

Sustainable employability at universities

Applying the KIWEST in the Netherlands and developing a shorter version

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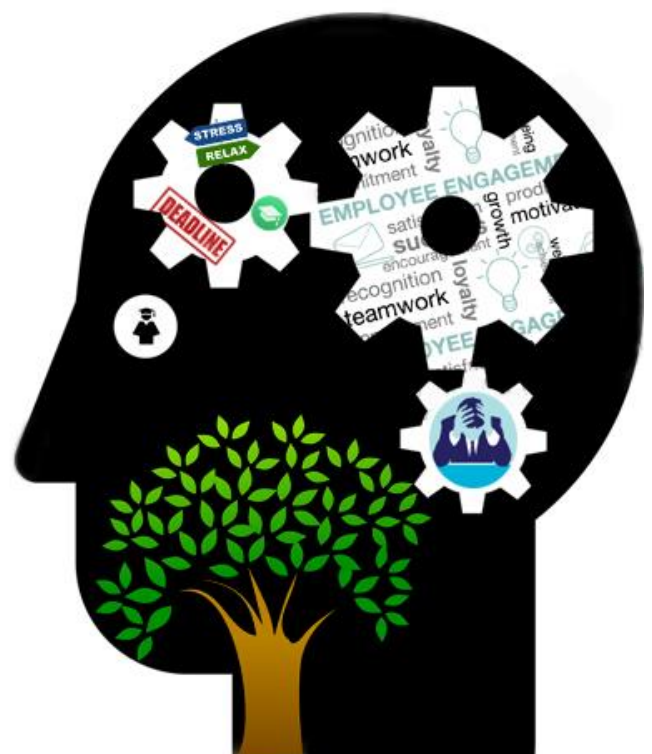
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Abstract

Nowadays, sustainable employability is an increasingly important topic for universities due to an ageing population and shifting trends in the university landscape. Employees are sustainable employable when they have sufficient resources and viable opportunities at their disposal to perform their current and future work, while maintaining their health and well-being. The KIWEST is a questionnaire that can map the psychosocial work environment at universities. Anticipating on the results of the KIWEST, universities can improve the sustainable employability of their employees, which in turn can lead to a decrease in healthcare costs and a better performance of universities. To date the KIWEST has not been implemented outside Norway, but the latter proves it is interesting to implement the KIWEST in the Netherlands as well. However, several steps must be taken before this can happen. The aim of this study was to perform these steps, namely investigating to what extent the KIWEST can be applied to the Netherlands and to examine to what extent the KIWEST can be shortened, in order to make sure the KIWEST is a useful instrument to map the psychosocial work environment and in the end to improve the sustainable employability in the Dutch context. Since these steps are quite diverse, this thesis has been divided into two different studies.

Study 1. This study investigates to what extent the KIWEST could be applied in the Netherlands. This has not been examined extensively for the Dutch setting yet. Therefore, the internal consistency reliability of the 29 different subscales and the model fit of the KIWEST have been studied. These are important issues to investigate when cross-culturally applying a questionnaire. University employees of the Plant Sciences Group of Wageningen University & Research ($n = 138$) participated in the research by completing the KIWEST questionnaire. The data of the Dutch respondents ($n = 112$) showed that for most of the translated subscales the Cronbach's alpha was acceptable ($\alpha > 0.7$, $n = 18$), for some subscales the alpha was questionable ($0.5 < \alpha < 0.7$, $n = 9$) and for two subscales the alpha was negative, so not acceptable. The model fit indices, that were based on data from all respondents by conducting a confirmatory factor analysis (CFA), indicated that the model fit was mediocre/poor ($\chi^2(6704) = 12724.82$, $p < 0.000$, RMSEA = 0.081, CFI/NFI = 0.573/0.406). A subsequent exploratory factor analysis (EFA) showed that this might be due to discriminant validity issues.

Study 2. This study examines to what extent the KIWEST could be shortened, since the current length of the questionnaire proved to be an impediment for a good response rate. Occupational health psychology experts have been consulted ($n = 6$) and were asked to rate the subscales in the KIWEST on relevance (content validity) and overlap (discriminant validity). Additionally, for the overlapping subscales a discriminant validity analysis was conducted using the data obtained in study 1. Results showed that the subscales task completion ambiguity, trust regarding management, trust in management (next administrative level) and WORK-SOC can definitely be removed and also indicated that some subscales can possibly be removed.

A preliminary conclusion can be drawn that the KIWEST can be applied to the Netherlands. Most of the Dutch subscales showed good internal consistency reliability and the model fit might be relatively poor due to discriminant validity issues, which are not uncommon within such a large research instrument

measuring the psychosocial work environment, and not necessarily due to the implementation in the Dutch context. Furthermore, it has been shown that the KIWEST can be shortened. In the future, among other things, study 1 can be replicated with less limitations, namely generating a greater amount of respondents and using the official way of translating, in order to see if the same results are found and a more extensive discriminant validity analysis can be done in SPSS. Also, psychometric properties of a shorter version of the KIWEST can be tested.

Keywords sustainable employability, health promotion, KIWEST, psychosocial work environment, universities, cross-cultural application.

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1. [Introduction](#)

“Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love” (WHO, 1986, p. 3)

Since most people spend most of their waking hours at work, the work environment can be seen as an important arena for health promotion. The WHO even regards health promotion at the workplace as a top priority in the 21st century (WHO, n.d.). According to Åkerlind, Schunder and Frick (2007) workplace health promotion activities can positively contribute to employees’ physical, psychological as well as social health and well-being and in this way to employees’ sustainable employability.

A university is one setting in which workplace health promotion can take place (Scriven & Hodgins, 2011). In order to promote health and well-being of university employees, it is necessary to map their current work environment. This can be done, for instance, by looking at shifting trends in the university landscape and universities’ organizational culture. In this way, job factors come forward that are stimulating or hindering the health and well-being of university employees.

1.1 [Shifting trends in the university landscape](#)

In the Netherlands, several shifting trends in the university landscape influence the health and well-being of university employees. These shifting trends lead, for instance, to high work pressure among university employees. According to de Waard (2013) 40% of the university employees perceive their work pressure as (way) too high. This can result in stress and burn-out (Jettinghoff & Scheeren, 2016) and work-family conflict (Pejtersen, Kristensen, Borg & Bjorner, 2010). According to recent research 60% of the university employees, academic and non-academic, already experience some kind of physical or psychological complaints because of this increasing work pressure (Werkdruk Universitair Docent, 2017).

Jettinghoff and Scheeren (2016) describe four of these shifting trends in the university landscape from which this increasing work pressure originates, namely a major increase in students (and a minor increase in university employees), a diversified student population (with different needs), a reduction in direct subsidies (so more time is spend on writing grant applications) and an increase of publication pressure (since this is important for getting funding and for the promotion of the university).

The fifth trend originates from an increasing collaboration between universities, the business community and the government, which is also known as the top sector policy. In the Netherlands, in 2011, nine top sectors have been indicated and within these top sectors collaboration between entrepreneurs, researchers and the government is expected. In this way, the Netherlands hopes to strengthen its international position and to improve its knowledge-infrastructure (CBS, 2015). For universities this means that they have to deploy their (limited) resources maximally, which can lead to pressure on the university system.

The sixth trend concerns the Tenure track. An increasing number of academics fall under the Tenure track. The objective of the Tenure track is to hire talented academics and, therefore, Tenure track

universities have a strict selection procedure and constantly monitor academics' performance. As a consequence, within the Tenure track, job insecurity and pressure to perform well are high. When performing well, academics can continue their careers and get a permanent contract, a tenure, in the end (Fruijtier & Brok, 2007).

Furthermore, temporary contracting is omnipresent at universities (Kuiper, 2014). In 2006 around 35% of the university employees had a temporary contract and in 2015 this was around 42% (VSNU, n.d.). An explanation for this trend can be found in research funding. As stated before, universities receive less subsidies from the government and have to apply for subsidy elsewhere. This subsidy is often only for a few years. That is why it is risky for universities to give their staff permanent contracts. Also, temporary contracting is increasingly common nowadays due to a growing number of students. Because of this temporary contracting, there is a lot of competition for getting permanent contracts, which results in a high pressure to perform well (Jettinghoff & Scheeren, 2016).

However, it is not all doom and gloom for university employees. The eighth trend, towards sustainable employability, contributes to the health and well-being of university employees. Sustainable employability means that employees continuously experience opportunities as well as conditions to do their job while maintaining their health and well-being (Brouwer et al., 2012). Recently, sustainable employability has been included in the Collective Labor Agreement (CLA) of universities. For instance, university employees can take off two days a year to develop themselves and improve their sustainable employability (VSNU, 2015). They can go to seminars or conferences or do a workshop. Also, work pressure among academics is seen as an important issue during the latest CLA negotiations. However, there was no new CLA in 2016, because the labor unions and the employers' association could not come to an agreement on this issue (Knobel, 2016).

1.2 Organizational culture

As stated, a lot of these shifting trends in the university landscape lead to an increase in work pressure, which hinders the trend towards sustainable employability. Work pressure, and also other job stressors like interpersonal conflicts, can lead to increased stress levels and a decrease in health. However, the extent to which employees' health and well-being is affected depends on how universities deal with these jobs stressors, which, in turn, is influenced by organizational culture (Leka, Griffiths & Cox, 2004). Organizational culture can be described as "the collective values, beliefs and practices of organizational members" (Needle, 2004, p. 214). When there is a positive organizational culture, which can be characterized by, for instance, trust, honesty, fairness, social support and autonomy, it appears that employees can deal more easily with job stressors and their health and well-being is positively influenced (Lopes, Lagoa & Calapez, 2014; Samra, Gilbert, Shain & Bilsker, 2012).

All in all, it appears that, despite an increase in work pressure, academics are still quite satisfied with their jobs (Innstrand, Christensen, Undebakke & Svarva, 2015). A high degree of job autonomy, flexibility (Innstrand et al., 2015), a deep interest in what they are doing (Harman, 2003), a high social status (Shin & Jung, 2014), challenges, self-actualization and variety in the work (Houston, Meyer & Paewai, 2006) contribute to this.

1.3 Mapping the psychosocial work environment: KIWEST

The latter section shows there are job demands (e.g. high work pressure, interpersonal conflict) and job resources (e.g. autonomy, flexibility, trust, fairness, social support), which can influence the health and well-being and in the end sustainable employability of university employees. For getting empirical insight into these job demands and job resources of university employees, a questionnaire can be used, namely the KIWEST (Knowledge-Intensive Work Environment Survey Target) (Undebakke, Innstrand, Anthun & Christensen, 2015). The results of the KIWEST show how employees perceive their psychosocial work environment and give an indication about their health and well-being. This questionnaire has been developed by four Norwegian universities, the University of Oslo, Bergen, Tromsø and Trondheim, and is part of the broader Norwegian ARK Work Environment and Work Climate Intervention Programme. The original KIWEST can be found in Appendix I.

1.4 Research aim and relevance

It is interesting to implement the KIWEST in the Dutch setting as well. However, several steps must be taken before the KIWEST can be applied to the Netherlands. Therefore, the aim of this thesis was to perform these steps, namely investigating to what extent the KIWEST can be applied to the Netherlands and to examine to what extent the KIWEST can be shortened, in order to make sure the KIWEST is a useful instrument to map the psychosocial work environment and in the end improve sustainable employability in the Dutch setting. In this context, the scientific as well as the societal relevance are discussed.

1.4.1 Scientific relevance

First of all, the scientific relevance lies in investigating the cross-cultural application of the KIWEST in the Netherlands. Ideally, in order to apply a research instrument in another country, several steps need to be taken. Three of these steps are translation, determination of the internal consistency reliability and determination of the model fit. In 2015, Stijn de Jong, a graduate of Wageningen University, performed some of these steps. He translated the subscales of the KIWEST from English to Dutch (see Appendix II) and he did a pilot test among 31 university employees in order to test the internal consistency reliability. However, because the number of respondents was quite low, he could not make strong arguments on the internal consistency reliability and he suggested that the translated questionnaire needed to be tested again among a higher number of respondents. That is why, in this research, the internal consistency reliability of the Dutch KIWEST has been tested again. In addition to the internal consistency reliability, the model fit has been investigated. This has not been examined before and will indicate if the KIWEST is a good instrument to use in the Dutch setting. All in all, knowledge about the internal consistency reliability and model fit adds to the scientific knowledge about applying the KIWEST in the Dutch setting. Based on the latter, the following research questions can be formulated:

1. What is the internal consistency reliability of the subscales of the Dutch KIWEST?
2. To what extent do the Dutch KIWEST data fit the KIWEST model?

Secondly, testing the KIWEST on its cross-cultural application by looking at the internal consistency reliability and model fit is only one step forward by applying it in the Dutch context. It is also interesting to investigate to what extent the KIWEST can be shortened, in order to secure a good response rate. There are shorter versions of research instruments available to measure the psychosocial work environment, but not specifically for universities. Shortening the KIWEST adds to the scientific knowledge on what aspects of the psychosocial work environment at universities, represented by the subscales of the KIWEST, are most important to examine regarding sustainable employability. Based on the latter the following research question can be formulated:

3. To what extent can the KIWEST be shortened?

Since these scientific domains are quite different, this thesis is divided into two studies:

Study 1 Cross-cultural application of the KIWEST (internal consistency reliability + model fit)

Study 2 Shortening the KIWEST

1.4.2 Societal relevance

The societal relevance of investigating the KIWEST lies in the fact that a reliable and valid KIWEST can give useful insights into the psychosocial work environment (of departments) of Dutch universities and a shorter KIWEST is more comfortable to use (for managers as well as for employees). Based on the results individual or collective health interventions can be developed and implemented. In this way the health and well-being and in the end sustainable employability of university employees can be improved. Next to top-down interventions, the KIWEST can also create change from bottom-up. The KIWEST can make employees more aware of their psychosocial work environment. As a consequence, they might undertake action themselves to improve their health and well-being.

So, when the KIWEST is reliable, valid and shorter, it is a useful instrument to map the psychosocial work environment at different universities in the Netherlands. In Norway, the KIWEST is conducted biannually on a national scale, which is something that could be done in the Netherlands as well. When acting upon the results, the KIWEST can contribute to the improvement of the working conditions of university employees in the Netherlands. This can lead to healthier employees and eventually to a decrease in healthcare costs and better performance of universities (Chenoweth, 2011; Leininger, Adams & DeBeliso, 2014).

1.5 Reading instruction

This thesis starts with the theoretical framework, in which the knowledge-intensive work environment in relation to the health and well-being of knowledge workers is described, the underlying model of the KIWEST, the job demands and job resources model, is discussed and the structure of the KIWEST is presented. After this, study 1 concerning internal consistency reliability and model fit comes across, in which literature on the cross-cultural application of research instruments is presented as well as the methods and results of this study. Then, there will be elaborated on study 2, which includes some literature on shortening questionnaires and the methods and results of this study. The results will be linked to existing literature in the discussion part and some research limitations as well as some

recommendations for future research will be provided in this section as well. In the end, a short conclusion can be found.

2. Theoretical framework

2.1 Knowledge-intensive work environment

As the name already implies, a knowledge-intensive work environment is present in organizations in which most of the employees or the entire workforce consist of knowledge workers (Newell et al., 2009). A knowledge worker can be defined as “someone having a high degree of expertise, education, or experience, and the primary purpose of their jobs involves the creation, distribution, or application of knowledge” (Davenport, 2005, p. 10). Basically, they think for a living. In the recent past there has been a shift to a knowledge-based economy. Nowadays, many organizations consist of knowledge workers, like universities, law firms, management consultancies and investment banks (Newell et al., 2009).

2.2 Psychosocial health and well-being of knowledge workers

The health and well-being of these knowledge workers is of crucial importance for organizations, since they possess specific knowledge and have to be able to transmit that knowledge for organizations to survive (Innstrand et al., 2015). Basically, the performance of the organization depends on them.

According to Innstrand et al. (2015) especially the psychological and social conditions people experience at work, also called the psychosocial work environment, play an essential role in the health and well-being of these knowledge workers. Psychosocial factors at the workplace are even considered the most important work environment issues nowadays and will remain important issues in the future (Kristensen, Hannerz, Høgh & Borg, 2005). Basically, the psychosocial work environment can be divided into three concepts: organization, social interaction and individual perception (Moen & Tjalvin, n.d.). Organization refers, for instance, to characteristics of employees' working conditions, the content of the work, the practical organization of the work and management issues. Social interaction refers to human-to-human relationships, for instance (the lack of) collaboration, feedback and support and possible conflicts at work. Individual perception refers to how employees experience all this. A specific definition of a psychosocial work environment is provided by Hansen et al. (2015). They describe the psychosocial work environment as “the work environment which has to do with the nature and content of the work, the organization of the work, and the social relations and conditions under which the work is performed” (p. 15).

Gardell (1981) defines five requirements for a positive psychosocial work environment. He describes them as “(1) work should be arranged in a way which allows the individual worker to influence his own working situation, working methods and pace, (2) work should be arranged in a way which allows for an overview and understanding of the work process as a whole, (3) work should be arranged in a way which gives the individual worker possibilities to use and develop all his human resources, (4) work should be arranged in a way that allows for human contacts and cooperation in the course of work and (5) work should be arranged in a way which makes it possible for the individual worker to satisfy time claims from roles and obligations outside work, for instance family, social and political commitments” (p. 73).

When there is an unpleasant psychosocial work environment, this can have adverse effects on the health and well-being of knowledge workers (Innstrand et al., 2015). For instance, Nieuwenhuijsen, Bruinvels and Frings-Dresen (2010) found that high job demands, low job control, low co-worker support, low supervisor support, low procedural justice, low relational justice and a high effort-reward imbalance can lead to an increase in stress-related disorders, such as neurasthenia, adjustment disorders and burnout. Also, Bonde (2008) found that adverse psychosocial circumstances at work relate to an elevated risk of depression and Kristensen et al. (2005) argue it can lead to musculoskeletal disorders and cardiovascular diseases. Furthermore, as a consequence, the organization can experience adverse (economic) effects, because absence due to sickness and labor turnover will increase and productivity will decrease (Lohela, Björklund, Vingård, Hagberg & Jensen, 2009).

2.3 JD-R Model

As already mentioned in the introduction, the KIWEST is designed to measure how employees perceive their psychosocial work environment, which gives an indication of the health and well-being of knowledge workers at universities. The underlying framework of the KIWEST is the JD-R model, the job demands and job resources model. This is a well-known model for employee well-being (Innstrand et al., 2015).

Job demands can be described as “physical, psychological, social or organizational aspects of the job that require sustained physical and/or psychological effort or skill” (Bakker & Demerouti, 2007, p. 312). Therefore, job demands can be a physiological or psychological burden. Examples of job demands are intense work pressure and interpersonal conflicts at work. Not all job demands are perceived as a burden per se. For instance a high workload, time pressure and a high level of responsibility can also be seen as challenging demands, which can be positively linked to work engagement (Crawford, LePine & Rich, 2010).

Job resources can be described as “physical, psychological, social or organizational aspects of the job that are either/or functional in achieving work goals, reduce job demands and the associated physiological and psychological costs and stimulate personal growth, learning and development” (Bakker & Demerouti, 2007, p. 312). Examples of job resources are autonomy, support from colleagues and meaningful work. In general, job resources are important motivators for successfully and happily doing one’s job.

According to the JD-R model organizational outcomes and in the end the health and well-being of employees can be influenced via two different psychological pathways, originating from job demands and job resources. The first psychological pathway is called the job strain pathway. Job demands can result in job strain, which can lead to adverse organizational outcomes and adverse health outcomes, like stress and burn-out. This happens when there are high demands and inadequate resources (Innstrand et al., 2015). The second psychological pathway is called the motivational pathway. According to Schaufeli and Taris (2013) job resources can lead to job motivation through extrinsic and intrinsic processes. In the extrinsic process employees are motivated to do their work, because there are adequate job resources available, they can mobilize them and in this way achieve their work goals.

In the intrinsic process employees are motivated to do their work, because their basic human needs are fulfilled by job resources like autonomy, social contacts/support and competence. In the end, (extrinsic and intrinsic) job motivation can result in positive organizational outcomes, like work engagement and organizational commitment and a better health and well-being of employees (Bakker & Demerouti, 2007; Innstrand et al., 2015). Energetic, committed and absorbed feelings, which arise among employees when following this pathway, contribute to this (Schaufeli & Taris, 2013). The job strain pathway and the motivational pathway are visible in Figure 1 (Bakker & Demerouti, 2007, p. 313), where the + refers to a positive influence and the – refers to a negative influence.

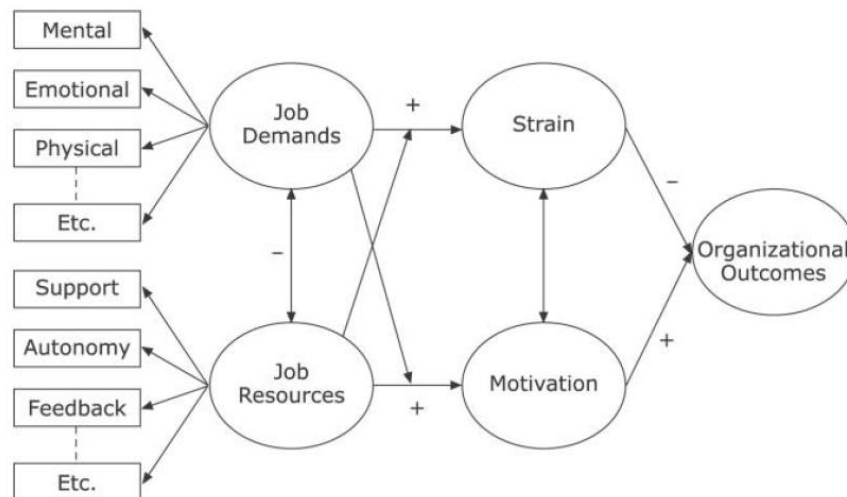


Figure 1. The Job Demands-Resources model. Reprinted from “The Job Demands-Resources model: state of the art,” by A.B. Bakker and E. Demerouti, 2007, *Journal of managerial psychology*, 22, p. 313.

The JD-R model can be linked to the broader concepts of pathogenesis and salutogenesis. Salutogenesis is a stress resource orientated concept (Antonovsky, 1987). It focuses on what resources (General Resistance Resources, like knowledge/intelligence, coping strategy) and capacities people possess, recognize and use to create health (Lindström & Eriksson, 2005). This is in line with the motivational pathway in the JD-R model, which looks at job resources that employees possess, recognize and use that result in a better health and well-being of their employees and a better performance for the organization. Contrastingly, pathogenesis focuses on obstacles and deficits, which cause ill health (Lindström & Eriksson, 2005). This is in line with the job strain pathway in the JD-R model, which looks at job demands that can result in employees’ ill health, like stress and burn-out, and can have a negative impact on the organization.

2.4 JD-R Model & the KIWEST

Aspects of the JD-R model have been used for the development of the KIWEST. The KIWEST can be divided into several broader sections with different subscales concerning demands, resources and commitment, which measure the psychosocial work environment (Undebakke et al., 2015), namely:

- Resources related to individual’s task completion, such as job autonomy, task completion ambiguity, empowering leadership, recognition, social support from supervisors and competency demands.

