, i.e. that theoretically well-founded concepts are operationalized without appropriately considering the mindset of respondents. This is all the more important when trying to apply a construct in another country—and culture—(i.e. Germany) than where it was developed (Australia).

Respondents in our sample of 25 participants (employees from various organisations) voiced that the questionnaire was comparatively long and that some items were very similar to one another. Items 1, 2, 8, 10 and 11 were considered most important by them. It might hence be advisable to shorten the instrument for applications in a practical context, i.e. as screening tool for psychological health.

These results represent an intermediate step in the research process on the further development of the PSC tool for application in Germany. The qualitative pretest presented in this chapter precedes the quantitative main study, in which data from 2500 employees from different industries and organisations in Germany will be collected. This data will be used for testing the postulated four factor structure of the PSC construct, the tool’s relations to other psychosocial working conditions and relevant work-related outcome measures as well as PSC’s postulated organisational level nature.

In a wider perspective, there are conceptual and operational issues to be considered. Conceptually, as PSC refers to employees’ shared perceptions of management commitment to employees’ psychological health, it requires that employees share implicit assumptions about employer responsibilities. Based on prior research (e.g. Idris, Dollard, Coward, & Dormann, 2012) it can be hypothesized that the extent and the quality of these assumptions, and thus employees’ expectations regarding employer commitment to their psychological health, will vary across countries and cultures. The designation of the BAuA as a Collaborating Center of the World Health Organization (WHO) is a good foundation for further research on PSC in countries with diverse cultures, legal, social, and political settings. Applying tests of measurement invariance will be an appropriate tool for testing whether the PSC tool means the same to workers from different countries and cultures, and it is an indispensable prerequisite for investigating group differences (Vandenberg & Lance, 2000).

Operationally, one of the questions that deserve further consideration relates to the determinants of PSC within industries and organisations: “As PSC is largely determined by management attitudes and values, we theorize that PSC will vary within (at various levels within an organisation) and between organisations” (Dollard & Bailey, 2014, p. 31). At what level—between teams or between organisations—can

we expect is the variation greater and what are the implications of this for PSC theory? One might argue that variation at the organisational level is likely due to senior management, and variation at the unit level to middle management. Within an organisation, one would expect convergence between these climates, but also some divergence due to middle management's discretion, quality, or even ethical approach. Senior management is highly influential in setting policy and procedure (espoused PSC) and middle management in the enactment of these (i.e. practiced PSC). Middle managers are more proximal to the experience of employees. We hypothesize that work unit level will be the source of greater variance than the organisational level of PSC. This is one of the questions that we will address based on the quantitative data of our study.

Take home messages

- Pretesting the translated PSC items using cognitive interview techniques was essential to clarify the meaning of items among respondents.
- Adding a definition for “psychological health” to the PSC tool was necessary to harmonize understanding of this term among respondents.
- Employees have difficulties in shifting their reference from their individual to their group's perspective with regard to PSC.

References

- Berthelsen, H., Hakanen, J., Kristensen, T.S., Lönnblad, A., & Westerlund, H. (2016). A qualitative study on the content validity of the social capital scales in the Copenhagen psychosocial questionnaire (COPSOQ II). *Scandinavian Journal of Work and Organizational Psychology*, 1(1), 5, 1–13.
- Brück, C. (2014, September). Worker participation—Germany. Retrieved from https://oshwiki.eu/wiki/Worker_participation_-_Germany.
- Buers, C., Triemstra, M., Bloemendal, E., Zwijnenberg, N. C., Hendriks, M., & Delnoij, D. M. J. (2014). The value of cognitive interviewing for optimizing a patient experience survey. *International Journal of Social Research Methodology*, 17(4), 325–340.
- Dollard, M. F., & Bailey, T. (2014). *The Australian Workplace Barometer. Psychosocial safety climate and working conditions in Australia*. Samford Valley: Australian Academic Press.
- Dragano, N., Siegrist, J., & Wahrendorf, M. (2011). Welfare regimes, labour policies and unhealthy psychosocial working conditions: a comparative study with 9917 older employees from 12 European countries. *Journal of Epidemiology and Community Health*, 65, 793–799.
- Ertel, M. (2014, October). Note on policy interventions on psychosocial risks in Germany. Retrieved from <https://osha.europa.eu/de/tools-and-publications/seminars/eu-osha-seminar-on-psychosocial-risks-in-europe>.
- EU-OSHA. (2012). *Management of psychosocial risks at work: An analysis of the findings of the European Survey of Enterprises on New and Emerging Risks*. Luxembourg: Publication Office of the European Union.

- Federal Ministry of Labour and Social Affairs. (2013, September). Joint declaration on mental health in the workplace: Bonn. Retrieved from https://www.bmas.de/SharedDocs/Downloads/DE/PDF-Publikationen/a449e-joint-declaration.pdf?__blob=publicationFile.
- Fulton, L. (2013). Health and safety representation in Europe. Labour Research Department and ETUI (online publication prepared for worker-participation.eu).
- Hall, G. B., Dollard, M. F., & Coward, J. (2010). Psychosocial safety climate: Development of the PSC 12. *International Journal of Stress Management*, 17(4), 353–383.
- Idris, M. A., Dollard, M. F., Coward, J., & Dormann, C. (2012). Psychosocial safety climate: Conceptual distinctiveness and effect on job demands and worker psychological health. *Safety Science*, 50, 19–28.
- Janetzke, H., & Ertel, M. (2017). *Psychosocial risk management in a European comparison*. Dortmund/Berlin/Dresden: BAuA. Retrieved from https://www.baua.de/DE/Angebote/Publikationen/Berichte/F2339.pdf?__blob=publicationFile&v=5.
- Joint German Occupational Safety and Health Strategy. (2015, April). Retrieved from <http://www.gda-portal.de/en/AboutGDA/AboutGDA.html>.
- Liu, C., & Spector, P. E. (2005). International and cross cultural issues. In J. Barling, E. K. Kelloway, & M. R. Frone (Eds.), *Handbook of work stress* (pp. 487–515). Thousand Oaks: Sage Publications.
- Management of the GDA Mental Health Working Programme. (Eds.). (2014). *Occupational safety and health in practice: Recommendations for implementing psychosocial risk assessment*. Berlin: Federal Ministry of Labour and Social Affairs.
- Otto, W., Neuert, C., Meitinger, K., Beitz, C., Schmidt, R., & Stiegler, A. (2016). *Psychosocial Safety Climate—Weiterentwicklung und Validierung eines Instrumentes für die Erfassung der Handlungsbereitschaft zum Schutz der psychischen Gesundheit der Beschäftigten auf organisationaler Ebene. Kognitiver Pretest* (gesis-Projektbericht 2016/08). Mannheim: Gesis.
- Vandenberg, R. J., & Lance, C. E. (2000). A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational Research Methods*, 3(1), 4–70.
- Willis, G. B. (2005). *Cognitive interviewing. A tool for improving questionnaire design*. Thousand Oaks: Sage Publications.

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