- Resources related to colleague fellowship, such as cohesion in work teams, social community at work, inclusiveness and social responsibility and social climate.
- Resources related to the organizational unit, such as goal clarity, innovation, fairness of the supervisor, trust regarding management and trust (own unit and next administrative level).
- Demands related to individual's task completion, such as illegitimate tasks, dysfunctional support, interpersonal conflicts, role conflict and role overload.
- Commitment to work, such as meaning of work, engagement, work-home facilitation, work-family conflict, commitment to the workplace, workaholism and work-related sense of coherence.

It is important to note that this categorization is just a proposal, because the categorization can be different for different employees and organizational units (Undebakke et al., 2015).

Figure 2 (Undebakke et al., 2015, p. 8) shows how (some of) the scales relate to the JD-R Model.

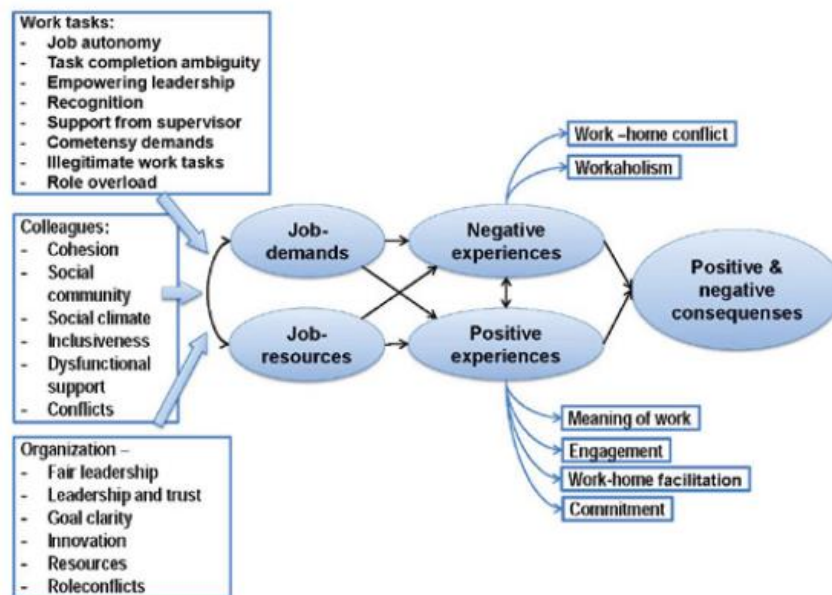


Figure 2. KIWEST and JD-R. Reprinted from “ARK – The ARK Intervention Programme: Who – What – How,” by K.G. Undebakke, S.T. Innstrand, K.S. Anthun and M. Christensen, 2015, p. 8. Trondheim: HiST & NTNU.

For a complete and detailed overview of the subscales see Table 1.

Table 1

Subscales KIWEST (Undebakke, Innstrand, Anthun & Christensen, 2015)

Subscale	High score indicates...	Subscale	High score indicates...
Job autonomy	Employees feel they have autonomy and influence on how the work will be carried out	Trust (own unit & next administrative level)	Employees experience to a high degree that management is reliable and trustworthy
Task completion ambiguity	Employees can, or have to, determine when their tasks are completed	Illegitimate tasks	Employees experience a low degree of tasks that are perceived as being outside one's area of responsibility
Empowering leadership	Employees perceive management to be empowering	Dysfunctional support	Employees experience a low degree of dysfunctional support
Recognition	Employees feel to a high degree that they are recognized and appreciated for their efforts	Interpersonal conflicts	Employees are to a little or no degree negatively influenced by conflicts between colleagues
Social support from supervisors	Employees feel a high degree of support from his/her closest supervisor	Role conflict	Employees perceive little conflict between their different roles
Competency demands	Employees have the feeling they can/have to learn continuously	Role overload	Employees experience little time conflict with their work tasks (too much in too little time)
Cohesion in work teams	Employees experience good cooperation with colleagues in their unit	Meaning of work	Employees experience to a high degree that their work is meaningful
Social community at work	Employees experience high degree of social community with colleagues in their own unit	Utrecht Work Engagement Scale (UWES)	Employees experience to a high degree of work engagement
Inclusiveness and social responsibility	Inclusion and social responsibility are generally taken care of	Work to family conflict and Work to family facilitation	The work has little impact on family life and the job has a positive effect on the home situation
Social climate	A good social climate	Organizational commitment	Employees experience having positive ties to their place of work
Goal clarity	Employees have a clear picture of the purpose of his or her own work	Dutch Workaholism Scale (DUWAS)	Employees experience little addiction to work
Innovation	Employees experience that there is a culture for continuous improvement in the unit	Work-related Sense of Coherence WORK-SOC	Employees experience to a high degree that their workplace is health promoting
Fairness of the supervisor	Employees experience that management is fair		
Trust regarding management	High degree of perceived trust in management		

In the next chapters a look will be taken at the cross-cultural application of the KIWEST (study 1) and to what extent the KIWEST can be shortened (study 2).

3. Study 1: Cross-cultural application of the KIWEST

3.1 Introduction

Since the world population is so diverse it is important that researchers have access to reliable and valid research instruments or scales in their own cultures and languages to conduct cross-cultural research (Sousa & Rojjanasrirat, 2011). Therefore, the development and administration of 3MC (multinational, multicultural and multiregional) research instruments, like surveys, is important. In this way high quality comparative data can be gathered (Survey Research Center, 2016). When gathering this data, it is essential that the research instrument that is used is invariant. Using measures that are variant is like comparing apples and oranges, which means that there are misinterpretations of mean differences. The differences in the instrument score might not reflect true differences in the construct (Vlachopoulos et al., 2013). Although Innstrand et al. (2015) argue that the KIWEST should provide normative values, this could also be an issue when cross-culturally applying the KIWEST in the Netherlands, since most of the subscales used are from non-Dutch origin.

According to Sousa and Rojjanasrirat (2011) there are several steps in the cross-cultural application of a research instrument, which can be described as:

- "Translation of the original instrument into the target language by two independent translators (forward translation or one-way translation)" (p. 269).
- "Comparison of the two translated versions of the instrument" (p. 269).
- "Blind back-translation of the preliminary initial translated version of the instrument" (p. 270).
- "Comparison of the two back-translated versions of the instrument" (p. 270).
- "Pilot testing of the pre-final version of the instrument in the target language with a monolingual sample: cognitive debriefing" (p. 271).
- "Preliminary psychometric testing of the pre-final version of the translated instrument with a bilingual sample" (p. 271).
- "Full psychometric testing of the pre-final version of the translated instrument in a sample of the target population" (p. 272).

In this research, the focus will be on the last step (since the KIWEST has already been translated to Dutch) and especially on internal consistency reliability and model fit (measurement equivalence). These are several of the common approaches that are used for measuring the psychometric qualities of a survey (Sousa & Rojjanasrirat, 2011). Before elaborating on internal consistency reliability and measurement equivalence, the Norwegian and Dutch cultures will be described and compared looking at Hofstede's cultural dimensions and shifting trends in the university landscape, in order to see if the KIWEST is a promising research instrument to apply in the Netherlands.

3.1.1 The Netherlands and Norway

Norwegian and Dutch cultures do not differ a lot in terms of cultural values (at the workplace). This can be seen when looking at how the countries score at Hofstede's cultural dimensions (Hofstede, Hofstede & Minkov, 1991; Hofstede & Hofstede, 2001):

- Individual/collectivism (loosely-knit social framework versus tightly-knit social framework). Norway scores 69 for individualism and the Netherlands scores 80. This means that in both countries individual's independence is seen as important as well as the expression of personal opinions, in a direct way of communication.
- Power distance (unequal distribution of power). Norway scores 31 and the Netherlands scores 38. Basically, this means that Norwegian and Dutch people think inequalities should be minimized. It is no problem that hierarchy is there, it can be convenient, but it should not be leading. Also, the management should be accessible and coach and empower its employees. There is direct and participative way of communicating.
- Masculinity/femininity (competitive versus consensus-oriented). Norway scores 8 for masculinity and the Netherlands 14. Both scores are quite low, which means that both societies thrive on aspects like work-life balance, inclusiveness and solidarity, support, decision-making through involvement and consensus.
- Uncertainty avoidance (being uncomfortable with uncertainty and ambiguity). Norway scores 50 on this dimension and the Netherlands 53. This indicates that both countries do not really have a preference for controlling the future or for letting it happen.
- Long term orientation (holding onto traditions and norms versus social change and modernity). Norway scores 35 on this dimension and the Netherlands 67. This is quite a difference, which means that Norway adheres to a normative culture (one absolute truth, respect for traditions and focus on achieving quick results) and in the Netherlands the culture is more pragmatic (truth dependent on situation, context and time, easily adapt traditions to changed situations and being determined to achieve results).
- Indulgence (suppression and strict social norms (restraint) and allowance to have fun and enjoy (indulgence)). Norway scores 55 for indulgence and the Netherlands 68. This shows that Norway's score is inconclusive and in the Netherlands people think it is important to enjoy life, have leisure time, live up to their impulses and generally have a positive attitude/are optimistic. However, the difference between Norway and the Netherlands is not that big.

Furthermore, some of the shifting trends in the Dutch university landscape, as described in the introduction, are also an issue in other countries, like Norway. Innstrand et al. (2015) argue that Norwegian universities operate in a more competitive environment than ever before and have to respond to needs of the market, which results in strain for academics. Also, job insecurity plays a role, because there are limited permanent positions, such as for associate professors. Therefore, many people spend a lot of time in temporary positions, like research fellow or postdoc (European University Institute, 2015).

The latter shows that Norwegian and Dutch cultural values (at the workplace) are quite similar and Dutch and Norwegian universities face similar challenges. Therefore, the KIWEST looks a promising instrument to use in the Netherlands as well. It is interesting to investigate, looking at internal consistency reliability and model fit (measurement equivalence), if this is really the case.

3.1.2 Internal consistency reliability

Reliability refers to “whether an instrument can be interpreted consistently across different situations” (Field, 2013, p. 11). For a questionnaire, this means that the questions should yield the same results each time (Babbie, 2008). There are several types of reliability and one of them is internal consistency reliability. A construct (or subscale) is measured by different items (or statements) and, for the construct to be internally consistent, items measuring the same construct should produce similar results. For instance, for the construct ‘task completion ambiguity’ the respondents should score similarly on the items: ‘I determine when my work assignments are completed, I know when a task is completed and it is up to me to assess when I have completed a work assignment’. Statistical analyses can indicate if it is possible to remove some items from a construct in order to improve the internal consistency reliability. For calculating the internal consistency reliability solidly, the minimum number of respondents is 100 and 300 are preferred (Field, 2013). Based on the latter, the following research question can be formulated:

What is the internal consistency reliability of the subscales of the Dutch KIWEST?

3.1.3 Measurement equivalence

When a model, like the KIWEST, is able to reproduce the data, then there is a fit, or measurement equivalence. There is a good fit when the model is fairly consistent with the data and does not need any specification. Good fitting models allow data coming from different sociocultural groups to be meaningfully compared (Chen, Yang & Morin, 2015). Basically, when the model fit is adequate, different cultural groups assign the same meanings to scale items (Milfont & Fischer, 2015).

There are different types of measurement equivalence (Milfont & Fischer, 2015). First of all, there is functional equivalence. Milfont and Fischer (2015) describe this as “does the construct exist in all groups studied” (p. 112). Secondly, there is structural equivalence; “are indicators related to the construct in a non-trivial way” (Milfont & Fischer, 2015, p. 112). Metric equivalence refers to “are loading weights identical across groups” (Milfont & Fischer, 2015, p. 112) and lastly scalar equivalence investigates if “intercepts, that is the origin of measurement scales, are identical across groups” (Milfont & Fischer, 2015, p. 112).

It is not possible to test functional and (to some extent) structural equivalence by a statistical test. In order to investigate this, qualitative research and the opinions of experts is needed (Milfont & Fischer, 2015). Since Norwegian and Dutch cultures do not differ a lot from each other, as already described, it is believed that functional equivalence, a prerequisite for conducting statistical tests, is being met.

Based on the latter, the following research question can be formulated:

To what extent do the Dutch KIWEST data fit the KIWEST model?

From the latter research questions it will appear if the Dutch version of the KIWEST is valid and reliable. When this is the case, it is a useful instrument to map the psychosocial work environment at Dutch universities.

3.2 Methods

In this section an overview is given of the research methods to answer the above research questions. First of all, the research design of the study is discussed. Then, the data collection comes across as well as the study population as the sampling strategy. Lastly, there is a section on data analysis.

3.2.1 Research design

This study is a cross-sectional study and quantitative methods were used to answer the research questions. By spreading the KIWEST questionnaire data was obtained to calculate the internal consistency reliability of the Dutch KIWEST and to investigate the model fit. The KIWEST questionnaire was offered online in Qualtrics to facilitate easy response (Babbie, 2008).

3.2.2 Data collection

As described above, for answering the research questions in this study, the KIWEST questionnaire was used. The KIWEST, as presented in Qualtrics, can be found in Appendix III and Appendix IV.

The KIWEST, as has been mentioned in the theoretical framework, consists of a number of subscales. These subscales are standardized and validated scales from recognized Nordic and European research groups (Undebakke et al., 2015). In total, the original KIWEST consist of 30 subscales. However, Undebakke et al. (2015) describe 28 of them (presented as 26), which can be found in Table 1. The subscales 'resources and in research teaching' and 'influence on health' are not in the table, since these measures were developed by the authors of the KIWEST themselves and are not validated yet. However, since they are included in the KIWEST, they have been used in this study as well. In addition, the subscale 'trust' and the subscale 'work to family' are presented as two subscales in Table 1, but are divided into four subscales, trust (own unit), trust (next administrative level), work to family (conflict) and work to family (facilitation) when results of the KIWEST are presented to employees (Undebakke et al., 2015).

The KIWEST has not been structured according to the broader sections (of resources, demands and commitment) or the subscales, but according to another categorization of the subscales, namely: interpersonal relationships, job demands, work organization and job content, management and relationship with job. This has been done, since it makes more sense to employees when subscales are clustered like this (e.g. statements about colleagues and the management together) and to ease the feedback process (S.T. Innstrand, personal communication, February 10th 2017). For an overview see Table 2.

Table 2

Categorization of subscales in the KIWEST

Categorization	Subscales
Interpersonal relations	Cohesion in work teams, social community at work, inclusiveness and social responsibility, social climate, dysfunctional support and interpersonal conflicts
Job demands	Task completion ambiguity, competency demands, role conflicts and role overload
Work organization and job content	Job autonomy, goal clarity, innovation, resources, research and teaching and illegitimate tasks
Management	Empowering leadership, recognition, social support from supervisors, fairness of supervisor, trust regarding management, trust in unit management (own unit), trust in next administrative level
Relationship with the job	Utrecht Work Engagement Scale, Work-family conflict/work-family facilitation, organizational commitment, Dutch Workaholism scale, work-related sense of coherence, influence on health

In total, there are 127 items (statements). Every subscale consists of a varying amount of items, ranging from three to ten. See Appendix V for a complete overview. There are different answer options, all of them Likert scale, such as: strongly disagree, disagree, neither/nor, agree and strongly agree or (almost) never, once in a while, often, (almost) always or never, a few times a year or less, once a month or less, a few times a month, once a week, a few times a week, every day.

Before using the KIWEST in this study, one adjustment was made. The subscale work-related sense of coherence (WORK-SOC) was removed, since it did not work out according to professor Innstrand from the University of Trondheim, one of the founders of the KIWEST (S.T. Innstrand, personal communication, September 21st 2016). This subscale was not used during the feedback meetings with university employees (S.T. Innstrand, personal communication, October 27th 2016). Removing this subscale means that there are 29 subscales, including 118 items (127 – 9), left. Also, de Jong (2015) has some suggestions for removal of items. However, all items that de Jong (2015) mentions for removal were kept in this study, since the number of respondents of the study of de Jong (2015) was quite low. It is interesting to see what the Cronbach's alpha of these subscales becomes if a larger number of respondents is reached.

3.2.3 Study population and sampling strategy

The study population in this study consists of university employees, academic as well as non-academic. Academic employees are the ones who conduct scientific research and are responsible for teaching activities, such as professors (hoogleraren), associate professors (universitair hoofddocenten) and assistant professors (universitair docenten). Also, lecturers (docenten) and PhD students (promovendi) fall into this group. Non-academic employees (ondersteunend en beheerspersoneel - OBP) are employees who are responsible for teaching- and research support, facility services, ICT, management and administrative support and student services. In the Netherlands around 58% of the university employees are academic employees and around 42% non-academic employees (Onderwijsincijfers, 2015).

The sampling strategy that has been used in this study is convenience sampling. Departments of Wageningen University & Research (WUR) were asked if they wanted to set out the KIWEST questionnaire and the Plant Sciences Group (PSG) agreed to do so.

PSG is one of the knowledge units of the WUR, next to Agrotechnology & Food Sciences, Animal Sciences, Environmental Sciences and Social Sciences. PSG consists, similarly to the other research departments, of two main pillars, namely Wageningen University and the DLO foundation (Stichting Dienst Landbouwkundig Onderzoek). Together, PSG employs around 1000 people (D. Wissink, personal communication, 16th January 2017).

As the name implies, Wageningen University refers to the university and its programs, such as Plant Sciences. This is the u-part of the WUR, which is non-profit. Within Plant Sciences there are 18 chair groups, namely the Bioinformatics Group, the Biosystematics Group, the Centre for Crop System Analysis, the Farm Technology Group, the Farming Systems Ecology Group, the Horticulture and Product Physiology Group, the Laboratory of Cell Biology, the Laboratory of Entomology, the Laboratory of Genetics, the Laboratory of Molecular Biology, the Laboratory of Nematology, the Laboratory of Phytopathology, the Laboratory of Plant Physiology, the Laboratory of Plant Breeding, the Laboratory of Virology, the Mathematical and Statistical Methods Group, the Plant Production Systems Group and the Plant Developmental Biology Group.

The DLO foundation consists of research institutes. For PSG these are Plant Research International (PRI) and Applied Plant Research (PPO – Praktijkonderzoek Plant en Omgeving). This is the r-part of the WUR, which operates as a profit company. The research institutes consist of eight business units, namely Agrosystems Research, Arable Farming, Multifunctional Agriculture and Field Production of Vegetables, Biointeractions and Plant Health, Biometris, Bioscience, Bulbs, Trees and Fruit, Greenhouse Horticulture and Plant Breeding.

In this study employees from Wageningen University and the DLO part of the PSG were approached to take part in the online questionnaire. In order to reach the study population at the WUR, messages were posted on the Intranet (see Appendix VI), e-mails were sent to managers and flyers were distributed (see Appendix VII). The number of respondents that was aimed for was 100 to 300.

3.2.3.1 Ethical considerations within the study

Within social research there are several ethical standards that have to be taken into account in order to prevent harm to participants (Babbie, 2008), namely voluntary participation, obtaining informed consent and anonymity/confidentiality. Firstly, in this study university employees were informed about the KIWEST study by their supervisors or through the Intranet, but it was their own decision whether they wanted to participate or not. So, there was voluntary participation. Also, it was stated that they could withdraw from the study at any time, for any reason. Secondly, a clear introduction was formulated for the participants in the KIWEST in which the purpose of the research was clearly described, ethical issues were mentioned and the names and contact details of the researchers were provided. After reading this introduction, participants had to confirm that they understood what was written above and that they agreed to fill in the questionnaire. In this way informed consent was obtained. Lastly, anonymity and

confidentiality was addressed in the informed consent of the KIWEST. The KIWEST responses are anonymous, since individuals who completed it cannot be tracked down.

3.2.4 Data analysis

3.2.4.1 Research question 1: Internal consistency reliability

For answering research question 1, Cronbach's alpha was calculated for all the 29 subscales. This was done in SPSS by using the KIWEST data of the respondents who completed the Dutch version of the KIWEST questionnaire. It was important to reverse some of the items before doing any calculations.

Cronbach's alpha is a measure to study the internal consistency reliability (Field, 2013). For each subscale Cronbach's alpha is measured separately, because all subscales measure different constructs. Ideally, Cronbach's alpha needs to be above 0.7 (Field, 2013). This means that the subscale is reliable. It is important to look at the 'scale if item deleted' box in SPSS. This box shows what Cronbach's alpha would be if that item is deleted. If the subscale is reliable, no item should cause a great decrease in Cronbach's alpha. When it does cause a great decrease, it should be considered to drop the item.

3.2.4.2 Research question 2: Model fit

According to Milfont and Fisher (2015) confirmatory factor analysis (CFA) is the most widely used method for testing measurement invariance. CFA can be described as "a model testing technique in which a theoretical model is compared with the observed structure in a sample" (Milfont & Fisher, 2015, p. 112) and can be performed by using SPSS AMOS software. In CFA, goodness-of-fit indices can be used to examine the extent to which the theoretical model is consistent with the empirical data.

There are several fit indices that indicate to what extent the data fit the model. According to Ullman (2001) the comparative fit index (CFI) and the root mean square error of approximation (RMSEA) are mostly reported. For CFI, values greater than 0.9 indicate that the model that fits the data well (Innstrand et al., 2015). According to Visek (2007) the RMSEA is "an estimate of lack of fit, with values of 0.06 or less indicative of a good-fitting model relative to the degrees of freedom" (p. 18). When the RMSEA is greater than 0.1 the model fits the data poorly. In case of smaller sample sizes the normed fit index (NFI) can be reported as well. When the NFI is greater than 0.9 the data fit the model well.

When there is a poor model fit, an exploratory factor analysis (EFA) can be conducted to investigate the factor structure (Farrell & Rudd, 2009). Probably, the structure in the EFA deviates from the (theoretically) proposed structure in the CFA.

3.3 Results

In this section the results are presented for the research questions:

What is the internal consistency reliability of the subscales of the Dutch KIWEST?

To what extent do the Dutch KIWEST data fit the model?

3.3.1 Sample characteristics university employees and short overview of the results

The KIWEST questionnaire was available on the Intranet of PSG for three weeks, from the 14th of November 2016 until the 5th of December 2016, and was actively promoted in five groups within PSG during that time. After three weeks 112 employees completed the Dutch version of the questionnaire and 26 employees completed the English version of the questionnaire, which resulted in a total amount of 138 respondents. The response rate for whole PSG, which consists of around 1000 employees, is 13.8% ($n = 138$) and the response rate for the groups within PSG that actively promoted the questionnaire, which consist of around 220 employees, is 62.7% ($n = 138$). However, most likely the latter response rate is not completely accurate, since not every group of PSG has given information on the extent to which it actively promoted the questionnaire.

Among those 138 respondents 58.7% were male ($n = 81$) and 41.3% were female ($n = 57$). The average age of the respondents was 46.2 years ($SD = 12.6$ years, range = 24 - 66 years, five cases missing). Most of the respondents, 58% ($n = 80$) were already working for the WUR for more than ten years, followed by 35.5% ($n = 49$) less than five years and 6.5% ($n = 9$) between five and nine years. 50.7% of the respondents ($n = 70$) were working for Wageningen University and 49.3% for DLO ($n = 68$). Of the respondents 68.1% ($n = 94$) had a permanent contract and 31.9% ($n = 44$) a temporary contract. Lastly, most of the respondents were working in education and research, 65.9% ($n = 91$), followed by 15.2% ($n = 21$) in education and research support, 5.1% ($n = 7$) in administrative and secretarial support, another 5.1% ($n = 7$) in personnel and organization, 3.6% ($n = 5$) in management and policy advice, 1.4% ($n = 2$) in facility services and 3.6% ($n = 5$) were having some other type of job or a combination of jobs.

In Table 3 the characteristics of the Dutch and non-Dutch respondents are presented separately.

Table 3

Characteristics of the Dutch and non-Dutch respondents

Characteristics	Dutch (N = 112 = 100%)	Non-Dutch (N = 26 = 100%)
Gender		
Male	59.8% (n = 67)	53.8% (n = 14)
Female	40.2% (n = 45)	46.2% (n = 12)
Average age	48.5 years (<i>SD</i> = 11.8 years, range = 24 – 66 years, five cases missing)	36.6 years (n = 26) (<i>SD</i> = 11.3 years, range 24 – 65 years)
Employment time at WUR		
Less than 5 years	24.1% (n = 27)	84.6% (n = 22)
Between 5 and 10 years	8% (n = 9)	-
More than 10 years	67.9% (n = 76)	15.4% (n = 4)
Organization		
Wageningen University	42% (n = 47)	88.5% (n = 23)
DLO	58% (n = 65)	11.5% (n = 3)
Type of contract		
Permanent	79.5% (n = 89)	19.2% (n = 5)
Temporary	20.5% (n = 23)	80.8% (n = 21)
Job family		
Education and research	58.9% (n = 66)	92.3% (n = 24)
Education and research support	18.8% (n = 21)	3.8% (n = 1)
Administrative and secretarial support	6.3% (n = 7)	-
Health, safety and the environment	-	-
Facility services	1.8% (n = 2)	-
ICT	-	-
Management and policy advice	4.5% (n = 5)	-
Personnel and organization	6.3% (n = 7)	-
PR, information and communication	-	-
Student-focused support	-	-
Other type of job/combination	3.6% (n = 4)	3.8% (n = 1)

The results of the 138 university employees of PSG can be found in Figure 3. In this figure the means of the 29 subscales are presented on a scale from 1 to 5. A high score indicates a good psychosocial climate. For the exact definition of the scores, see Table 1 in the theoretical framework.

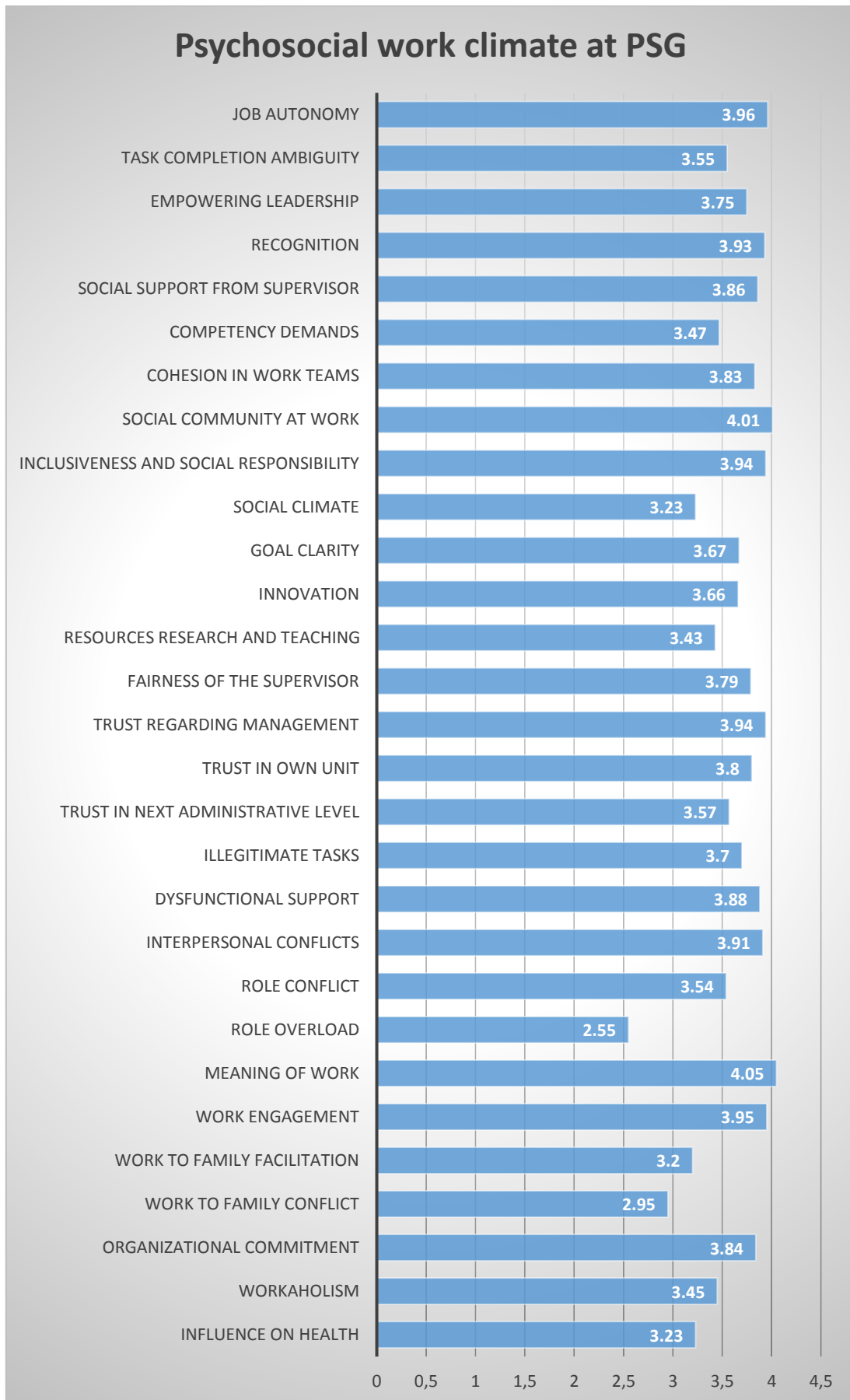


Figure 3. Psychosocial work environment at PSG: an overview of the means of the subscales.

In Table 4 the means are presented from high to low in order to give a better overview on which subscales the university employees score relatively high and on which ones they score relatively low.

Table 4

Results from PSG: the means of the subscales from high to low (n = 138)

Subscale	Score
Meaning of work	4.05
Social community at work	4.01
Job autonomy	3.96
Work engagement	3.95
Inclusiveness and social responsibility, trust regarding management	3.94
Recognition	3.93
Interpersonal conflicts	3.91
Dysfunctional support	3.88
Social support from supervisor	3.86
Organizational commitment	3.84
Cohesion in work teams	3.83
Trust in management (own unit)	3.80
Fairness of the supervisor	3.79
Empowering leadership	3.75
Illegitimate tasks	3.70
Goal clarity	3.67
Innovation	3.66
Trust in next administrative level	3.57
Task completion ambiguity	3.55
Role conflict	3.54
Competency demands	3.47
Workaholism	3.45
Resources research and teaching	3.43
Social climate, influence on health	3.23
Work family facilitation	3.20
Work to family conflict	2.95
Role overload	2.55

A report describing the results of the KIWEST from PSG in more detail can be found in Appendix VIII.

3.3.2 Results internal consistency reliability Dutch subscales

The data of the 112 employees who completed the Dutch version of the KIWEST have been used for calculating Cronbach's alpha of the KIWEST subscales. However, for some subscales, empowering leadership, social support of the supervisor, fairness of the supervisor and resources in research and teaching, there was some missing data, because the respondents could answer some items of these subscales with 'not applicable'. When 'not applicable' was selected for one or more items within these subscales, the data were not used for calculating Cronbach's alpha. In Table 5 can be seen how many valid answers there were given for the subscales where there was an answer option 'not applicable'.

Table 5

Number of valid responses (for calculating Cronbach's alpha) for subscales with answer option 'not applicable'

Subscale	Number of valid responses (out of 112)
Empowering leadership	104
Social support of supervisors	107
Fairness of supervisors	101
Resources research and teaching	41

After reversing the coding of some of the items, Cronbach's alpha was calculated for every subscale. In Table 6 these Cronbach's alphas can be found, together with the Cronbach's alphas obtained by de Jong (2015) and in Norway. The **red color** means the Cronbach's alpha is too low, so unacceptable ($\alpha < 0.5$). The **orange color** means the Cronbach's alpha is questionable ($0.5 < \alpha < 0.7$), but does not necessarily has to be rejected in this study due to a relatively small sample size ($n = 112$) (Field, 2013), and the **green color** means Cronbach's alpha is good, so acceptable ($\alpha > 0.7$).

Table 6

Cronbach's alpha of the Dutch and Norwegian subscales

Subscale	Number of respondents (N)	Number of items	Cronbach's alpha*	Item that could be deleted**	New Cronbach's alpha if item deleted
Job autonomy Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	4	0.795 0.876 0.742		
Task completion ambiguity Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	3	0.648 0.388 0.529	25 25 25	0.773 0.858 0.698
Empowering leadership Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 104*	3	0.896 0.769 0.835		
Recognition Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	3	0.892 0.722 0.885		
Social support supervisors Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 107*	3	0.869 0.606 0.846		
Competency demands Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	3	-0.392 -0.334 -0.281		
Cohesion in work teams Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	3	0.698 0.251 0.660	7 7	0.780 0.526
Social community at work Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	3	0.836 0.714 0.626		
Inclusiveness and social responsibility Norway de Jong (2015)	N = 7859 N = 31	4	0.751 0.521		

Cornelissen (2017)	N = 112		0.576		
Social climate Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	5	-0.744 -0.368 -0.748		
Goal clarity Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	3	0.771 0.779 0.752		
Innovation Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	5	0.865 0.690 0.793	39	0.761
Resources research and teaching Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 41*	4	0.841 0.817 0.849		
Fairness of the supervisor Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 101*	3	0.866 0.829 0.783		
Trust regarding management Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	4	0.845 0.593 0.663	3	0.718
Trust in own unit Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	5	0.952 0.905 0.944		
Trust in next administrative level Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	5	0.963 0.938 0.948		
Illegitimate tasks Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	4	0.770 0.762 0.733		
Dysfunctional support Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	5	0.880 0.763 0.762	2 2	0.900 0.805
Interpersonal conflict Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	3	0.869 0.846 0.766		
Role conflict Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	4	0.721 0.709 0.663		
Role overload Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	3	0.801 0.862 0.828		
Meaning of work Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	3	0.823 0.791 0.845		
Engagement Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	9	0.929 0.874 0.898	117 118	0.931 0.919
Vigor Norway de Jong (2015) Cornelissen (2017)		3	0.869 0.798 0.851		
Dedication		3			

Norway de Jong (2015) Cornelissen (2017) Absorption Norway de Jong (2015) Cornelissen (2017)		3	0.903 0.932 0.912 0.855 0.632 0.818		
Work to family Norway de Jong (2015) Cornelissen (2017) Facilitation Norway de Jong (2015) Cornelissen (2017) Conflict Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	8 4 4	0.743 0.534 0.515 0.643 0.560 0.695 0.816 0.753 0.617	96 96 90, 96 96 90	0.768 0.567 0.650, 0.547 0.749 0.852
Organizational commitment Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	3	0.799 0.573 0.589	97 97	0.819 0.622
Dutch Workaholism Norway de Jong (2015) Cornelissen (2017) Working excessively Norway de Jong (2015) Cornelissen (2017) Working compulsively Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	10 5 5	0.866 0.720 0.847 0.792 0.614 0.754 0.781 0.636 0.804	102 105 102	0.741 0.685 0.651
Influence on health ¹ Norway de Jong (2015) Cornelissen (2017)	N = 7859 N = 31 N = 112	2	0.792 0.702 0.868		

* = For some subscales there are less than 112 respondents due to the 'not applicable' answer option.

**= If the Cronbach's alpha is higher than the original one and the item-total correlation is below 0.3.

→ See Table 7 and Appendix I for the item numbers and the accompanying statements.

As the results in Table 6 already show, the Cronbach's alphas of 18 out of 29 Dutch subscales are acceptable ($\alpha > 0.7$), 9 out of 29 are questionable ($0.5 < \alpha < 0.7$) and two, the subscales competency demands and social climate, are negative. The average Cronbach's alpha (not including the two negative alphas) obtained from the subscales of the Dutch KIWEST is 0.762. This is higher than the average Cronbach's alpha obtained from the subscales of the Dutch KIWEST is 0.762. This is higher than the average Cronbach's alpha obtained by de Jong (2015), which was 0.717 ($n = 31$), but lower than the average Cronbach's alpha obtained by the Norwegian researchers, which was 0.815 ($n = 7859$).

There are several subscales where Cronbach's alpha can be improved by deleting items. In the subscale task completion ambiguity item 25 can be removed, in the subscale dysfunctional support item 2 can be removed, in the subscale work to family items 90 and 96 can be removed and in the subscale organizational commitment item 97 can be removed. The item numbers and the accompanying statements that are up for deletion can be found in Table 7.

Table 7

Item numbers and accompanying statements that are up for deletion

Subscale	Item	
Dysfunctional support	2	People in my unit sometimes help me in a difficult situation, but to not support in a way that is matter-of-factly.
Task completion ambiguity	25	I know when a task is completed.
Work to family (conflict)	90	My job reduces the effort I can give to activities at home.
Work to family (facilitation)	96	Having a good day at work makes me a better companion when I get home.
Organizational commitment	97	I feel that my workplace is of great importance to me.

3.3.3 Results model fit

For calculating the model fit the Dutch and non-Dutch data were used ($n = 138$). Initially, it was the idea to only use the Dutch data ($n = 112$), but the amount of Dutch respondents was too low for this. However, since all are working in the Dutch context, it is not an issue to include the non-Dutch respondents as well. A Norwegian study testing the validity of an earlier version of the KIWEST, with some different subscales, also did this (Innstrand et al., 2015).

In order to calculate the model fit, the missing data were replaced by the item means, since SPSS AMOS is very sensitive to missing values. The results of the CFA analysis indicate a relatively poor fit to the observed data ($\chi^2(6704) = 12724.82$, $p < 0.000$, RMSEA = 0.081, CFI/NFI = 0.573/0.406). More specifically, the RMSEA indicates mediocre fit (between 0.08 and 0.10), and the CFI and NFI indicate poor fit (< 0.9).

Since there was poor model fit according to the CFI and NFI a principal axis factoring (PAF), a type of exploratory factor analysis, was conducted on the 118 items with oblique rotation (promax). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, $KMO = 0.56$ ('mediocre' according to Field, 2013). Bartlett's test of sphericity $\chi^2(6903) = 14705.67$, $p < 0.001$, indicated that correlations between items were sufficiently large for PAF. When looking at the pattern matrix of the PAF the relatively poor model fit could be seen. It was assumed that each item loaded onto one factor, an underlying construct. However, this structure could only be seen for some constructs. The pattern matrix can be found in Appendix IX.

4. Study 2: Shortening the KIWEST

4.1 Introduction

Testing the KIWEST on its cross-cultural application is one step forward in applying it in the Dutch context. However, another step forward could be shortening it. The pilot study of de Jong (2015) showed that many respondents complained about the length, since the KIWEST is quite long in its current form. Shortening questionnaires is interesting, since it may have a positive effect on the response rate (Axhausen, Schmid & Weis, 2015).

There are different ways for shortening a questionnaire. Looking for already existing literature on the topic (e.g. searching for comparable questionnaires that are shorter) is an option, but also quantitative methods, such as discriminant validity analysis (Innstrand et al., 2015), can be used and qualitatively an assessment of the content (content validity) can be done and there can be looked to what extent constructs show overlap (discriminant validity). In this study the focus will be on content and discriminant validity. Focusing on content (validity) means looking at which constructs are most relevant/important to include, in this case for sustainable employability at universities, and which ones could be excluded, while keeping the questionnaire an adequate measure of what it intends to measure. By focusing on overlapping subscales there can be discovered which subscales are redundant (Innstrand et al., 2015). This is where discriminant validity, a subtype of construct validity, comes into play. Discriminant validity refers to the extent to which a construct is distinct from other constructs. When there is a lack of discriminant validity, the latent construct is better explained by some other variables from a different construct than by its own observed variables (Farrell & Rudd, 2009).

In the case of the KIWEST, Innstrand et al. (2015) and M. Christensen (personal communication, November 11th 2016) argue that there might be possibilities for shortening it. The fact that there are other psychosocial work environment questionnaires that have multiple versions, a longer, sometimes a medium and a shorter one (Tabanelli et al., 2008), although not specifically developed for universities, underlines this. An example of this is the COPSQ (Copenhagen Psychosocial Questionnaire). Therefore, the following research question can be formulated:

To what extent can the KIWEST be shortened?

A shortened version of the KIWEST might be more accessible for university employees, since it takes less time to complete. Most likely this leads to a higher response rate, which gives a better view of the how employees perceive their psychosocial work environment at universities. Scientifically, it is interesting to see which psychosocial factors, represented by the subscales of the KIWEST, are deemed most important to include regarding sustainable employability of university employees.

4.2 Methods

In this section an overview is given of the research methods to answer the above research question. First of all, the research design of the study is discussed. Then, the data collection comes across as well as the study population as the sampling strategy. Lastly, there is a section on data analysis.

4.2.1 Research design

In this study, mixed methods were used. Interviews were held with occupational health psychology experts. In the interviews the experts were asked to complete a rating scheme on the possible removal of subscales and were asked some questions related to this. Additionally, a discriminant validity analysis was performed in SPSS AMOS, taking into account the answers of the experts, in order to discover to what extent the views of the experts on the overlap of subscales could be confirmed. These methods were chosen, since these are more common, to the researchers' knowledge, than others methods, like comparing a survey to already existing surveys from previous literature.

4.2.2 Data collection

As described above, for answering research question 3, interviews were held with experts in the field of occupational health psychology. According to Polit & Beck (2006) consulting experts in the field is a common method for assessing a questionnaire content-wise. In the interview the experts rated the subscales on their possible removal from the KIWEST. In this study, all the 30 subscales of the KIWEST have been taken into account. Also the WORK-SOC, which was removed in study 1, has been included in order to see if its removal was just.

The subscales were rated by the occupational health experts on the following scale:

- 1 = can be removed
- 2 = might be removed
- 3 = cannot be removed
- 4 = definitely cannot be removed

A scale from 1 to 4 has been used, so there is no midpoint and experts have to choose between removal (1 + 2) or no removal (3 + 4) (Lynn, 1986; Polit & Beck, 2006). A rating scheme and some accompanying questions can be found in Appendix X.

When rating the subscales the experts were asked to pay attention to the relevancy of each subscale (importance for sustainable employability at universities – content validity) and the extent to which the subscales show overlap (discriminant validity).

The data of study 1, obtained by spreading the KIWEST, have been used to perform a discriminant validity analysis in SPSS AMOS on the subscales that, according to experts, can be removed because they are overlapping. So, no new data had to be gathered for this.

4.2.3 Study population and sampling strategy

For selecting the experts, purposive sampling was used. Experts were selected based on their expertise. In order to make sure they were familiar with questionnaires, scales and validity and they were familiar with the psychosocial work environment at universities, it was preferred that they were working at universities as a researcher.

For doing a discriminant validity analysis in SPSS AMOS the data obtained among the study population of study 1, university employees (of PSG), were used.

4.2.3.1 Ethical considerations within the study

Within social research there are several ethical standards that have to be taken into account in order to prevent harm to participants (Babbie, 2008), namely voluntary participation, obtaining informed consent and anonymity/confidentiality. Firstly, in this study, it was the experts' own decision whether they wanted to participate or not. So, their participation was voluntary. Also, it was told to them that they could withdraw from the study at any time, for any reason. Secondly, the experts were clearly informed about the aim of the research and they were asked if they still wanted to participate in the study. This informed consent was obtained orally. Lastly, the results of the interviews are kept confidential. The researcher knows which experts rated/said what, but will not expose this to the readers of the thesis.

4.2.4 Data analysis

For answering research question 3, discovering which subscales can be removed, a scheme with several steps has been developed as a guideline for removing subscales. This scheme can be found in Figure 4.

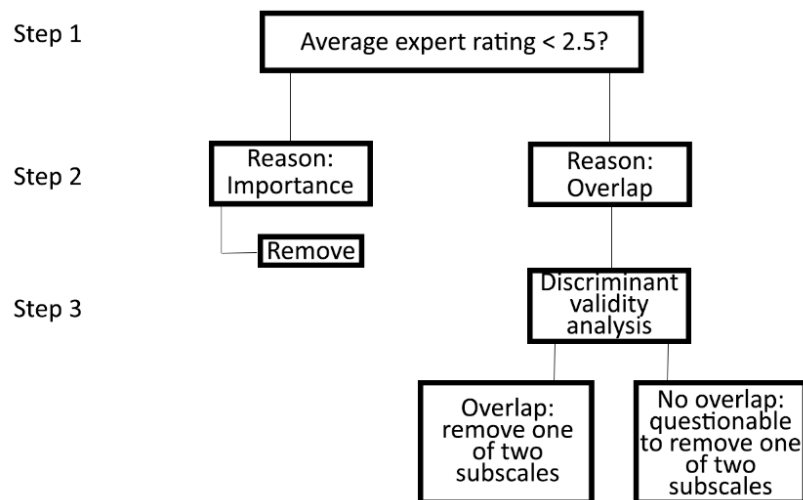


Figure 4. Scheme for removal of subscales.

In step 1 the average ratings of the subscales of all experts was calculated. This average showed if a subscale could be removed (average between 1 and 2.4) or the subscale must be kept (average between 2.6 and 4). When the score was 2.5, it was inconclusive. The scores are rounded off to the first decimal place. The calculations and averages can be found in a table in the results section. Furthermore, the relevant parts of the answers of the experts can be found in an appendix.

Step 2 included looking at the reason for removal. When the experts thought there was a lack of importance of the subscale (for sustainable employability), the subscale could be removed. When, according to experts, subscales showed overlap, step 3 came into play.

In step 3 a discriminant validity in SPSS AMOS was performed in order to examine if experts' arguments of overlap could be confirmed based on data obtained in study 1. Discriminant validity can be calculated based on numbers obtained by SPSS AMOS, namely factor loadings, in order to calculate the average

variance extracted (AVE) (Hair, Black, Babin, Anderson & Tatham, 2006), and inter-construct correlations, in order to calculate the squared inter-construct correlations (SIC):

- $AVE = k^2/n$
 k = factor loading
 n = number of items
- $SIC = (\text{inter-construct correlation})^2$

There is a lack of discriminant validity when the SIC is larger than the AVE of both constructs (Farrell & Ruth, 2009). Then, the subscales are overlapping and one of them is redundant and can be removed.

In addition, a look has been taken at subscales of which two or more experts agreed on overlap, but the average experts rating was similar to or above 2.6. There has been tested in SPSS AMOS if a lack of discriminant validity could be found and if this was the case, the subscale could possibly be removed.

In Table 8 an overview can be found of which subscales can (possibly) be removed.

Table 8

Overview for (possible) removal of subscales

Removal subscale (content validity)	- Expert rating below 2.5, because of lack of importance.
Removal subscale (discriminant validity)	- Expert rating below 2.5, because of overlap. - SPSS AMOS shows lack of discriminant validity.
Possible removal of subscale	- Expert rating similar to or above 2.6, but two or more experts agreed on overlap. - SPSS AMOS shows lack of discriminant validity.

4.3 Results

In this section the results are presented for the research question:

To what extent can de KIWEST be shortened?

4.3.1 Sample characteristics experts

Sixteen occupational health psychology experts were approached by e-mail and five of them were willing to participate in an interview or fill in the rating scheme per e-mail. One expert provided some remarks through the mail, but did not complete the rating scheme. The experts that participated were experts on occupational health psychology, as mentioned before, but had different expertise within the field, namely quality of working life, sustainable employment, occupational health, burnout, stress, fatigue, work-life balance, employee well-being, interventions in the workplace, work engagement, workaholism, the JD-R model and work performance.

4.3.2 Overview results

4.3.2.1 Step 1: Calculating expert mean per subscale

First, before calculating the means, the reasons that the experts mentioned, for the exclusion of subscales, were examined. This had to be reasons applicable to content validity and discriminant validity

and not to some other kind of validity. For instance, wording of items (face validity) and the extent to which the latent variable is explained by its observed variables (convergent validity, another subtype of construct validity), could also be reasons for exclusion. These types of validity were not taken into account for shortening the KIWEST. The researcher assumes the questionnaire already shows good face validity, because there has already been done research on face validity (de Jong, 2015). Since convergent validity focuses more on the single constructs and the items that represent them, it was less useful to look at this for shortening the KIWEST. Most of the subscales consist of a bare minimum of three items, so removing items based on convergent validity was often not possible. Therefore, when ratings were based on these forms of validity, they were not used for calculating the expert mean. However, some comments of experts on shortening individual subscales by removing items are included in Appendix XI.

After checking if the reasons for removal were valid (content or overlap) the expert mean per subscale could be calculated. For an overview of the calculations and the average expert rating see Table 9. For the sake of confidentiality the experts were named expert A, B, C, D, E and F.

Table 9

Calculation of expert average of subscales

Subscale	Calculation Average Expert									Result
	A	B	C	D	E	F	Sum	/#ex- pert	Av.	
Job autonomy	4	4	4	4	4	-	20	5	4	KEEP
Task completion ambiguity	2.5	2	2	3	1	-	10.5	5	2.1	REMOVE
Empowering leadership	2	4	-	4	4	-	14	4	3.5	KEEP
Recognition	4	2	3	4	4	-	17	5	3.4	KEEP
Social support supervisors	4	3	-	1	4	-	13	4	3.3	KEEP
Competency demands	2	3	2	4	4	-	15	5	3	KEEP
Cohesion in work teams	2	-	3	2	4	-	11	4	2.8	KEEP
Social community at work	4	-	2	4	4	-	14	4	3.5	KEEP
Inclusiveness & social responsibility	3	3	1*	3	2*	-	9	3	3	KEEP
Social climate	3	4	2*	4	1	-	12	4	3	KEEP
Goal clarity	3	3	4	4	4	-	18	5	3.6	KEEP
Innovation	3	3	3	2	4	-	15	5	3	KEEP
Resources research & teaching	3	4	4	4	4	-	19	5	3.8	KEEP
Fairness of the supervisor	4	-	3	2	1*	-	9	3	3	KEEP
Trust management	1	2	-	1	-	-	4	3	1.3	REMOVE
Trust (own unit)	4	3	-	3	-	-	10	3	3.3	KEEP
Trust (next admin. level)	2	3	-	2	1	-	8	4	2	REMOVE
Illegitimate tasks	2	2	3	2	4	-	13	5	2.6	KEEP
Dysfunctional support	3	3	2	2	1	-	11	5	2.2	REMOVE
Interpersonal conflicts	4	4	2	4	4	-	18	5	3.6	KEEP
Role conflict	4	4	3	4	4	-	19	5	3.8	KEEP
Role overload	4	4	4	4	4	-	20	5	4	KEEP
Meaning of work	4	4	1	4	4	-	17	5	3.4	KEEP
Engagement (UWES)	4	4	4	4	4	-	20	5	4	KEEP
Work to family	4	3	2	4	4	-	17	5	3.4	KEEP
Organizational commitment	4	3	3	4	1	-	15	5	3	KEEP
Dutch Workaholism Scale	4	2	1	3	4	1	15	6	2.5	NO RESULT
WORK-SOC	2	2	1	2	2	-	9	5	1.8	REMOVE
Influence on health	4	3	1	4	1	-	13	5	2.6	KEEP

*The purple rating means that the rating was based on how the single construct was measured (convergent validity), not looking at the construct for overlap (discriminant validity) or importance (content validity).

This table shows that, according to the average score of the experts, the subscales task completion ambiguity, trust regarding management, trust (next administrative level), dysfunctional support and WORK-SOC can be removed and the other subscales must be kept.

For the subscale Dutch Workaholism Scale (DUWAS) the mean expert rating was inconclusive (2.5). This means that the experts did not agree to remove or keep the construct.

In Table 10, a subscale ranking can be found.

Table 10

Ranking subscales on their importance for inclusion

Subscale	Score
Job autonomy, role overload, work engagement	4
Role conflict, resources related to research and teaching	3.8
Goal clarity, interpersonal conflicts	3.6
Empowering leadership, social community	3.5
Recognition, meaning of work, work to family	3.4
Social support of supervisors, trust (own unit)	3.3
Competency demands, inclusiveness and social responsibility, social climate, innovation, fairness of the supervisor, organizational commitment	3
Cohesion in work teams	2.8
Illegitimate tasks, influence on health	2.6
Dutch Workaholism Scale (DUWAS)	2.5
Dysfunctional support	2.2
Task completion ambiguity	2.1
Trust in next administrative level	2
WORK-SOC	1.8
Trust regarding management	1.3

However, before stating which subscales can definitely be removed, the next steps have to be performed.

4.3.2.2 Step 2: Reasons

The main reason for the exclusion of subscales was overlap with other subscales. A comprehensive overview of the reasons experts named for excluding (and including) subscales can be found in Appendix XII. In Table 11 a short overview of reasons for the exclusion of subscales can be found.

Table 11

Reasons for exclusion of subscales experts

Subscale	Reason for exclusion
Trust in next administrative level	Less important for sustainable employability than trust in management (own unit)
Task completion ambiguity	Overlapping with job autonomy and goal clarity
Trust regarding management	Overlapping with trust in management (own unit)
Dysfunctional support	Overlapping with social support of supervisor
WORK-SOC	Overlapping with multiple other subscales

Based on these results there can be argued that the subscale **trust in next administrative level** can be removed, since experts argue that this subscale is less important for sustainable employability than trust in own unit. According to experts the other subscales mentioned above show overlap, so a discriminant validity analysis has been conducted on those subscales (except for WORK-SOC, because this subscale was not included in the KIWEST of study 1) by using data obtained in study 1 and analyzing it in SPSS AMOS, in order to see if the views of the experts could be confirmed.

4.3.2.3 Step 3: Discriminant validity analysis

Based on the calculations of discriminant validity, which can be found in Appendix XIII, it turned out that:

- Task completion ambiguity is indeed overlapping with job autonomy, but not with goal clarity.
- Trust regarding management is indeed overlapping with trust in management (own unit).

- Dysfunctional support is not overlapping with social support from supervisors.

So, based on these results **task completion ambiguity and trust regarding management** can indeed be removed. However, removing **dysfunctional support** is questionable.

4.3.2.4 Final results

All in all, based on the results there can be argued that the subscales **task completion ambiguity, trust regarding management, trust in next administrative level and WORK-SOC** can definitely be removed. For the reasons for exclusion, see Table 12.

Table 12

Reasons for exclusion subscales

Subscale	Reasons for exclusion
Task completion ambiguity	Lack of discriminant validity (analysis + experts) Overlap with job autonomy
Trust regarding management	Lack of discriminant validity (analysis + experts) Overlap with trust in management (own unit)
Trust in next administrative level	Lack of importance for sustainable employability
WORK-SOC	Research from founders of the KIWEST and this study (overlap according to experts) show its inutility

4.3.2.5 Possible removal of subscales

Also, there are some subscales or group of subscales where two or more experts made similar remarks on overlap, but where the score was high enough for inclusion (similar to or above 2.6). These are supportive leadership of direct supervisor (empowering leadership, recognition and social support from supervisors), cohesion in work teams/social community, illegitimate tasks/role conflict and UWES in relation to organizational commitment and meaning of work. It is interesting to investigate how these subscales score on discriminant validity analysis to see if it is promising to conduct additional research in the future on the removal of these subscales:

- Recognition and social support from supervisors show indeed overlap and empowering leadership and social support from supervisors too. However, empowering leadership and recognition do not show overlap.
- Cohesion in work teams and social community do show overlap.
- Illegitimate tasks and role conflict show overlap as well.
- The UWES does not overlap with commitment and meaning of work. However, commitment and meaning of work do show overlap.

In Table 13 an overview on the possible removal of subscales can be found. However, more research on the removal of these subscales is needed, since the experts' average rating scores on the subscales were not decisive (similar to or above 2.6).

Table 13

Subscales that show potential for removal

Subscales that show potential for removal		
Empowering leadership	Or	Social support from supervisors
Recognition	Or	Social support from supervisors
Cohesion in work teams	Or	Social community
Illegitimate tasks	Or	Role conflict
Meaning of work	Or	Organizational Commitment

5. Discussion

In this section, first, the results are discussed. Then, the theoretical and practical implications and limitations come across and, lastly, recommendations for future research are provided.

5.1 Internal consistency reliability of Dutch subscales

As can be seen in Table 6, the Cronbach's alphas of 18 out of 29 subscales were appropriate ($\alpha > 0.7$), which indicates a good internal consistency reliability. These subscales can be used in the Dutch setting without further ado. However, the Cronbach's alphas of 9 out of 19 subscales were questionable ($0.5 < \alpha < 0.7$, $n = 9$). The latter can be due to limitations of the study, like translation and sample size. For an elaboration on this, see the limitations section.

Also, the Cronbach's alphas of two of the Dutch subscales, namely competency demands and social climate, were negative. This indicates that if respondents score high on one item within the subscale, they score low on another item within the same subscale. Table 14 and 15 illustrate this.

Table 14

The statements of the subscale competency demands with their accompanying means

Competency demands	Mean
27. I am expected to continually develop my competence.	3.48
33. The nature of my work means I continually have to develop and think in new ways.	3.81
36. I feel pressure to continually learn new things in order to manage my work tasks.*	2.95

*= reversed item

For competency demands, when item 36 is not reversed, the mean is 3.04 and Cronbach's alpha becomes positive: 0.624, so nearly acceptable. It would be logical to see this item in line with the other items in this scale in order to measure competency demands. When respondents score high on items 27 and 33, it seems logical that they score high on item 36 as well. Looking at the wording of the items, in the Dutch and in the English version of the KIWEST, it does not seem that item 36 needs to be reversed. Therefore, it seems that this reversed item does not fit the subscale. Since Cronbach's alpha of competency demands is also negative in Norway, this seems to be the case there as well. This means that it is likely that the items are interpreted in the same way in Norway as in the Netherlands and the translation was done in a good way.

Table 15

The statements of the subscale social climate with their accompanying means

Social climate	Mean
4. The climate in my unit is rigid and rule-based.	1.82
8. The climate in my unit is distrustful and suspicious.*	4.22
12. The climate in my unit is competitive.	2.51
16. The climate in my unit is encouraging and supportive.	3.72
18. The climate in my unit is relaxed and comfortable.	3.71

*= reversed item

It seems that the subscale social climate has a negative Cronbach's alpha due to coding issues as well. Only item 8 needs to be reversed, but it seems that item 4 must be reversed as well. The mean of this item (1.82) confirms this way of thinking. Also, item 12 is confusing. In general, a high score on the subscale would indicate a good social climate, so this would mean that a competitiveness is a sign of a good social climate (Undebakke et al. 2015). However, probably not everyone will agree with this and some will interpret competition within the unit as a sign of a bad social climate. This thinking can be confirmed by research from Fletcher, Major and Davis (2008), who show that a competitive climate leads to greater stress levels among employees, regardless of differences in individual characteristics. Following this line of reasoning means that this item should be reversed. Also, for improving Cronbach's alpha the removal of this item could be considered, provided that item 4 would be reversed. This would lead to an acceptable alpha of 0.721. In Norway there seem to be issues with the coding of the items as well, since the Norwegian alpha is also negative. This means that it is likely that the items do not fit the subscale, but are interpreted in the same way in Norway as in the Netherlands and the translation was done in a good way.

Another possibility for improving Cronbach's alpha of the subscale social climate is removing both item 4 and item 12, since it seems that the official subscale of social climate only consists of three items (item 8, 16 and 18). Undebakke et al. (2015) indicate in their ARK Intervention Report that item 4 and 12 are single items, which makes the researcher think that these items are added to the subscale. However, Undebakke et al. (2015) do not elaborate on this. When removing item 4 and item 12 the Cronbach's alpha of the subscale becomes 0.624.

Furthermore, as described in the results section, it appears that the Cronbach's alpha of some subscales can be improved by deleting the items 2, 25, 90, 96 and 97. See Table 7. The results for deleting items show overlap with the results found in the study of de Jong (2015) and the study of the Norwegian researchers. The only item that cannot be removed based on the results of de Jong (2015) and the Norwegian researchers, but can be removed according to this study, is item 90 of the subscale work to family (conflict).

However, it is important to note that it is questionable to remove an item from a subscale which consists of only three items, since de Jong (2015) and the experts interviewed in this thesis argue that a subscale needs a minimum of three items to be valid. So, it is questionable to remove item 25 ('I know when a task is completed') from the subscale task completion ambiguity and item 97 ('I feel that my workplace is of great importance to me') from the subscale organizational commitment. Since the subscales dysfunctional support and work to family (conflict/facilitation) consist of more than three items, it is no problem to remove item 2 ('People in my unit sometimes help me in a difficult situation, but do not support in a way that is matter-of-factly') and item 90 ('My job reduces the effort I can give to activities at home') and 96 ('Having a good day at work makes me a better companion when I get home').

5.2 Model fit

The results of the CFA indicate that the observed data do not fit the KIWEST model very well. The EFA results support this finding to some extent. When looking at the pattern matrix of the exploratory factor

analysis the KIWEST structure can be seen, although not very clearly. Quite some items cross-load on different factors, multiple subscales load onto one single factor and for some subscales the items do not load onto one factor at all. Ideally, for good model fit, all items of one construct should load (highly) onto one factor (and not onto others). This indicates that, for some subscales in this study, there is a lack of discriminant validity and convergent validity. According to Innstrand et al. (2015) especially a lack of discriminant validity can explain why the CFI and NFI are relatively low (poor fit). However, they argue that some overlap can be expected in such a large research instrument measuring a lot of aspects of the psychosocial work environment. Following this line of reasoning, and also taking into account that the Norwegian and Dutch internal consistency reliability of the subscales were quite comparable, there can be argued that the relatively poor fit might have to do with overlap of subscales in the questionnaire and not necessarily with the Dutch context in which it is implemented. Besides this, to date the model fit of this version of the KIWEST is unknown for the Norwegian context. Especially when the same results are found in Norway, there can be argued that the relatively poor fit is a matter of questionnaire construction.

Taking the internal consistency reliability and the model fit together, there can be argued that the KIWEST is a promising instrument to use in the Netherlands. There are some hurdles, but these do not seem insurmountable. The relative smooth way of applying the KIWEST in the Netherlands can probably be explained by the fact that the cultural values (at the workplace) are quite similar in Norway and the Netherlands (Hofstede & Hofstede, 2001; Hofstede, Hofstede & Minkov, 1991), as has been described before. Probably, Norwegian and Dutch employees encounter similar situations at work and employees recognize situations or can imagine situations like the ones described in the (translated) statements, which aids interpretation and in the end usability of the questionnaire.

5.3 Shortening the KIWEST

5.3.1 Importance for sustainable employability and overlap

The subscales that should stay, according to the experts, belong to the core aspects for measuring a psychosocial work environment at universities. In other words, these are demands and resources that have such an importance for sustainable employability at universities that they cannot be removed. They belong to the most important facets of the psychosocial work environment at universities and need to be maintained for the questionnaire's validity. In this section the subscales that can be removed will be discussed following the line of reasoning of the experts, taking into account discriminant validity analysis in SPSS AMOS and by focusing on already existing literature on the topic. The last part of the discussion contains a comprehensive recommendation, not only looking at which subscales can be removed but also which items (from study 1) could be deleted in order to shorten the KIWEST.

5.3.1.1 Importance for sustainable employability

Some subscales can be removed, because they are less important, content wise (for sustainable employability), than other subscales in the questionnaire.

For instance, many experts think trust in management (own unit) is more important to include than **trust in management (next administrative level)**. Generally, experts think there is more contact with management of the own unit than with the management of the next administrative level. Therefore, (lack of) trust in the management of the own unit can have more influence on the health and well-being of employees than (lack of) trust in the next administrative level. This can be supported by research of Dirks and Ferrin (2002). They show that (lack of) trust in direct leaders (management own unit) has a greater impact on performance, altruism, intent to quit and job satisfaction, which are all aspects that can greatly influence health and well-being of employees, than organizational leadership (next administrative level).

Furthermore, there is one subscale, **the Dutch Workaholism Scale**, for which the rating was inconclusive (2.5). Three of the six experts argued it could be removed and they all had the same line of argumentation; not a lot of (university) employees show this type of behavior, so it is not relevant to examine this in relation to sustainable employability at universities. According to these three experts the amount of workaholic employees in the general workforce is small, since workaholism is a relatively rare personality trait. Around one out of twelve employees can be considered a workaholic (Andreassen et al., 2014; Sussman, Lisha & Griffiths, 2011), especially in the agricultural, construction, communication, consultancy and commerce/trade sector (Taris, van Beek & Schaufeli, 2012). To be considered a workaholic one should work excessively (behavioral aspect) and compulsively (cognitive aspect) (Schaufeli, Taris & Bakker, 2008). For instance, this means that the employee cannot stop working and even works when in need for sleep or when ill. Obviously, when someone suffers from workaholism, this can have a profound effect on the health and well-being of (university) employees and this might be why the other experts think it should be included.

5.3.1.2 Overlapping subscales

Also, looking for overlapping subscales is a way to shorten the KIWEST. By looking at which subscales overlap, the questionnaire could be shortened without affecting the content too much.

One subscale that perished this way was **task completion ambiguity**. According to several experts it was overlapping with job autonomy and goal clarity, looking at the statements. Two of the statements lean towards job autonomy, which can be described as “the extent of autonomy and influence on how the work is carried out” (Näswall et al., 2010, p. 9). According to the experts, when employees can determine themselves when a task is finished, as described in item 29 and 32, this relates to having autonomy on the job. The argument of overlap with goal clarity can be explained by looking at the terms. A task or multiple tasks are usually completed to reach a goal (Locke & Latham, 2006). It seems that the experts argue like; when goals are clear, you generally know when your task is finished and, therefore, task completion ambiguity can be removed. Discriminant validity analysis in SPSS AMOS confirms that task completion ambiguity is overlapping with job autonomy, but no overlap is found between task completion ambiguity and goal clarity. However, this still means task completion ambiguity can be removed.

Another subscale that can be removed due to overlap is **trust regarding management**. According to all experts it overlaps with trust in management (own unit). Trust regarding management deals with perceived trust and trust in management (own unit) with reliability and trustworthiness of the management (Innstrand et al., 2015). Although reliability is different from trustworthiness, both subscales consist of items regarding trust, for the same level of management (own unit). Therefore, according to experts, trust regarding management can be removed while maintaining content validity. Also, discriminant validity analysis in SPSS AMOS shows that trust regarding management and trust in management (own unit) are overlapping and one of them is redundant.

Also, the subscale **dysfunctional support** can be removed according to experts. They argue that it is the opposite of social support and it not necessary to include both; when you measure social support, dysfunctional support is automatically measured as well. According to Semmer (2007) these subscales are indeed closely related. He argues dysfunctional support can be seen as a lack of recognition and respect, which undermines social support. However, in the KIWEST one scale concerns supervisors (social support) and the other one concerns colleagues (dysfunctional support). Therefore, the two subscales measure (lack of) support from different groups. It is unclear if the experts took this into account when rating this subscale. Therefore, there cannot be made strong inferences based on this rating. Discriminant validity analysis in SPSS AMOS confirms the line of reasoning of the researcher, since dysfunctional support and social support of the supervisor do not show overlap. Therefore, it is questionable to remove the subscale dysfunctional support.

Furthermore, the interviews with the experts confirmed that the subscale **WORK-SOC** can be removed. According to several experts this subscale is overlapping with other subscales in the KIWEST. For instance, they argue the item meaningless/meaningful is in line with the subscale meaning of work. The broadness of the subscale seems a problem to many experts, although it is its purpose. WORK-SOC measures the overall quality of working life, which plays on a higher level than job demands and job resources (Bauer & Jenny, 2007). However, perhaps this is also why it seems outplaced to many experts, since the other subscales measure specific job demands and job resources.

Other interesting remarks on overlap

Also, there are some subscales of which the rating indicates inclusion into the KIWEST (rating similar to or above 2.6), but where there are interesting remarks from experts on overlap. It might be interesting to examine the possibilities for removal of some of these subscales in future research. A closer look will be taken at the subscales or group of subscales where two or more experts made similar remarks.

Firstly, four out of five experts think **one of the three subscales of supportive leadership of the direct supervisor**, namely empowering leadership, recognition and social support from supervisors, can be removed. Based on this and on the argumentation of the experts, overlap can be detected. According to Jose and Mampilly (2015) these scales are indeed overlapping, since they all deal with the psychological empowerment of employees. Also, findings of an ongoing Norwegian study on the validation of the KIWEST support the idea of overlap, since this study found that these leadership dimensions are quite similar (M. Christensen, personal communication, 3rd November 2016).

Discriminant validity analysis in SPSS AMOS underlines this to some extent. It turns out that empowering leadership/recognition and empowering leadership/social support from supervisors are indeed overlapping.

Secondly, three out of five experts argue that the subscales **cohesion in work teams and social community** at work show overlap. This can be explained by looking at existing literature. There can be found that the concepts are indeed related. For instance, the concept sense of community, which is similar to social community, is derived from social cohesion theory (McMillan & Chavis, 1986). Therefore, it was hard for experts to determine which subscale was more important to include and the rating was indecisive. Discriminant validity analysis in SPSS AMOS supports the view of the three experts on overlap, so there can be argued that one of the subscales might be redundant. Taking the ratings of experts into account this redundant subscale should be cohesion in work teams, since it has a much lower score (2.8) than social community (3.5).

Thirdly, two experts think the subscale **illegitimate tasks** can be removed because it shows overlap with **role conflict**. Semmer et al. (2015) argue that this line of reasoning can be supported, because both subscales indeed originate from role theory. However, they also argue that, for illegitimate tasks, an additional theory, namely justice theory, comes into play. Role conflict is about incompatible demands which hinders compliance. Illegitimate tasks concern tasks that are unnecessary or unreasonable; they infringe norms about what an employee is expected to do (justice), which often is in conflict with employee's professional identity (role). Therefore, there are arguments for both inclusion and exclusion into the KIWEST, which probably explains the mediocre score of 2.6. However, according to discriminant validity analysis in SPSS AMOS one of the two, probably illegitimate tasks - taking into account the lower rating of the experts for this subscale (2.6) than for role conflict (3.8), is indeed redundant and might be removed.

Fourthly, two to three experts disagree about the **relation between the subscales meaning of work, organizational commitment and work engagement (UWES)**. They all rate work engagement as most important, but have different views on how meaning of work and organizational commitment relate to work engagement.

One expert argued that the subscale meaning of work was not necessary to include, since the UWES (and organizational commitment) are already included. Also, one expert that wants to keep the subscale refers to overlap for meaning of work and the UWES. This thinking can be supported by taking a closer look at work engagement. According to Bakker (2003) work engagement can be characterized by vitality, dedication and absorption. They argue that meaning and usefulness of work play a role in the extent to which employees are dedicated (and in the end engaged). However, the individual concept 'meaning of work' is also used a lot in research, which probably explains why most of the experts wanted it to stay (Rosso, Dekas & Wrzesniewski, 2010).

Also, two experts argued that the subscale organizational commitment was redundant, since it is indirectly measured by the UWES (and meaning of work). This indicates these experts think these subscales overlap to some extent. For the subscales work engagement and organizational commitment,

this thinking is logical, according to Hallberg and Schaufeli (2006), since the terms engagement and commitment are used interchangeably in previous research. However, Hallberg and Schaufeli (2006) found that this was not legitimate, since these are distinct constructs. Probably this is also why most of the experts came to the conclusion to keep both subscales.

Discriminant validity analysis in SPSS AMOS showed indeed that the UWES is not overlapping with meaning of work and organizational commitment, so that the UWES is a distinct construct. However, meaning and work and commitment are overlapping and it is one of those that should be looked at more closely for possible removal in the future.

5.3.2 Recommendation for shortening the KIWEST by integration of the studies

By combining the results of study 1 and study 2 and by taking the remarks of the discussion into account, a comprehensive recommendation for the removal of several subscales and items can be made. Also, an overview of internal consistency reliability issues for a shorter version of the KIWEST is provided.

5.3.2.1 Removal of items and subscales

In study 1 there has been looked for the removal of items, in order to improve Cronbach's alpha of the subscales. Due to validity reasons (subscales must consist of a minimum of three items), only **item 2** (of dysfunctional support), **item 90** (of work family conflict) and **item 96** (of work family facilitation) can be removed, as described in section 5.1. In addition, there has been looked at the discussion section for determining which items to exclude. Based on the discussion there can be argued that **item 4 and 12** (of social climate) are not of a lot of use and therefore they can possibly be removed. An overview of which items can (possibly) be removed can be found in Table 16.

In study 2 there has been looked for subscales that could be removed. The recommendation on the removal of subscales in Table 17 is almost similar to the results described in the results section. There are two differences. Based on the discussion there could be concluded that from the overlapping subscales role conflict and illegitimate tasks the subscale illegitimate tasks can possibly be removed, because there is such a large discrepancy in the experts' rating (role conflict 3.8 and illegitimate tasks 2.6). The same holds for the overlapping subscales cohesion in work teams and social community. Cohesion in work teams scores a 2.8 and social community a 3.5. In the opinion of the researcher, the differences in experts rating that accompany the other overlapping subscales are not substantial enough to determine which of them are redundant. However, for the possible removal of those subscales more research needs to be done in the future, since the expert ratings did not provide decisive results.

Table 16

Overview of definite and possible removal of items and subscales

Study 1 – Removal items		Study 2 – Removal subscales	
Definite	Item 2 (dysfunctional support): 'People in my unit sometimes help me in a difficult situation, but do not support in a way that is matter-of-factly'.	Definite	Task completion ambiguity
	Item 90 (work family conflict): 'My job reduces the effort I can give to activities at home'.		Trust regarding management
	Item 96 (work family facilitation): 'Having a good day at work makes me a better companion when I get home'.		Trust in management (next administrative level)
Possible	Item 4 (social climate): 'The climate in my unit is rigid and rule-based'.	Possible	WORK-SOC
	Item 12 (social climate): 'The climate in my unit is competitive'.		Empowering leadership or social support from supervisors
			Recognition or social support from supervisor
			Illegitimate tasks
			Cohesion in work teams
Meaning of work or organizational commitment			

In Figure 5 an adjusted version of the KIWEST-JD-R model can be found. The subscales that can be removed have been strikethrough and the subscales that can possibly be removed are written in italics. The colored subscales indicate the subscales that are overlapping. The * indicates that the subscale contains a statements or multiple statements that might be removed.

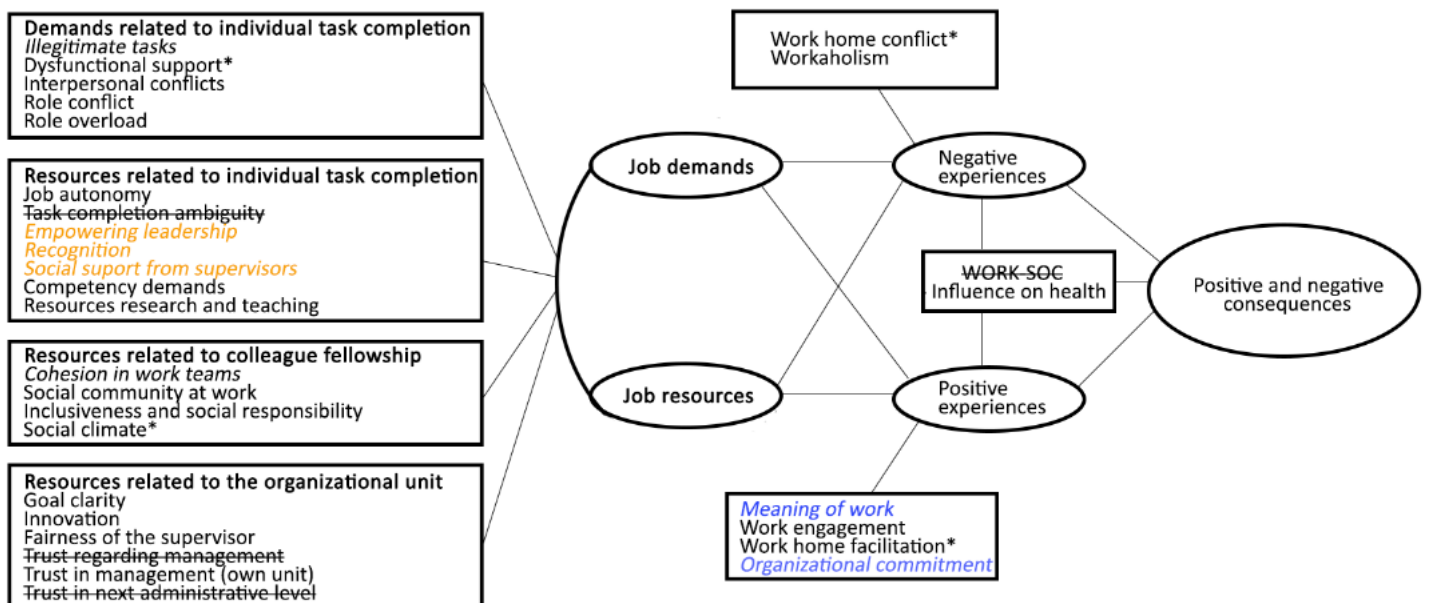


Figure 5. Adjusted KIWEST-JD-R model.

5.3.2.2 Internal consistency reliability in the shorter version of the Dutch KIWEST

Going back to the internal consistency reliability of the Dutch subscales of the KIWEST in study 1, there was found that the subscales task completion ambiguity, cohesion in work teams, social community at work, inclusiveness and social responsibility, trust regarding management, role conflict, work to family (conflict), work to family (facilitation) and organizational commitment did not show acceptable internal consistency reliability. See Table 6. By removing the subscales task completion ambiguity, cohesion in work teams and trust regarding management and the items 90 and 96 of the subscales work to family (conflict) and work to family (facilitation), items 4 and 12 from social climate and changing the coding of item 36 of competency demands, the reliability of the KIWEST improves. However, when this has been done, there will still be some subscales in the shorter version of the KIWEST of which the internal consistency reliability is questionable; competency demands ($\alpha = 0.624$), social climate ($\alpha = 0.624$) social community ($\alpha = 0.626$), inclusiveness and social responsibility ($\alpha = 0.576$), role conflict ($\alpha = 0.663$) and organizational commitment ($\alpha = 0.589$). For these subscales there could be looked into translation.

5.4 Theoretical and practical implications

This research adds to the already existing scientific knowledge on implementing the KIWEST in the Netherlands. First of all, it partially replicates the study of de Jong (2015), who also examined the internal consistency of the Dutch subscales. However, in this study a larger amount of respondents has been reached and as a consequence there can be made stronger inferences based on the internal consistency outcomes. Secondly, the model fit of the KIWEST had not been investigated in a Dutch context before, so a gap in research has been filled. Additionally, examining to what extent the KIWEST can be shortened shows which constructs are most important to include when investigating sustainable employability at universities (in the Netherlands).

In practice, for researchers and HRM-departments of universities or supervisors of departments who are interested in conducting the survey and using the results, it is important to know that the survey is valid and reliable. This research shows that the KIWEST is reliable and valid to some extent, in the Dutch context. Improvements can be made, but this does not mean the results of the KIWEST are useless. They can give an indication on how university employees perceive their psychosocial work environment. This makes the KIWEST a valuable tool, also in the Netherlands, since there are not a lot of other tools available for evaluating the psychosocial work environment of university employees specifically and sustainable employability becomes an increasingly important topic for universities. Especially the shorter version of the KIWEST is promising, since most likely HRM-departments and supervisors of departments will be more open to spreading the survey and employees will be more willing to participate when it takes less time to complete. Also, the shorter version is more concise, since only the most important/relevant subscales are included and the shorter version is more reliable and valid, since some of the subscales with internal consistency issues and content and discriminant validity issues are removed.

5.5 Limitations

There were several limitations when conducting this study.

5.5.1 Internal consistency and model fit

Firstly, the original KIWEST was specifically aimed at university employees. However, in this study also employees working for the research/profit part of the WUR, the DLO Foundation, were included. When only including employees working for the university part a better comparison could have been made with the Norwegian results regarding Cronbach's alpha (since they only included university employees from non-profit departments).

Secondly, a limitation could be that the Jong (2015) did not use the official way for translating a questionnaire; the cross-cultural adaptation process. This could have affected the results in this study. The cross-cultural adaptation process includes several steps, like "forward translation by two independent translators, comparison of the two translated versions of the instrument, blind back-translation and comparison of the two back-translated versions of the instrument" (Sousa & Rojjanasrirat, 2011, p. 269, 270, 271), as described more extensively in the theoretical framework. Although de Jong (2015) did interview quite some professionals regarding the translation of the KIWEST, the formulation of some of the statements could have been slightly different, perhaps resulting in better interpretation and a better internal consistency reliability, when the cross-cultural adaptation process was used.

Thirdly, the number of responses was reasonable, but the aim was to reach even more respondents (up to 300). When doing statistical tests, a large amount of respondents is preferred. According to Kline (1986), Nunnally and Bernstein (1994) and Charter (1999) the minimum amount of respondents needed for doing an internal consistency reliability analysis is around 300 to 400, although others argue it can also give adequate results with less respondents (Yurdugül, 2008). Nevertheless, the more respondents, the better. There is a good chance that the alphas between 0.5 and 0.7 become acceptable ($\alpha > 0.7$) when a larger amount of Dutch respondents is reached, because the standard error will be less. Also, in order to calculate the model fit by using a factor analysis more respondents are preferred (Sousa & Rojjanasrirat, 2011). In this study the sample size adequacy was quite low, which means there should be looked at the results with some caution. There were some impediments for reaching a large amount of respondents. Not every chair group of PSG was willing to set out the survey among its employees, mainly because the length (duration) of the survey (min. 15 min) and due to the fact that the yearly employee satisfaction research had just been held.

5.5.2 Interviews experts and discriminant validity analysis

Fourthly, a limitation concerning the last part of the research, about shortening the KIWEST, is that not every expert provided a reason for exclusion of subscales. As mentioned before, the ratings of experts that only looked at the convergent validity of the subscale (without seeing the subscale in context) were not taken into account. However, when the reason for removal is unknown, it could be that experts rated it for convergent validity or face validity – without the researchers knowing. It was decided to give these ratings the benefit of the doubt, since there were not a lot of removal ratings without an explanation. In order to prevent this from happening, the researcher could have been clearer on the purpose of this part of the research, shortening the KIWEST by only looking at the content of the subscales and at overlapping subscales and not focusing on other types of validity.

5.6 Recommendations for future research

In the future there can be done replications of this study with less limitations. For example, the translation of the KIWEST questionnaire (especially of the subscales of which Cronbach's alpha was not acceptable) could be done in the official way and the sample size could be larger. There could be studied if this improves the internal consistency reliability and the model fit of the KIWEST. Additionally, it would be interesting to conduct a more extensive discriminant validity analysis. In this study the views of the experts (on overlap) were leading and discriminant validity analysis was only used supplementary to discover to what extent these views could be confirmed based on the obtained data. However, in future research there could be done an investigation among all the constructs and see which of them show overlap, like in the study of Innstrand et al. (2015). Also, it would be interesting to investigate how the shorter version of the KIWEST, removing subscales based on the results of this study or on the basis of a more extensive discriminant validity analysis, affects the model fit. Next to looking into more detail at the discriminant validity, also convergent validity of the Dutch subscales could be examined more extensively. This can also affect the model fit.

Furthermore, in this research the focus was not on the outcomes of the KIWEST. For future research it would be interesting to conduct the (short version of the) KIWEST at different universities in the Netherlands and compare the outcomes. Also, the Dutch outcomes could be compared with KIWEST outcomes from Norway and in the future with KIWEST outcomes from Sweden and the USA. The latter would contribute to cross-cultural knowledge on differences in the psychosocial work environment at universities.

Additionally, there could be done research on why certain employees, organizational units or universities score better on certain aspects of sustainable employability than other employees, organizational units or universities. One method that can be used to investigate this is the positive defiance method. This method looks at why the behavior of certain respondents differs from the norm of a referent group, by interviewing or observing them (Appelbaum, Laconi & Matousek, 2007). It could be, for example, that the employees from a certain organizational unit feel a significantly stronger social community in their unit than employees from another organizational unit. As described, the positive defiance method would look at differences in behavior and finds that the former organizational unit organizes a team-building activity once in every two months and the other one does not. Then, according to Appelbaum, Laconi and Matousek (2007), this activity should be applied to other organizational units as well, because of its positive effect.

6. Conclusion

A preliminary conclusion can be drawn that the KIWEST can be applied to the Netherlands. However, it is necessary to look into more detail into the translation and coding of some of the items of the subscales. The model fit is relatively poor. This seems to be due to discriminant validity issues, which are not uncommon in such a large measurement instrument, and not necessarily to the application of the KIWEST into the Dutch context. Furthermore, the KIWEST can be shortened. The subscales task completion ambiguity, trust regarding management, trust in management (next administrative level) and WORK-SOC can be removed and items 2 (of dysfunctional support), 90 (of work family (conflict)) and 96 (of work family (facilitation)) can be deleted.

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8. Appendices

8.1 Appendix I: English version of the KIWEST

Categories	Questions
<p>Interpersonal relationships(1)</p> <p>To what extent do you agree or disagree with the following statements about relations within your unit?</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <ol style="list-style-type: none"> 1. I feel that I am part of a community at my unit. 2. People in my unit sometimes help me in a difficult situation, but do not support in a way that is matter-of-factly. 3. My work is hampered by power struggles and territorial thinking in my unit. 4. The climate in my unit is rigid and rule-based. 5. People in my unit sometimes help me in a difficult situation, but indicate that I should have dealt with the problem myself. 6. People in my unit sometimes help me in a difficult situation, but expect everlasting gratitude. 7. This unit gives me ample opportunities to improve my personal performance. 8. The climate in my unit is distrustful and suspicious. 9. There is a good atmosphere between me and my colleagues at my unit. 10. There is a good sense of fellowship between the colleagues at my unit. 11. People in my unit sometimes help me in a difficult situation, but support me reluctantly. 12. The climate in my unit is competitive. 13. People in my unit sometimes help me in a difficult situation, but do so with a reproachful tone or gaze. 14. In my unit, intrigues impair the work climate. 15. People in my unit sometimes help me in a difficult situation, but combine this with reproaches. 16. The climate in my unit is encouraging and supportive. 17. In my unit, there is a great deal of tension due to prestige and conflicts. 18. The climate in my unit is relaxed and comfortable.
<p>Interpersonal relationships(2)</p> <p>To what extent do you agree or disagree with the following statements about relations within your unit?</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <ol style="list-style-type: none"> 19. Men and women are treated as equals in my unit. 20. In my unit, there is room for employees of a different ethnic background or religion. 21. In our unit, we stand together in trying to reach our performance goals. 22. In my unit, there is room for older employees. 23. I'm happy with my unit's level of task commitment. 24. In my unit, there is room for employees with various illnesses or disabilities.
<p>Job demands (3)</p> <p>To what extent do you agree or disagree with the following statements?</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <ol style="list-style-type: none"> 25. I know when a task is completed. 26. I am often given assignments without adequate resources. 27. I am expected to continually develop my competence. 28. It happens quite often that I have to work under heavy time pressure. 29. I determine when my work assignments are completed. 30. I frequently receive incompatible requests from two or more people. 31. My job involves tasks that are in conflict with my personal values.

	<p>32. It is up to me to assess when I have completed a work assignment.</p> <p>33. The nature of my work means I continually have to develop and think in new ways.</p> <p>34. I frequently have too much to do at work.</p> <p>35. I have to do things that I feel should be done differently.</p> <p>36. I feel pressure to continually learn new things in order to manage my work tasks.</p> <p>37. I have enough time to do what is expected from me at work.</p>
<p>Work organization and job content (4)</p> <p>To what extent do you agree or disagree with the following statements about your work situation and your unit?</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <p>38. What is expected of me at work is clearly expressed.</p> <p>39. My unit is constantly evolving to meet the employees' needs.</p> <p>40. I must carry out work which I think should be done by someone else.</p> <p>41. I feel that the objectives of my job are diffuse and unclear.</p> <p>42. I have a sufficient degree of influence in my work.</p> <p>43. My unit is open-minded and adapts to changes.</p> <p>44. I can make my own decisions on how to organize my work.</p> <p>45. I must carry out work that put me into awkward positions.</p> <p>46. I have a clear understanding of which tasks constitute my job.</p> <p>47. In my unit, no one listens to new suggestions and ideas.</p> <p>48. I must carry out tasks that I think are unfair that I should do.</p> <p>49. My unit is flexible and continually adapts to new ideas.</p> <p>50. There is room for me to take my own initiatives at work.</p> <p>51. I must carry out work which I feel demands more of me than is reasonable.</p> <p>52. My unit strives to retain status quo rather than to change.</p> <p>53. I manage my work situation in the direction I want.</p>
<p>Work organization and job content (5)</p> <p>To what extent do you agree or disagree with the following statements about your work situation and your unit?</p>	<p>Attention! Non-academic staff can skip this!</p> <p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <p>54. I get the administrative support I need for planning and implementation of teaching and examinations.</p> <p>55. I get the administrative support I need for my research.</p> <p>56. I get the technical support I need for my research.</p> <p>57. I get the support I need for internationalization of my research.</p>
<p>Management (6)</p> <p>To what extent do you agree or disagree with the following statements about management in your unit?</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <p>58. My unit management is always reliable.</p> <p>59. I can trust information from my unit management.</p> <p>60. I can expect my unit management to treat me in a consistent and predictable way.</p> <p>61. My unit management withholds important information from the employees.</p> <p>62. I am treated fairly by my unit management.</p> <p>63. My unit management is open and honest with me.</p> <p>64. My work is recognized and appreciated by my unit management.</p> <p>65. It is possible for the employees at my unit to express their views.</p> <p>66. I have complete confidence in my unit management.</p> <p>67. I am respected by my unit management.</p> <p>68. My unit management trusts the employees to do their work well.</p> <p>69. I am confident that I can trust my unit management.</p>

<p>Management (7)</p> <p>To what extent do you agree or disagree with the following statements about management in your unit?</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <p>70. My immediate superior contributes to the development of my skills.</p> <p>71. My immediate superior encourages me to participate in important decisions.</p> <p>72. My immediate superior encourages me to speak up when I have a different opinion.</p> <p>73. My immediate superior treats the employees fairly.</p> <p>74. My immediate superior talks with me about how well I carry out my work.</p> <p>75. My immediate superior listens to me when I have problems at work.</p> <p>76. My immediate superior distributes work assignments fairly.</p> <p>77. My immediate superior treats the employees impartially.</p> <p>78. My immediate superior gives me the help and support I need from him/her.</p>
<p>Management (8)</p> <p>To what extent do you agree with the following statements about management in your unit?</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <p>79. I can expect the management of the next administrative level to treat me in a consistent and predictable way.</p> <p>80. The management of the next administrative level is always reliable.</p> <p>81. The management of the next administrative level is open and honest with me.</p> <p>82. I am confident that I can trust the management of the next administrative level.</p> <p>83. I have complete confidence in the management of the next administrative level.</p>
<p>Relationship with your job (9)</p> <p>To what extent do you agree or disagree with the following statements?</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <p>84. I am happy to tell others about my workplace.</p> <p>85. Job worries or problems distract me when I am at home.</p> <p>86. I feel motivated and involved in my work.</p> <p>87. The things I do at work help me deal with personal and practical issues at home.</p> <p>88. The things I do at work make me a more interesting person at home.</p> <p>89. My work is meaningful.</p> <p>90. My job reduces the effort I can give to activities at home.</p> <p>91. I would recommend a close friend to apply for a position at my workplace.</p> <p>92. Stress at work makes me irritable at home.</p> <p>93. My work has a positive influence on my health.</p> <p>94. The skills I use at work are useful for things I have to do at home.</p> <p>95. My work has a negative influence on my health.</p> <p>96. Having a good day at work makes me a better companion when I get home.</p> <p>97. I feel that my workplace is of great importance to me.</p> <p>98. My job makes me feel too tired to do the things that need attention home.</p> <p>99. I feel that the work I do is important.</p>
<p>Your relationship with your job (10)</p> <p>How often do you have the following experiences?</p>	<p>Answer options: (almost) never, once in a while, often, (almost) always</p> <p>100. I seem to be in a hurry and racing against the clock.</p> <p>101. I find myself continuing to work after my co-workers have called it quits.</p> <p>102. It is important to me to work hard even when I do not enjoy what I am doing.</p>

	<p>103. I stay busy and keep many irons in the fire. 104. I feel that there's something inside me that drives me to work hard. 105. I spend more time working than on socializing with friends, on hobbies, or on leisure activities. 106. I feel obliged to work hard, even when it is not enjoyable. 107. I find myself doing two or three things at one time, such as eating lunch and writing a memo, while talking on the telephone. 108. I feel guilty when I take time off work. 109. It is hard for me to relax when I'm not working.</p>
<p>Your relationship with your job (11) How often do you have the following experiences?</p>	<p>Answer options: never, a few times a year or less, once a month or less, a few times per month, once a week, a few times per week, every day 110. At my work, I feel bursting with energy. 111. At my job, I feel strong and vigorous. 112. When I get up in the morning, I feel like going to work. 113. I am enthusiastic about my job. 114. My job inspires me. 115. I am proud of the work that I do. 116. I feel happy when I am working intensely. 117. I am immersed in my work. 118. I get carried away when I am working.</p>
<p>Your relationship with your job (12) How do you feel about your present job and workplace in general?</p>	<p>Answer options: a mark between 1 and 7 119. Manageable / unmanageable 120. Meaningless / meaningful 121. Structured / unstructured 122. Easy to influence / impossible to influence 123. Insignificant / significant 124. Clear / unclear 125. Controllable / uncontrollable 126. Unrewarding / rewarding 127. Predictable / unpredictable</p>

8.2 Appendix II: Dutch version of the KIWEST

Categories	Questions
<p>Interpersoonlijke relaties (1)</p> <p>Dit onderdeel gaat over uw afdeling, (expertise groep/stafafdeling/directie), collega's en de omgangscultuur binnen uw werk.</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens</p> <ol style="list-style-type: none"> 1. Ik voel mij onderdeel van de groep op mijn afdeling. 2. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar zij helpen mijn niet in situaties waar ik zelf verantwoordelijk voor ben. 3. Mijn werk wordt belemmerd door de machtsstrijd en territoriaal denken (hokjes denken) binnen mijn afdeling. 4. De omgangscultuur binnen mijn afdeling is regelgericht en stijf. 5. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar geven wel aan dat ik eigenlijk mijn eigen problemen moet oplossen. 6. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar verwachten wel eeuwige dankbaarheid. 7. De afdeling geeft mij kansen om mijn persoonlijke prestaties te verbeteren. 8. Wantrouwen en achterdocht bepalen de omgangscultuur op mijn afdeling. 9. Er is een goede sfeer tussen mij en mijn collega's. 10. Er is een goede samenwerking tussen de collega's op het werk. 11. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar zij doen dat wel met tegenzin. 12. De omgangscultuur binnen mijn afdeling is competitief. 13. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar zij doen dit wel op een verwijtende toon of met een verwijtende blik. 14. Intriges tasten de sfeer op mijn afdeling aan. 15. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar combineren dit wel met verwijten. 16. De omgangscultuur binnen mijn afdeling is bemoedigend en ondersteunend. 17. Prestigestrijd en conflicten leiden tot spanning binnen mijn afdeling. 18. De omgangscultuur binnen mijn afdeling is relaxed en comfortabel.
<p>Interpersoonlijke relaties (2)</p> <p>Dit onderdeel gaat over uw afdeling, (expertise groep/stafafdeling/directie), collega's en de omgangscultuur binnen uw werk.</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens</p> <ol style="list-style-type: none"> 19. Mannen en vrouwen worden gelijk behandeld op mijn werk. 20. Op mijn werk is er plaats voor werknemers met een verschillende etnische achtergrond en godsdienst. 21. Binnen onze afdeling staan we samen in het bereiken van onze doelen. 22. Op mijn afdeling is er plaats voor oudere werknemers. 23. Ik ben blij met de inzet van mijn collega's binnen mijn afdeling. 24. Op mijn afdeling is er plaats voor werknemers met uiteenlopende aandoeningen en handicaps.
<p>Eisen van het werk (3)</p> <p>Dit onderdeel gaat over uw taken, eisen en bepaalde voorvallen binnen uw werk.</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens</p> <ol style="list-style-type: none"> 25. Ik weet wanneer mijn taak af is. 26. Ik krijg vaak taken toebedeeld waarbij de randvoorwaarden ontbreken om deze te kunnen uitvoeren. 27. Er wordt van mij verwacht dat ik continu mijn competenties ontwikkel.

	<p>28. Het gebeurt regelmatig dat ik onder hoge tijdsdruk moet werken.</p> <p>29. Ik bepaal wanneer mijn werkzaamheden klaar zijn.</p> <p>30. Ik ontvang regelmatig onverenigbare verzoeken van twee of meer mensen.</p> <p>31. Mijn werk bevat taken die in conflict zijn met mijn persoonlijke waarden.</p> <p>32. Het is aan mij om vast te stellen of een werktaal voltooid is.</p> <p>33. Door de aard van mijn werk moet ik me continu ontwikkelen en daarnaast op nieuwe manieren denken.</p> <p>34. Ik heb regelmatig veel werk te doen.</p> <p>35. Ik doe mijn werk op een andere manier dan ik zelf zou willen.</p> <p>36. Ik voel druk om continu nieuwe dingen te leren voor het uitvoeren van mijn taken.</p> <p>37. Op het werk heb ik genoeg tijd om te doen wat er van mij verwacht wordt.</p>
<p>Organisatie en inhoud van het werk (4)</p> <p>Dit onderdeel gaat over de organisatie en inhoud van uw werk.</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens</p> <p>38. Op het werk wordt duidelijk tot uitdrukking gebracht wat er van mij verwacht wordt.</p> <p>39. Om aan de behoefte van de medewerkers te voldoen is mijn afdeling continu in ontwikkeling.</p> <p>40. Ik moet werk uitvoeren dat volgens mij eigenlijk door iemand anders zou moeten worden gedaan.</p> <p>41. Ik heb het gevoel dat de doelstellingen van mijn werk diffuus en onduidelijk zijn.</p> <p>42. Ik heb de mogelijkheid zelf te beslissen hoe ik mijn werk doe.</p> <p>43. Mijn afdeling is 'open-minded' en past zich aan veranderingen aan.</p> <p>44. Ik kan een eigen werkwijze kiezen.</p> <p>45. Het werk dat ik moet uitvoeren brengt me in lastige posities.</p> <p>46. Ik begrijp welke taken tot mijn werk behoren.</p> <p>47. Binnen mijn afdeling luistert niemand naar nieuwe suggesties of ideeën.</p> <p>48. Ik moet taken uitvoeren waarvan ik het oneerlijk vind dat ik degene ben die deze uit moet voeren.</p> <p>49. Mijn afdeling is flexibel en past zich aan nieuwe ideeën aan.</p> <p>50. Er is binnen mijn werk ruimte om eigen initiatief te nemen.</p> <p>51. Ik moet werk uitvoeren dat meer van mij eist dan redelijk is.</p> <p>52. Mijn afdeling streeft eerder naar statusbehoud dan naar verandering.</p> <p>53. Ik bepaal zelf de volgorde van mijn werkzaamheden.</p>
<p>Organisatie en inhoud van het werk (5)</p> <p>Dit onderdeel gaat over steun binnen uw werk.</p>	<p>Let op! Ondersteunend en Beheer Personeel (OBP) mag dit onderdeel overslaan!</p> <p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens, niet van toepassing</p> <p>54. Ik krijg de benodigde administratieve ondersteuning voor de voorbereiding en de uitvoering van onderwijs en toetsen.</p> <p>55. Ik krijg de benodigde administratieve ondersteuning voor mijn onderzoek.</p> <p>56. Ik krijg de benodigde technische ondersteuning voor mijn onderzoek.</p> <p>57. Ik krijg de benodigde steun voor het internationaliseren van mijn onderzoek.</p>
<p>Management (6)</p> <p>Dit onderdeel gaat over management en de leiding</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens</p> <p>58. De leiding van mijn afdeling is altijd betrouwbaar.</p> <p>59. Ik kan de informatie afkomstig van de leiding van mijn afdeling vertrouwen.</p>

<p>binnen uw afdeling (expertise groep/stafafdeling/directie).</p>	<p>60. De leiding van mijn afdeling behandelt mij op een consistente en voorspelbare manier. 61. De leiding van mijn afdeling houdt belangrijke informatie voor de medewerkers achter. 62. Ik word eerlijk behandeld door de leiding van mijn afdeling. 63. De leiding van mijn afdeling is open en eerlijk tegen mij. 64. Ik voel me in mijn werk erkend en gewaardeerd door mijn directe leidinggevende. 65. De medewerkers binnen mijn afdeling kunnen hun opvattingen en gevoelens duidelijk maken. 66. Ik heb volledig vertrouwen in de leiding van mijn afdeling. 67. Ik word gerespecteerd door de leiding van mijn afdeling. 68. De leiding van mijn afdeling vertrouwt erop dat de werknemers hun werk goe doen. 69. Ik ben ervan overtuigd dat ik de leiding van mijn afdeling kan vertrouwen.</p>
<p>Management (7)</p> <p>Dit onderdeel gaat over uw directe leidinggevende.</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens, niet van toepassing</p> <p>70. Mijn directe leidinggevende draagt bij aan het ontwikkelen van mijn vaardigheden. 71. Mijn directe leidinggevende stimuleert mij om deel te nemen in belangrijke besluiten. 72. Mijn directe leidinggevende stimuleert mij om te spreken wanneer ik een andere mening heb. 73. Mijn directe leidinggevende behandelt de werknemers eerlijk. 74. Mijn directe leidinggevende heeft het met mij over hoe goed ik het werk uitvoer. 75. Mijn directe leidinggevende is bereid te luisteren naar mijn problemen op het werk. 76. Mijn directe leidinggevende verdeelt de werktaken eerlijk. 77. Mijn directe leidinggevende behandelt de werknemers onpartijdig. 78. Ik krijg hulp en ondersteuning van mijn directe leidinggevende.</p>
<p>Management (8)</p> <p>Dit onderdeel gaat over de leiding van uw afdeling (expertise groep/stafafdeling/directie).</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens</p> <p>79. Ik kan verwachten van de leiding van mijn afdeling, dat zij mij op een consistente en voorspelbare manier behandelen. 80. De leiding van mijn afdeling is altijd betrouwbaar. 81. De leiding van mijn afdeling is open en eerlijk tegen mij. 82. Ik ben ervan overtuigd dat ik de leiding van mijn afdeling kan vertrouwen. 83. Ik vertouw de leiding van mijn afdeling helemaal.</p>
<p>Relatie met je baan (9)</p> <p>Dit onderdeel gaat over uw werkzaamheden en uw werk-privé balans.</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens</p> <p>84. Ik geniet ervan om anderen te vertellen over mijn werkplek. 85. Wanneer ik thuis ben, leiden zorgen en problemen op het werk mij af. 86. Ik voel mij gemotiveerd en betrokken bij mijn werk. 87. Ik kan thuis beter omgaan met praktische en persoonlijke problemen door wat ik doe op het werk. 88. Ik ben thuis een interessanter persoon door de dingen die ik op het werk doe. 89. Mijn werk is zinvol. 90. Mijn werk maakt het moeilijk om aan mijn verplichtingen thuis te voldoen. 91. Ik zou een goede kennis aanraden te solliciteren naar een functie bij mij op het werk.</p>

	<p>92. Ik ben thuis prikkelbaar, omdat mijn werk stressvol is.</p> <p>93. Mijn werk heeft een positieve invloed op mijn gezondheid.</p> <p>94. De vaardigheden die ik gebruik op het werk zijn bruikbaar voor dingen die ik thuis moet doen.</p> <p>95. Mijn werk heeft een negatieve invloed op mijn gezondheid.</p> <p>96. Ik ben een betere partner als ik thuiskom na een plezierige werkdag.</p> <p>97. Ik heb het gevoel dat mijn werk(omgeving) erg belangrijk voor mij is.</p> <p>98. Het komt vaak voor dat ik na een werkdag door vermoeidheid niet meer toekom aan bezigheden die thuis aandacht behoeven.</p> <p>99. Ik heb het gevoel dat het werk wat ik doe belangrijk is.</p>
<p>Relatie met je baan (10)</p> <p>Dit onderdeel gaat over uw ervaringen binnen uw werk.</p>	<p>Antwoordopties: (bijna) nooit, af en toe, vaak, (bijna) altijd</p> <p>100. Ik heb haast en werk tegen deadlines aan.</p> <p>101. Ik werk door terwijl mijn collega's al naar huis zijn.</p> <p>102. Ik vind het belangrijk om hard te werken, zelfs als ik eigenlijk geen plezier heb ik mijn bezigheden.</p> <p>103. Ik ben druk en heb veel ijzers tegelijk in het vuur.</p> <p>104. Ik heb het gevoel dat iets in mijzelf me dwingt hard te werken.</p> <p>105. Ik besteed meer tijd aan mijn werk dan aan mijn vrienden, hobby's of andere vrijetijdsactiviteiten.</p> <p>106. Ik voel me verplicht te werken, ook al vind ik dat niet altijd prettig.</p> <p>107. Ik ben met meerdere dingen tegelijk bezig. Ik schrijf bijvoorbeeld een memo terwijl ik eet en met iemand telefoneer.</p> <p>108. Ik voel me schuldig als ik vrij neem van mijn werk.</p> <p>109. Ik vind het moeilijk om me te ontspannen als ik niet aan het werk ben.</p>
<p>Relatie met je baan (11)</p> <p>Dit onderdeel gaat over uw ervaringen binnen uw werk.</p>	<p>Antwoordopties: nooit, aantal keer per jaar of minder, een keer per maand of minder, een aantal keer per maand, een keer per week, een aantal keer per week, elke dag</p> <p>110. Op mijn werk bruis ik van de energie.</p> <p>111. Als ik werk voel ik me fit en sterk.</p> <p>112. Als ik 's morgens opsta heb ik zin om aan het werk te gaan.</p> <p>113. Ik ben enthousiast over mijn baan.</p> <p>114. Mijn werk inspireert mij.</p> <p>115. Ik ben trots op het werk wat ik doe.</p> <p>116. Wanneer ik heel intensief aan het werk ben, voel ik mij gelukkig.</p> <p>117. Ik ga helemaal op in mijn werk.</p> <p>118. Als ik werk vergeet ik alle dingen om me heen.</p>
<p>Relatie met je baan (12)</p> <p>Dit onderdeel gaat over uw ervaringen binnen uw werk.</p>	<p>Antwoordopties: een cijfer tussen de 1 en 7</p> <p>119. Beheersbaar / Onbeheersbaar</p> <p>120. Niet zinvol / Zinvol</p> <p>121. Gestructureerd / Ongestructureerd</p> <p>122. Makkelijk te beïnvloeden / Moeilijk te beïnvloeden</p> <p>123. Belangrijk / Onbelangrijk</p> <p>124. Duidelijk / Onduidelijk</p> <p>125. Controleerbaar / Oncontroleerbaar</p> <p>126. Ondankbaar / Dankbaar</p> <p>127. Voorspelbaar / Onvoorspelbaar</p>

8.3 Appendix III: English version of the KIWEST (as presented in Qualtrics)

Nowadays, sustainable employability is an important subject for organizations, also for the WUR. Employees are sustainable employable when they have sufficient resources and viable opportunities at their disposal to perform their current and future work, while maintaining their health and well-being. The type of work and organization play a role in this. In the strategic plan the WUR states the following about this issue: “We know a shared responsibility for the proper functioning of employees (expressed in three aspects: *workability, vitality and employability*)”.

In Norway researchers of the University of Trondheim have developed a questionnaire, the KIWEST, to measure different aspects of the psychosocial work environment at universities which contribute to or hinder sustainable employability, such as job autonomy. The questionnaire is administered biannually at all Norwegian universities and the HRM-departments of these universities use the results to improve the work environment.

In the context of the MSc-thesis Maaïke Cornelissen, student Health & Society at the WUR, applies the KIWEST to the Dutch situation, under supervision of Dr. Ir. Lenneke Vaandrager and Prof. Dr. Maria Koelen. The results of the KIWEST will be used to examine if the KIWEST is suitable to use in the Dutch context. Also, the results will be provided to the HRM department of the Plant Sciences Group. Knowing how employees experience the psychosocial work environment, the HRM department can think of ways to improve it.

Therefore, we would kindly like to ask you to participate in this study. Completing this questionnaire takes about 15 minutes.

The data obtained from the questionnaire will be processed anonymously and are strictly confidential. Therefore, answers cannot be traced to you as a person. You may withdraw at any time from the study, for any reason.

Do you still have question or remarks?

Please feel free to contact us:

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Thank you in advance for your participation!

Permission I understand the text above and agree to complete the questionnaire.
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Categories	Questions
Interpersonal relationships(1) In this part of the survey there are 24 statements about relationships within your unit/ chair group. Please indicate to what extent you disagree or agree with the statements.	Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree 1. I feel that I am part of a community at my unit. 2. People in my unit sometimes help me in a difficult situation, but do not support in a way that is matter-of-factly. 3. My work is hampered by power struggles and territorial thinking in my unit. 4. The climate in my unit is rigid and rule-based. 5. People in my unit sometimes help me in a difficult situation, but indicate that I should have dealt with the problem myself. 6. People in my unit sometimes help me in a difficult situation, but expect everlasting gratitude.

	<ol style="list-style-type: none"> 7. This unit gives me ample opportunities to improve my personal performance. 8. The climate in my unit is distrustful and suspicious. 9. There is a good atmosphere between me and my colleagues at my unit. 10. There is a good sense of fellowship between the colleagues at my unit. 11. People in my unit sometimes help me in a difficult situation, but support me reluctantly. 12. The climate in my unit is competitive. 13. People in my unit sometimes help me in a difficult situation, but do so with a reproachful tone or gaze. 14. In my unit, intrigues impair the work climate. 15. People in my unit sometimes help me in a difficult situation, but combine this with reproaches. 16. The climate in my unit is encouraging and supportive. 17. In my unit, there is a great deal of tension due to prestige and conflicts. 18. The climate in my unit is relaxed and comfortable.
<p>Interpersonal relationships(2)</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <ol style="list-style-type: none"> 19. Men and women are treated as equals in my unit. 20. In my unit, there is room for employees of a different ethnic background or religion. 21. In our unit, we stand together in trying to reach our performance goals. 22. In my unit, there is room for older employees. 23. I'm happy with my unit's level of task commitment. 24. In my unit, there is room for employees with various illnesses or disabilities.
<p>Job demands (3)</p> <p>In this part of the survey there are 13 statements about job demands. Please indicate to what extent you disagree or agree with the statements.</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <ol style="list-style-type: none"> 25. I know when a task is completed. 26. I am often given assignments without adequate resources. 27. I am expected to continually develop my competence. 28. It happens quite often that I have to work under heavy time pressure. 29. I determine when my work assignments are completed. 30. I frequently receive incompatible requests from two or more people. 31. My job involves tasks that are in conflict with my personal values. 32. It is up to me to assess when I have completed a work assignment. 33. The nature of my work means I continually have to develop and think in new ways. 34. I frequently have too much to do at work. 35. I have to do things that I feel should be done differently. 36. I feel pressure to continually learn new things in order to manage my work tasks. 37. I have enough time to do what is expected from me at work.
<p>Work organization and job content (4)</p> <p>In this part of the survey there are 16 statements about work organization and job content. Please indicate to what extent you disagree or agree with the statements.</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <ol style="list-style-type: none"> 38. What is expected of me at work is clearly expressed. 39. My unit is constantly evolving to meet the employees' needs. 40. I must carry out work which I think should be done by someone else. 41. I feel that the objectives of my job are diffuse and unclear. 42. I have a sufficient degree of influence in my work. 43. My unit is open-minded and adapts to changes.

	<p>44. I can make my own decisions on how to organize my work. 45. I must carry out work that put me into awkward positions. 46. I have a clear understanding of which tasks constitute my job. 47. In my unit, no one listens to new suggestions and ideas. 48. I must carry out tasks that I think are unfair that I should do. 49. My unit is flexible and continually adapts to new ideas. 50. There is room for me to take my own initiatives at work. 51. I must carry out work which I feel demands more of me than is reasonable. 52. My unit strives to retain status quo rather than to change. 53. I manage my work situation in the direction I want.</p>
<p>Work organization and job content (5)</p> <p>In this part of the survey there are four statements about the degree of support within your work. Please indicate to what extent you disagree or agree with the following statements. Please note, if you are a non-academic employee you can select 'not applicable'.</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree, not applicable</p> <p>54. I get the administrative support I need for planning and implementation of teaching and examinations. 55. I get the administrative support I need for my research. 56. I get the technical support I need for my research. 57. I get the support I need for internationalization of my research.</p>
<p>Management (6)</p> <p>In this part of the survey there are 12 statements about the management of your unit/ chair group. Please indicate to what extent you disagree or agree with the statements.</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <p>58. My unit management is always reliable. 59. I can trust information from my unit management. 60. I can expect my unit management to treat me in a consistent and predictable way. 61. My unit management withholds important information from the employees. 62. I am treated fairly by my unit management. 63. My unit management is open and honest with me. 64. My work is recognized and appreciated by my unit management. 65. It is possible for the employees at my unit to express their views. 66. I have complete confidence in my unit management. 67. I am respected by my unit management. 68. My unit management trusts the employees to do their work well. 69. I am confident that I can trust my unit management.</p>
<p>Management (7)</p> <p>In this part of the survey there are nine statements about your immediate superior. Please indicate to what extent you disagree or agree with the statements. Please note, your immediate superior is the person with whom you have (or will have) employee appraisal interviews.</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree, not applicable</p> <p>70. My immediate superior contributes to the development of my skills. 71. My immediate superior encourages me to participate in important decisions. 72. My immediate superior encourages me to speak up when I have a different opinion. 73. My immediate superior treats the employees fairly. 74. My immediate superior talks with me about how well I carry out my work. 75. My immediate superior listens to me when I have problems at work. 76. My immediate superior distributes work assignments fairly. 77. My immediate superior treats the employees impartially. 78. My immediate superior gives me the help and support I need from him/her.</p>

<p>Management (8)</p> <p>In this part of the survey there are five statements about the management of the next administrative level (e.g. faculty or university management). Please indicate to what extent you disagree or agree with the statements.</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <p>79. I can expect the management of the next administrative level to treat me in a consistent and predictable way.</p> <p>80. The management of the next administrative level is always reliable.</p> <p>81. The management of the next administrative level is open and honest with me.</p> <p>82. I am confident that I can trust the management of the next administrative level.</p> <p>83. I have complete confidence in the management of the next administrative level.</p>
<p>Relationship with your job (9)</p> <p>In this part of the survey there are 16 statements about your work activities and your work-life balance. Please indicate to what extent you disagree or agree with the statements.</p>	<p>Answer options: strongly disagree, disagree, neither/nor, agree, strongly agree</p> <p>84. I am happy to tell others about my workplace.</p> <p>85. Job worries or problems distract me when I am at home.</p> <p>86. I feel motivated and involved in my work.</p> <p>87. The things I do at work help me deal with personal and practical issues at home.</p> <p>88. The things I do at work make me a more interesting person at home.</p> <p>89. My work is meaningful.</p> <p>90. My job reduces the effort I can give to activities at home.</p> <p>91. I would recommend a close friend to apply for a position at my workplace.</p> <p>92. Stress at work makes me irritable at home.</p> <p>93. My work has a positive influence on my health.</p> <p>94. The skills I use at work are useful for things I have to do at home.</p> <p>95. My work has a negative influence on my health.</p> <p>96. Having a good day at work makes me a better companion when I get home.</p> <p>97. I feel that my workplace is of great importance to me.</p> <p>98. My job makes me feel too tired to do the things that need attention home.</p> <p>99. I feel that the work I do is important.</p>
<p>Your relationship with your job (10)</p> <p>In this part of the survey there are ten statements about experiences within your job. Please indicate how often you experience the following. Please note! The answer categories have changed.</p>	<p>Answer options: (almost) never, once in a while, often, (almost) always</p> <p>100. I seem to be in a hurry and racing against the clock.</p> <p>101. I find myself continuing to work after my co-workers have called it quits.</p> <p>102. It is important to me to work hard even when I do not enjoy what I am doing.</p> <p>103. I stay busy and keep many irons in the fire.</p> <p>104. I feel that there's something inside me that drives me to work hard.</p> <p>105. I spend more time working than on socializing with friends, on hobbies, or on leisure activities.</p> <p>106. I feel obliged to work hard, even when it is not enjoyable.</p> <p>107. I find myself doing two or three things at one time, such as eating lunch and writing a memo, while talking on the telephone.</p> <p>108. I feel guilty when I take time off work.</p> <p>109. It is hard for me to relax when I'm not working.</p>
<p>Your relationship with your job (11)</p> <p>This part is also about experiences within your job (nine statements). Please</p>	<p>Answer options: never, a few times a year or less, once a month or less, a few times per month, once a week, a few times per week, every day</p> <p>110. At my work, I feel bursting with energy.</p> <p>111. At my job, I feel strong and vigorous.</p> <p>112. When I get up in the morning, I feel like going to work.</p>

<p>indicate how often you experience the following. Please note! The answer categories have changed.</p>	<p>113. I am enthusiastic about my job. 114. My job inspires me. 115. I am proud of the work that I do. 116. I feel happy when I am working intensely. 117. I am immersed in my work. 118. I get carried away when I am working.</p>
<p>Your relationship with your job (12)</p> <p>This part (WORK-SOC) was not included in the KIWEST-survey used in this study!</p>	<p>Answer options: a mark between 1 and 7</p> <p>119. Manageable / unmanageable 120. Meaningless / meaningful 121. Structured / unstructured 122. Easy to influence / impossible to influence 123. Insignificant / significant 124. Clear / unclear 125. Controllable / uncontrollable 126. Unrewarding / rewarding 127. Predictable / unpredictable</p>

Background information

In this last part we would like to ask you some background information.

What is your gender?

- Male
- Female

What is your year of birth?

Have you had an employee appraisal interview during the last 24 months?

- Yes
- No
- Not relevant (due to leave or because I was recently employed)

If yes was selected, on a scale from 1 (very negative) to 5 (very positive), how do you feel about the employee appraisal interview you have had during the last 24 months?

1 2 3 4 5

Where do you work for within Wageningen UR?

- Wageningen University
- DLO

To which job family belongs your job?

- Education and Research
- Education and Research Support
- Administrative and Secretarial Support
- Health & Safety and the Environment
- Facility Services
- ICT
- Management and Policy Advice
- Personnel and Organization
- PR, Information Provision and Communication
- Student-focused Support
- Other, namely...

Which percentage of your job is allocated to the following categories? Distribute 100% over the following categories.

- Research
- Teaching
- Dissemination
- Training/education for yourself
- Fieldwork/laboratory work

- Administrative tasks/services
- Technical services (operation and maintenance)
- Other, please specify...

For how long are you already employed at the WUR?

- Under five years
- Five to nine years
- Ten or more years

What are your terms of employment?

- Temporary
- Permanent

How many hours do you work at the WUR? Please indicate this in fulltime-equivalent (FTE).

What is your nationality?

Do you have any remarks on the questionnaire? Please indicate below.

Thank you for completing the questionnaire. Please click 'next' in order to finish and submit your answers.

8.4 Appendix IV: Dutch version of the KIWEST (as presented in Qualtrics)

Duurzame inzetbaarheid is tegenwoordig een belangrijk thema binnen organisaties, zo ook binnen de WUR. Werknemers zijn duurzaam inzetbaar als zij voldoende middelen tot hun beschikking hebben en haalbare kansen kunnen benutten om hun huidige en toekomstige werk te doen, met behoud van gezondheid en welzijn. Zowel het werk alsook de organisatie spelen hierin een rol. In het strategische plan van de WUR staat hierover: "We kennen een gedeelde verantwoordelijkheid voor het goed functioneren van de medewerkers (uit te drukken in drie aspecten *workability, vitality en employability*)".

In Noorwegen hebben onderzoekers van de Universiteit van Trondheim een vragenlijst ontwikkeld om allerlei psychosociale aspecten van de werkomgeving te meten, zoals autonomie op het werk, die bijdragen aan duurzame inzetbaarheid of dit juist kunnen belemmeren. Deze vragenlijst, de KIWEST-vragenlijst, is speciaal bedoeld voor medewerkers van universiteiten. De vragenlijst wordt op alle Noorse universiteiten afgenomen en de HRM-afdelingen van deze universiteiten gebruiken de resultaten om de werkomgeving te verbeteren.

In het kader van een MSc-thesis spitst Maaïke Cornelissen, student Gezondheid en Maatschappij, onder begeleiding van Dr. Ir. Lenneke Vaandrager en Prof. Dr. Maria Koelen de vragenlijst toe op de Nederlandse situatie. Het is de bedoeling om te testen in hoeverre de KIWEST geschikt is om toe te passen in Nederland. Ook wordt een overzicht van de resultaten van uw afdeling aangeboden aan het HRMteam van PSG, zodat men weet waar de succesfactoren en knelpunten liggen en er eventueel actie kan worden ondernomen om uw werkomgeving te verbeteren.

Wij willen u daarom vriendelijk vragen mee te doen aan dit onderzoek. Het invullen van de online vragenlijst duurt ongeveer 15 minuten.

De gegevens verkregen uit de vragenlijst worden anoniem verwerkt en zijn strikt vertrouwelijk. Antwoorden zijn dan ook niet te herleiden naar u als persoon. U mag zich op elk moment terugtrekken uit het onderzoek, om welke reden dan ook.

Heeft u verder nog vragen of opmerkingen?

Neem dan gerust contact op met:

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Alvast hartelijk bedankt voor uw deelname!

Toestemming

Ik begrijp bovenstaande tekst en ga akkoord met het invullen van de vragenlijst.

Categories	Questions
Interpersoonlijke relaties (1) In dit onderdeel van de vragenlijst zijn er 24 stellingen beschreven die gaan over uw afdeling/leerstoelgroep, collega's en de omgangscultuur binnen uw werk. Geeft u hierbij aan in hoeverre u het oneens of eens bent met de stellingen.	Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens 1. Ik voel mij onderdeel van de groep op mijn afdeling. 2. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar zij helpen mijn niet in situaties waar ik zelf verantwoordelijk voor ben. 3. Mijn werk wordt belemmerd door de machtsstrijd en territoriaal denken (hokjes denken) binnen mijn afdeling. 4. De omgangscultuur binnen mijn afdeling is regelgericht en stijf.

	<ol style="list-style-type: none"> 5. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar geven wel aan dat ik eigenlijk mijn eigen problemen moet oplossen. 6. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar verwachten wel eeuwige dankbaarheid. 7. De afdeling geeft mij kansen om mijn persoonlijke prestaties te verbeteren. 8. Wantrouwen en achterdocht bepalen de omgangscultuur op mijn afdeling. 9. Er is een goede sfeer tussen mij en mijn collega's. 10. Er is een goede samenwerking tussen de collega's op het werk. 11. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar zij doen dat wel met tegenzin. 12. De omgangscultuur binnen mijn afdeling is competitief. 13. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar zij doen dit wel op een verwijtende toon of met een verwijtende blik. 14. Intriges tasten de sfeer op mijn afdeling aan. 15. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar combineren dit wel met verwijten. 16. De omgangscultuur binnen mijn afdeling is bemoedigend en ondersteunend. 17. Prestigestrijd en conflicten leiden tot spanning binnen mijn afdeling. 18. De omgangscultuur binnen mijn afdeling is relaxed en comfortabel.
Interpersoonlijke relaties (2)	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens</p> <ol style="list-style-type: none"> 19. Mannen en vrouwen worden gelijk behandeld op mijn werk. 20. Op mijn werk is er plaats voor werknemers met een verschillende etnische achtergrond en godsdienst. 21. Binnen onze afdeling staan we samen in het bereiken van onze doelen. 22. Op mijn afdeling is er plaats voor oudere werknemers. 23. Ik ben blij met de inzet van mijn collega's binnen mijn afdeling. 24. Op mijn afdeling is er plaats voor werknemers met uiteenlopende aandoeningen en handicaps.
<p>Eisen van het werk (3)</p> <p>In dit onderdeel van de vragenlijst zijn 13 stellingen beschreven die gaan over uw taken, eisen en bepaalde voorvallen binnen uw werk. Geeft u hierbij aan in hoeverre u het oneens of eens bent met de stellingen.</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens</p> <ol style="list-style-type: none"> 25. Ik weet wanneer mijn taak af is. 26. Ik krijg vaak taken toebedeeld waarbij de randvoorwaarden ontbreken om deze te kunnen uitvoeren. 27. Er wordt van mij verwacht dat ik continu mijn competenties ontwikkel. 28. Het gebeurt regelmatig dat ik onder hoge tijdsdruk moet werken. 29. Ik bepaal wanneer mijn werkzaamheden klaar zijn. 30. Ik ontvang regelmatig onverenigbare verzoeken van twee of meer mensen. 31. Mijn werk bevat taken die in conflict zijn met mijn persoonlijke waarden. 32. Het is aan mij om vast te stellen of een werktaak voltooid is. 33. Door de aard van mijn werk moet ik me continu ontwikkelen en daarnaast op nieuwe manieren denken. 34. Ik heb regelmatig veel werk te doen. 35. Ik doe mijn werk op een andere manier dan ik zelf zou willen. 36. Ik voel druk om continu nieuwe dingen te leren voor het uitvoeren van mijn taken.

	37. Op het werk heb ik genoeg tijd om te doen wat er van mij verwacht wordt.
<p>Organisatie en inhoud van het werk (4)</p> <p>In dit onderdeel van de vragenlijst zijn 16 stellingen beschreven die gaan over de organisatie en inhoud van uw werk. Geeft u hierbij aan in hoeverre u het oneens of eens bent met de stellingen.</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens</p> <p>38. Op het werk wordt duidelijk tot uitdrukking gebracht wat er van mij verwacht wordt.</p> <p>39. Om aan de behoefte van de medewerkers te voldoen is mijn afdeling continu in ontwikkeling.</p> <p>40. Ik moet werk uitvoeren dat volgens mij eigenlijk door iemand anders zou moeten worden gedaan.</p> <p>41. Ik heb het gevoel dat de doelstellingen van mijn werk diffuus en onduidelijk zijn.</p> <p>42. Ik heb de mogelijkheid zelf te beslissen hoe ik mijn werk doe.</p> <p>43. Mijn afdeling is 'open-minded' en past zich aan veranderingen aan.</p> <p>44. Ik kan een eigen werkwijze kiezen.</p> <p>45. Het werk dat ik moet uitvoeren brengt me in lastige posities.</p> <p>46. Ik begrijp welke taken tot mijn werk behoren.</p> <p>47. Binnen mijn afdeling luistert niemand naar nieuwe suggesties of ideeën.</p> <p>48. Ik moet taken uitvoeren waarvan ik het oneerlijk vind dat ik degene ben die deze uit moet voeren.</p> <p>49. Mijn afdeling is flexibel en past zich aan nieuwe ideeën aan.</p> <p>50. Er is binnen mijn werk ruimte om eigen initiatief te nemen.</p> <p>51. Ik moet werk uitvoeren dat meer van mij eist dan redelijk is.</p> <p>52. Mijn afdeling streeft eerder naar statusbehoud dan naar verandering.</p> <p>53. Ik bepaal zelf de volgorde van mijn werkzaamheden.</p>
<p>Organisatie en inhoud van het werk (5)</p> <p>In dit onderdeel van de vragenlijst zijn er vier stellingen beschreven op het gebied van steun binnen uw werk. Geeft u aan in hoeverre u het oneens of eens bent met de volgende stellingen. Selecteer 'niet van toepassing' als u tot het OBP (Ondersteunend en Beheer Personeel) behoort.</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens, niet van toepassing</p> <p>54. Ik krijg de benodigde administratieve ondersteuning voor de voorbereiding en de uitvoering van onderwijs en toetsen.</p> <p>55. Ik krijg de benodigde administratieve ondersteuning voor mijn onderzoek.</p> <p>56. Ik krijg de benodigde technische ondersteuning voor mijn onderzoek.</p> <p>57. Ik krijg de benodigde steun voor het internationaliseren van mijn onderzoek.</p>
<p>Management (6)</p> <p>In dit onderdeel van de vragenlijst zijn 12 stellingen beschreven op het gebied van het management van uw afdeling/leerstoelgroep. Geeft u hierbij aan in hoeverre u het oneens of eens bent met de stellingen.</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens</p> <p>58. De leiding van mijn afdeling is altijd betrouwbaar.</p> <p>59. Ik kan de informatie afkomstig van de leiding van mijn afdeling vertrouwen.</p> <p>60. De leiding van mijn afdeling behandelt mij op een consistente en voorspelbare manier.</p> <p>61. De leiding van mijn afdeling houdt belangrijke informatie voor de medewerkers achter.</p> <p>62. Ik word eerlijk behandeld door de leiding van mijn afdeling.</p> <p>63. De leiding van mijn afdeling is open en eerlijk tegen mij.</p> <p>64. Ik voel me in mijn werk erkend en gewaardeerd door mijn directe leidinggevende.</p> <p>65. De medewerkers binnen mijn afdeling kunnen hun opvattingen en gevoelens duidelijk maken.</p> <p>66. Ik heb volledig vertrouwen in de leiding van mijn afdeling.</p> <p>67. Ik word gerespecteerd door de leiding van mijn afdeling.</p>

	<p>68. De leiding van mijn afdeling vertrouwt erop dat de werknemers hun werk goe doen.</p> <p>69. Ik ben ervan overtuigd dat ik de leiding van mijn afdeling kan vertrouwen.</p>
<p>Management (7)</p> <p>In dit onderdeel van de vragenlijst zijn er negen stellingen beschreven over uw directe leidinggevende. Geeft u hierbij aan in hoeverre u het oneens of eens bent met deze stellingen.</p> <p>Onder uw direct leidinggevende wordt verstaan: degene met wie u een functioneringsgesprek heeft gehad of gaat hebben in de toekomst.</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens, niet van toepassing</p> <p>70. Mijn directe leidinggevende draagt bij aan het ontwikkelen van mijn vaardigheden.</p> <p>71. Mijn directe leidinggevende stimuleert mij om deel te nemen in belangrijke besluiten.</p> <p>72. Mijn directe leidinggevende stimuleert mij om te spreken wanneer ik een andere mening heb.</p> <p>73. Mijn directe leidinggevende behandelt de werknemers eerlijk.</p> <p>74. Mijn directe leidinggevende heeft het met mij over hoe goed ik het werk uitvoer.</p> <p>75. Mijn directe leidinggevende is bereid te luisteren naar mijn problemen op het werk.</p> <p>76. Mijn directe leidinggevende verdeelt de werktaken eerlijk.</p> <p>77. Mijn directe leidinggevende behandelt de werknemers onpartijdig.</p> <p>78. Ik krijg hulp en ondersteuning van mijn directe leidinggevende.</p>
<p>Management (8)</p> <p>In dit onderdeel van de vragenlijst zijn er vijf stellingen over de leiding van de eerste laag boven u (bijvoorbeeld de leiding van de faculteit of de leiding van de universiteit). Geeft u hierbij aan in hoeverre u het oneens of eens bent met de stellingen.</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens</p> <p>79. Ik kan verwachten van de leiding van mijn afdeling, dat zij mij op een consistente en voorspelbare manier behandelen.</p> <p>80. De leiding van mijn afdeling is altijd betrouwbaar.</p> <p>81. De leiding van mijn afdeling is open en eerlijk tegen mij.</p> <p>82. Ik ben ervan overtuigd dat ik de leiding van mijn afdeling kan vertrouwen.</p> <p>83. Ik vertrouw de leiding van mijn afdeling helemaal.</p>
<p>Relatie met je baan (9)</p> <p>In dit onderdeel van de vragenlijst zijn er 16 stellingen beschreven over uw werkzaamheden en uw werk-privé balans. Geeft u hierbij aan in hoeverre u het oneens of eens bent met de volgende stellingen.</p>	<p>Antwoordopties: sterk mee oneens, mee oneens, noch/noch, mee eens, sterk mee eens</p> <p>84. Ik geniet ervan om anderen te vertellen over mijn werkplek.</p> <p>85. Wanneer ik thuis ben, leiden zorgen en problemen op het werk mij af.</p> <p>86. Ik voel mij gemotiveerd en betrokken bij mijn werk.</p> <p>87. Ik kan thuis beter omgaan met praktische en persoonlijke problemen door wat ik doe op het werk.</p> <p>88. Ik ben thuis een interessanter persoon door de dingen die ik op het werk doe.</p> <p>89. Mijn werk is zinvol.</p> <p>90. Mijn werk maakt het moeilijk om aan mijn verplichtingen thuis te voldoen.</p> <p>91. Ik zou een goede kennis aanraden te solliciteren naar een functie bij mij op het werk.</p> <p>92. Ik ben thuis prikkelbaar, omdat mijn werk stressvol is.</p> <p>93. Mijn werk heeft een positieve invloed op mijn gezondheid.</p> <p>94. De vaardigheden die ik gebruik op het werk zijn bruikbaar voor dingen die ik thuis moet doen.</p> <p>95. Mijn werk heeft een negatieve invloed op mijn gezondheid.</p> <p>96. Ik ben een betere partner als ik thuiskom na een plezierige werkdag.</p> <p>97. Ik heb het gevoel dat mijn werk(omgeving) erg belangrijk voor mij is.</p>

	<p>98. Het komt vaak voor dat ik na een werkdag door vermoeidheid niet meer toekom aan bezigheden die thuis aandacht behoeven.</p> <p>99. Ik heb het gevoel dat het werk wat ik doe belangrijk is.</p>
<p>Relatie met je baan (10)</p> <p>In dit onderdeel van de vragenlijst zijn er tien stellingen beschreven op het gebied van ervaringen binnen uw werk. Geeft u hierbij aan hoe vaak u het volgende ervaart.</p> <p>Let op! De antwoord-categorieën zijn gewijzigd.</p>	<p>Antwoordopties: (bijna) nooit, af en toe, vaak, (bijna) altijd</p> <p>100. Ik heb haast en werk tegen deadlines aan.</p> <p>101. Ik werk door terwijl mijn collega's al naar huis zijn.</p> <p>102. Ik vind het belangrijk om hard te werken, zelfs als ik eigenlijk geen plezier heb ik mijn bezigheden.</p> <p>103. Ik ben druk en heb veel ijsers tegelijk in het vuur.</p> <p>104. Ik heb het gevoel dat iets in mijzelf me dwingt hard te werken.</p> <p>105. Ik besteed meer tijd aan mijn werk dan aan mijn vrienden, hobby's of andere vrijetijdsactiviteiten.</p> <p>106. Ik voel me verplicht hard te werken, ook al vind ik dat niet altijd prettig.</p> <p>107. Ik ben met meerdere dingen tegelijk bezig. Ik schrijf bijvoorbeeld een memo terwijl ik eet en met iemand telefoneer.</p> <p>108. Ik voel me schuldig als ik vrij neem van mijn werk.</p> <p>109. Ik vind het moeilijk om me te ontspannen als ik niet aan het werk ben.</p>
<p>Relatie met je baan (11)</p> <p>Dit onderdeel gaat met behulp van negen stellingen over ervaringen binnen uw werk. Geeft u hierbij aan hoe vaak u het volgende ervaart.</p> <p>Let op! De antwoord-categorieën zijn gewijzigd.</p>	<p>Antwoordopties: nooit, aantal keer per jaar of minder, een keer per maand of minder, een aantal keer per maand, een keer per week, een aantal keer per week, elke dag</p> <p>110. Op mijn werk bruis ik van de energie.</p> <p>111. Als ik werk voel ik me fit en sterk.</p> <p>112. Als ik 's morgens opsta heb ik zin om aan het werk te gaan.</p> <p>113. Ik ben enthousiast over mijn baan.</p> <p>114. Mijn werk inspireert mij.</p> <p>115. Ik ben trots op het werk wat ik doe.</p> <p>116. Wanneer ik heel intensief aan het werk ben, voel ik mij gelukkig.</p> <p>117. Ik ga helemaal op in mijn werk.</p> <p>118. Als ik werk vergeet ik alle dingen om me heen.</p>
<p>Relatie met je baan (12)</p> <p>Dit onderdeel van de vragenlijst (WORK-SOC) is niet opgenomen in de KIWEST-vragenlijst die gebruikt is in deze studie!</p>	<p>Antwoordopties: een cijfer tussen de 1 en 7</p> <p>119. Beheersbaar / Onbeheersbaar</p> <p>120. Niet zinvol / Zinvol</p> <p>121. Gestructureerd / Ongestructureerd</p> <p>122. Makkelijk te beïnvloeden / Moeilijk te beïnvloeden</p> <p>123. Belangrijk / Onbelangrijk</p> <p>124. Duidelijk / Onduidelijk</p> <p>125. Controleerbaar / Oncontroleerbaar</p> <p>126. Ondankbaar / Dankbaar</p> <p>127. Voorspelbaar / Onvoorspelbaar</p>

Achtergrondinformatie

In dit laatste onderdeel vragen we wat achtergrondinformatie van u.

Wat is uw geslacht?

- Man
- Vrouw

Wat is uw geboortjaar?

Heeft u in de afgelopen 24 maanden een R&O gesprek gehad?

- Ja
- Nee
- Niet relevant, omdat ik niet aanwezig was of hier pas net begonnen ben met werken

Zo ja, op een schaal van één (heel negatief) tot vijf (heel positief), hoe beoordeelt u uw R&O?

1 2 3 4 5

Waar werkt u binnen Wageningen UR?

- Wageningen University
- DLO

Binnen welke functiefamilie valt uw functie?

- Onderwijs en Onderzoek
- Onderwijs en Onderzoeksondersteuning
- Arbo en Milieu
- Administratieve en Secretariële Ondersteuning
- Facilitaire Zaken
- ICT
- Management en Bestuursondersteuning
- Personeel en Organisatie
- PR, Voorlichting en Communicatie
- Studentgerichte Ondersteuning
- Anders, namelijk...

Welk percentage van uw functie wordt besteed aan de volgende categorieën? Verdeel 100% over de volgende categorieën.

- Onderzoek
- Onderwijs
- Representatie
- Training/opleiding voor uzelf
- Veldwerk/laboratoriumwerk
- Administratieve taken/diensten
- Technische en facilitaire diensten
- Anders, namelijk...

Hoe lang bent u al in dienst van de WUR?

- Minder dan vijf jaar
- Tussen de vijf en negen jaar
- Tien jaar of meer

Wat voor dienstverband heeft u?

- Tijdelijk
- Vast

Hoeveel uur werkt u binnen de WUR? Geef uw aanstelling weer in fulltime-equivalent (FTE).

Heeft u nog opmerkingen over deze vragenlijst?

Heel erg bedankt voor uw medewerking! Klik alstublieft op 'volgende' om uw antwoorden op te slaan.

8.5 Appendix V: Subscales and associated questions

Sub-scales	Questions
Job autonomy	42. Ik heb de mogelijkheid zelf te beslissen hoe ik mijn werk doe. 44. Ik kan een eigen werkwijze kiezen. 50. Er is binnen mijn werk ruimte om eigen initiatief te nemen. 53. Ik bepaal zelf de volgorde van mijn werkzaamheden.
Task completion ambiguity	29. Ik bepaal wanneer mijn werkzaamheden klaar zijn. 25. Ik weet wanneer mijn taak af is. 32. Het is aan mij om vast te stellen of een taak voltooid is.
Empowering leadership	71. Mijn directe leidinggevende stimuleert mij om deel te nemen in belangrijke besluiten. 72. Mijn directe leidinggevende stimuleert mij om te spreken wanneer ik een andere mening heb. 70. Mijn directe leidinggevende draagt bij aan het ontwikkelen van mijn vaardigheden.
Recognition	64. Ik voel me in mijn werk erkend en gewaardeerd door mijn directe leidinggevende. 67. Ik word gerespecteerd door de leiding van mijn afdeling. 62. Ik word eerlijk behandeld door de leiding van mijn afdeling.
Social support from supervisors	75. Mijn directe leidinggevende is bereid te luisteren naar mijn problemen op het werk. 78. Ik krijg hulp en ondersteuning van mijn directe leidinggevende. 74. Mijn directe leidinggevende heeft het met mij over hoe goed ik het werk uitvoer.
Competency demands	27. Er wordt van mij verwacht dat ik continu mijn competenties ontwikkel. 33. Door de aard van mijn werk moet ik me continu ontwikkelen en daarnaast op nieuwe manieren denken. 36. Ik voel druk om continu nieuwe dingen te leren voor het uitvoeren van mijn taken.*
Cohesion in work teams	21. Binnen onze afdeling staan we samen in het bereiken van onze doelen. 23. Ik ben blij met de mate van inzet van mijn collega's binnen mijn afdeling. 7. De afdeling geeft mij kansen om mijn persoonlijke prestaties te verbeteren.
Social community at work	9. Er is een goede sfeer tussen mij en mijn collega's. 10. Er is een goede samenwerking tussen collega's op het werk. 1. Ik voel mij onderdeel van de groep op mijn afdeling.
Inclusiveness and social responsibility	19. Mannen en vrouwen worden gelijk behandeld op mijn werk. 20. Op mijn werk is er plaats voor werknemers met een verschillende etnische achtergrond en godsdienst. 22. Op mijn afdeling is er plaats voor oudere werknemers. 24. Op mijn afdeling is er plaats voor werknemers met uiteenlopende aandoeningen en handicaps.
Social climate	12. De omgangscultuur binnen mijn afdeling is competitief. 16. De omgangscultuur binnen mijn afdeling is bemoedigend en ondersteunend. 8. Wantrouwen en achterdocht bepalen de omgangscultuur op mijn afdeling.* 18. De omgangscultuur binnen mijn afdeling is relaxed en comfortabel. 4. De omgangscultuur binnen mijn afdeling is regelgericht en stijf.
Goal clarity	38. Op het werk wordt duidelijk tot uitdrukking gebracht wat er van mij verwacht wordt. 46. Ik begrijp welke taken tot mijn werk behoren. 41. Ik heb het gevoel dat de doelstellingen van mijn werk diffuus en onduidelijk zijn.*

Innovation	<p>39. Om aan de behoefte van de medewerkers te voldoen is mijn afdeling continu in ontwikkeling.</p> <p>47. Binnen mijn afdeling luistert niemand naar nieuwe suggesties of ideeën.*</p> <p>49. Mijn afdeling is flexibel en past zich aan nieuwe ideeën aan.</p> <p>43. Mijn afdeling is 'open-minded' en past zich aan veranderingen aan.</p> <p>52. Mijn afdeling streeft eerder naar statusbehoud dan naar verandering.*</p>
Resources research and teaching	<p>54. Ik krijg de benodigde administratieve ondersteuning voor de voorbereiding en de uitvoering van onderwijs en toetsen.</p> <p>55. Ik krijg de benodigde administratieve ondersteuning voor mijn onderzoek.</p> <p>56. Ik krijg de benodigde technische ondersteuning voor mijn onderzoek.</p> <p>57. Ik krijg de benodigde steun voor het internationaliseren van mijn onderzoek.</p>
Fairness of the supervisor	<p>76. Mijn directe leidinggevende verdeelt de werktaken eerlijk.</p> <p>73. Mijn directe leidinggevende behandelt de werknemers eerlijk.</p> <p>77. Mijn directe leidinggevende behandelt de werknemers onpartijdig.</p>
Trust regarding management	<p>68. De leiding van mijn afdeling vertrouwt erop dat de werknemers hun werk goed doen.</p> <p>59. Ik kan de informatie afkomstig van mijn leiding vertrouwen.</p> <p>61. De leiding van mijn afdeling houdt belangrijke informatie voor de medewerkers achter.*</p> <p>65. De medewerkers binnen mijn afdeling kunnen hun opvattingen en gevoelens duidelijk maken.</p>
Trust in unit management – own unit	<p>60. De leiding van mijn afdeling behandelt mij op een consistente en voorspelbare manier.</p> <p>58. De leiding van mijn afdeling is altijd betrouwbaar.</p> <p>63. De leiding van mijn afdeling is open en eerlijk tegen mij.</p> <p>69. Ik ben ervan overtuigd dat ik de leiding van mijn afdeling kan vertrouwen.</p> <p>66. Ik heb volledig vertrouwen in de leiding van mijn afdeling.</p>
Trust in next administrative level	<p>79. Ik kan verwachten van de leiding van mijn afdeling, dat zij mij op een consistente en voorspelbare manier behandelen.</p> <p>80. De leiding van mijn afdeling is altijd betrouwbaar.</p> <p>81. De leiding van mijn afdeling is open en eerlijk tegen mij.</p> <p>82. Ik ben ervan overtuigd dat ik de leiding van mijn afdeling kan vertrouwen.</p> <p>83. Ik vertrouw ik leiding van mijn afdeling helemaal.</p>
Illegitimate tasks	<p>40. Ik moet werk uitvoeren dat volgens mij eigenlijk door iemand anders zou moeten worden gedaan.*</p> <p>51. Ik moet werk uitvoeren dat meer van mij eist dan redelijk is.*</p> <p>45. Het werk dat ik moet uitvoeren brengt me in lastige posities.*</p> <p>48. Ik moet taken uitvoeren waarvan ik het oneerlijk vind dat ik degene ben die deze uit moet voeren.*</p>
Dysfunctional support	<p>11. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar zij doen dat wel met tegenzin.*</p> <p>15. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar combineren dat met verwijten.*</p> <p>6. Soms helpen collega's mij in moeilijke situaties, maar verwachten wel eeuwige dankbaarheid.*</p> <p>2. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar zij helpen mij niet in situaties waar ik zelf verantwoordelijk voor ben.*</p> <p>13. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar zij doen dit wel op een verwijtende toon of met een verwijtende blik.*</p>

	5. Soms helpen collega's binnen mijn afdeling mij in moeilijke situaties, maar geven wel aan dat ik eigenlijk mijn eigen problemen moet oplossen.*
Interpersonal conflicts	3. Mijn werk wordt belemmerd door de machtsstrijd en territoriaal denken (hokjes denken) binnen mijn afdeling.* 14. Intriges tasten de sfeer in mijn afdeling aan.* 17. Prestigestrijd en conflicten leiden tot spanning binnen mijn afdeling.*
Role conflicts	35. Ik doe mijn werk op een andere manier dan ik zelf zou willen.* 26. Ik krijg vaak taken toebedeeld waarbij de randvoorwaarden ontbreken om deze te kunnen uitvoeren.* 30. Ik ontvang regelmatig onverenigbare verzoeken van twee of meer mensen.* 31. Mijn werk bevat taken die in conflict zijn met mijn persoonlijke waarden.*
Role overload	37. Op het werk heb ik genoeg tijd om te doen wat er van mij wordt verwacht. 28. Het gebeurt regelmatig dat ik onder hoge tijdsdruk moet werken.* 34. Ik heb regelmatig veel werk te doen.*
Meaning of work	89. Mijn werk is zinvol. 99. Ik heb het gevoel dat het werk wat ik doe belangrijk is. 86. Ik voel mij gemotiveerd en betrokken bij mijn werk.
Utrecht Work Engagement Scale (UWES)	
Engagement, Vigour	110. Op mijn werk bruis ik van de energie. 111. Als ik werk voel ik me fit en sterk. 112. Als ik 's morgens opsta heb ik zin om naar het werk te gaan.
Engagement, Dedication	113. Ik ben enthousiast over mijn baan. 114. Mijn werk inspireert mij. 115. Ik ben trots op het werk wat ik doe.
Engagement, Absorption	116. Wanneer ik heel intensief aan het werk ben, voel ik mij gelukkig. 117. Ik ga helemaal op in mijn werk. 118. Als ik werk vergeet ik alle andere dingen om mij heen.
Work to family facilitation	87. Ik kan thuis beter omgaan met praktische en persoonlijke problemen door wat ik doe op het werk. 88. Ik ben thuis een interessanter persoon door de dingen die ik op het werk doe. 96. Ik ben een betere partner als ik thuiskom van een plezierige werkdag. 94. De vaardigheden die ik gebruik op het werk zijn bruikbaar voor dingen die ik thuis moet doen.
Work to family conflict	90. Mijn werk maakt het moeilijk om aan mijn verplichtingen thuis te voldoen.* 92. Ik ben thuis prikkelbaar, omdat mijn werk stressvol is.* 98. Het komt vaak voor dat ik na een werkdag door vermoeidheid niet meer toekom aan bezigheden die thuis aandacht behoeven.* 85. Wanneer ik thuis ben, leiden zorgen en problemen op het werk mij af.*
Organizational commitment	84. Ik geniet ervan om anderen te vertellen over mijn werk(plek). 91. Ik zou een goede kennis aanraden te solliciteren naar een functie bij mij op het werk. 97. Ik heb het gevoel dat mijn werk(omgeving) erg belangrijk voor mij is.

Dutch Workaholism Scale (DUWAS)	
Working excessively	<p>100. Ik heb haast en werk tegen deadlines aan.*</p> <p>101. Ik werk door terwijl mijn collega's al naar huis zijn.*</p> <p>103. Ik ben druk en heb veel iijzers tegelijk in het vuur.*</p> <p>105. Ik besteed meer tijd aan mijn werk dan aan mijn vrienden, hobby's, of andere vrijetijdsactiviteiten.*</p> <p>107. Ik ben met meerdere dingen tegelijk bezig. Ik schrijf bijvoorbeeld een memo terwijl ik eet en met iemand telefoneer.*</p>
Working compulsively	<p>102. Ik vind het belangrijk om hard te werken, zelfs als ik eigenlijk geen plezier heb ik mijn bezigheden.*</p> <p>104. Ik heb het gevoel dat iets in mijzelf me dwingt hard te werken.*</p> <p>106. Ik voel me verplicht hard te werken, ook al vind ik dat niet altijd prettig.*</p> <p>108. Ik voel me schuldig als ik vrij neem van mijn werk.*</p> <p>109. Ik vind het moeilijk om me te ontspannen als ik niet aan het werk ben.*</p>
Work-related sense of coherence – WORK-SOC	<p>119. Beheersbaar / Onbeheersbaar</p> <p>120. Niet zinvol / Zinvol*</p> <p>121. Gestructureerd / Ongestructureerd</p> <p>122. Makkelijk te beïnvloeden / Moeilijk te beïnvloeden</p> <p>123. Belangrijk / Onbelangrijk</p> <p>124. Duidelijk / Onduidelijk</p> <p>125. Controleerbaar / Oncontroleerbaar</p> <p>126. Ondankbaar / Dankbaar*</p> <p>127. Voorspelbaar / Onvoorspelbaar</p>
Influence on health	<p>95. Mijn werk heeft een negatieve invloed op mijn gezondheid.*</p> <p>93. Mijn werk heeft een positieve invloed op mijn gezondheid.</p>

*This is a reversed item.

8.6 Appendix VI: Message on the Intranet of Plant Sciences Group

Dutch:



VITAL@WORK – alweer een nieuwe term...! Nee – dat niet, maar wel een belangrijk thema voor ieder van ons binnen en buiten het werk bij Wageningen University & Research/PLANT. De steeds sneller veranderende wereld doet een beroep op onze veerkracht en vitaliteit. Binnen PSG willen we aan dit thema lokaal wat aandacht aan geven, zodat we ons lijf en onze geest zo energiek en vitaal mogelijk kunnen houden. Dit zullen we doen door met enige regelmaat o.a. wat activiteiten te organiseren, maar ook om met elkaar binnen PLANT hier invulling aan te geven. Volg de berichtgeving op intranet hierover.

Een eerste “VITAL” activiteit is een enquête (NL en ENG) – uitgevoerd door Maaïke Cornelissen, studente leerstoelgroep Health & Society, Wageningen University. Zij doet dit onderzoek in het kader van haar thesis bij Dr. ir. Lenneke Vaandrager. Deze enquête is een verdere verdieping op het MedewerkersTevredenheidsOnderzoek (MTO).

Kan ik zelf bepalen hoe ik mijn werk doe? Ervaar ik een goede sfeer tussen mij en mijn collega's? Krijg ik erkenning en waardering voor mijn werk? Luistert mijn leidinggevende naar mij? Heb ik naast het werk genoeg tijd voor familie en vrienden? Is mijn leidinggevende eerlijk tegen mij?

Met antwoorden op dit soort vragen, krijgen we meer inzicht in de werkomgeving en werkbeleving bij PLANT. Doe dus mee aan de pilot gebaseerd op een Noorse vragenlijst KIWEST (Knowledge-Intensive Work Environment Survey Target) en vul de vragenlijst in. Het vraagt zo'n 10-15 minuten van je tijd en het is anoniem en niet herleidbaar naar individuele personen. Klik op de volgende link voor toegang tot de vragenlijst: https://wur.az1.qualtrics.com/SE/?SID=SV_8wyw4TxzT0dwKij

Het resultaat voor jou als medewerker is inzicht in aspecten en signalen die van belang zijn in de werkbeleving en de herkenning hiervan. Voor PLANT is de opbrengst dat signalen inzichtelijk worden gemaakt, wat bijdraagt om de juiste keuze te maken in welke activiteiten bijdragen aan VITAL@WORK. De opbrengst voor de leerstoelgroep Health & Society is gevalideerde vragenlijst waarmee nader onderzoek kan worden verricht. De terugkoppeling is via een rapportage zichtbaar op intranet. Op basis van deze rapportage zullen we acties formuleren voor verbeteringen en je hierover informeren.

Alvast DANK voor je medewerking!

Maaïke Cornelissen en Dorien Wissink

English:



VITAL@WORK – a new term again...? No - but it is an important theme for every one of us working at the Wageningen University & Research. An increasing changing world affects our resilience and vitality. Within PLANT we want to devote some attention to the issue, because it is important that we keep our body and mind energetic and viable! We will do this by organizing regular activities, but also in other ways. Make sure you follow the messages on the intranet.

One first step in the VITAL@WORK project is a questionnaire – conducted by Maaïke Cornelissen, a student from the chair group Health & Society at Wageningen University. For her MSc-thesis she conducts research on the issue of sustainable employability, under supervision of Dr. ir. Lenneke Vaandrager.

Do I have autonomy in my work? Do I experience good relationships between me and my colleagues? Is my immediate superior honest with me? Does my immediate superior listen to me? Do I feel committed to the organization? Do I get recognition for my work? Do I have enough time left for family and friends?

By answering these kind of questions we get insight into the work environment and work experience at PLANT. So, please participate in the pilot study by completing the KIWEST questionnaire. KIWEST stands for Knowledge-Intensive Work Environment Survey Target and has been developed in Norway. Completing the questionnaire takes about 10-15 minutes and answers are anonymous.

As an employee you get insight in the aspects and signals that characterize the work environment and work experience at PLANT. On the basis of the results, the HRM department can decide which activities are useful for the VITAL@WORK project and the MSc student can say something about the validation of the KIWEST in the Netherlands.

The results will be presented to you through the intranet. On the basis of the results we will formulate actions for improvement and inform you about this.

Thank you in advance for your cooperation!

Hereby the link to the questionnaire: https://wur.az1.qualtrics.com/SE/?SID=SV_8wyw4TxzT0dwKjj

Maaïke Cornelissen and Dorien Wissink

8.7 Appendix VII: Flyer KIWEST



vital@work

PLANTWETENSCHAPPEN

Beste medewerker van PSG,

Kan ik zelf bepalen hoe ik mijn werk doe?
Ervaar ik een goede sfeer tussen mij en mijn collega's?
Krijg ik erkenning en waardering voor mijn werk?

Met antwoorden op dit soort vragen krijgen we meer inzicht in de werkomgeving en werkbeleving bij PLANT.

Door hierop in te spelen als organisatie kunnen we uw duurzame inzetbaarheid verhogen.

Doe daarom mee met het onderzoek!

U kunt de vragenlijst invullen via het intranet of via de volgende link: <http://bit.ly/2gGyRX>

Alvast dank!

8.8 Appendix VIII: Report results PSG

The introduction, background information and appendices are left out.

Resultaten

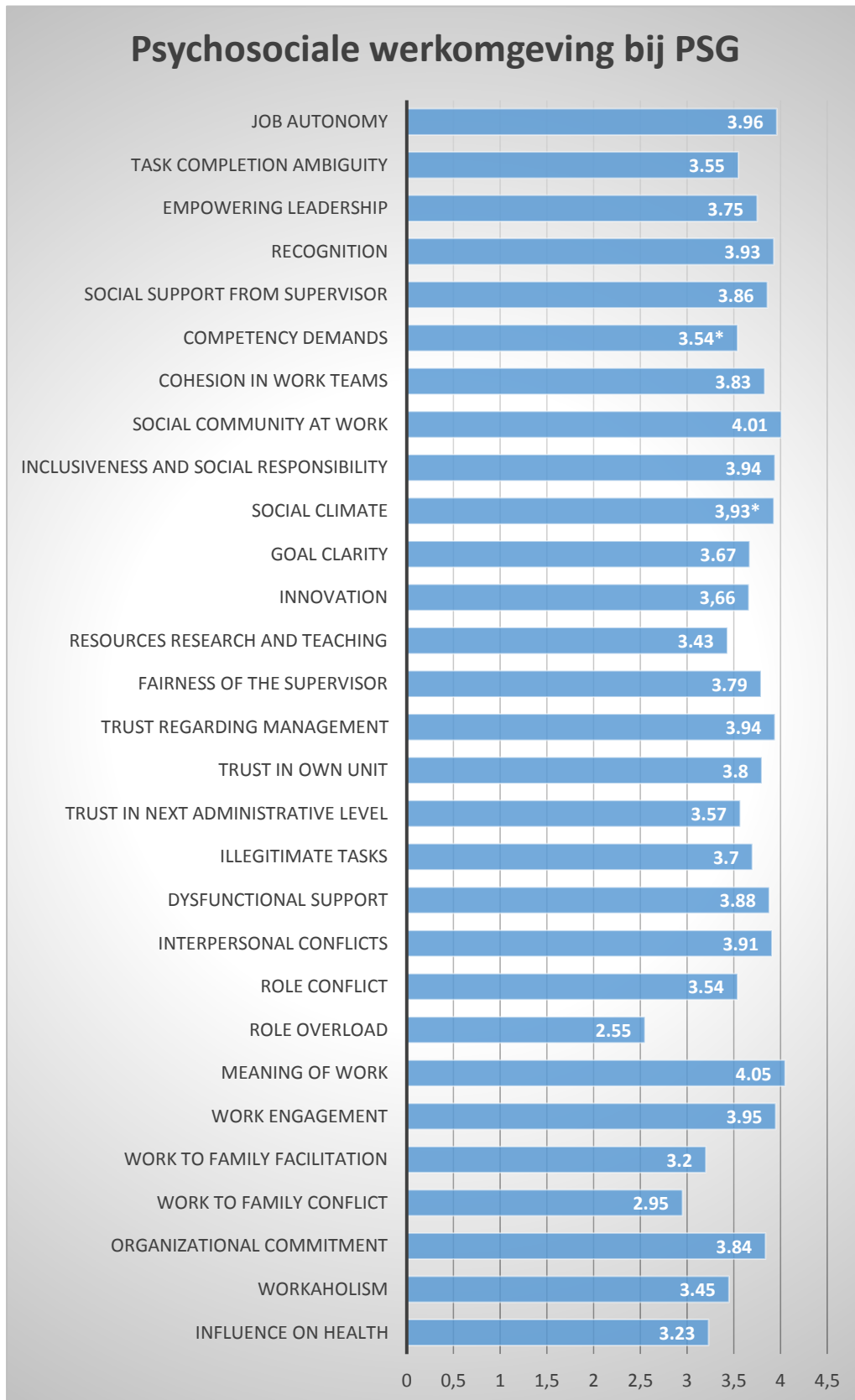
Eigenschappen van de respondenten

De KIWEST vragenlijst was drie weken beschikbaar op het Intranet van Plantwetenschappen, van 14 november tot en met 5 december 2016. In deze periode vulden 138 werknemers van PSG de vragenlijst in, 112 Nederlandstalige werknemers en 26 niet-Nederlandstalige werknemers. Het responspercentage van PSG ligt hiermee op 13,8% (138 van de 1000 werknemers) en het responsepercentage van de afdelingen waar de KIWEST actief gepromoot is ligt ongeveer op 62,7% (138 van de 220 werknemers).

Van de 138 respondenten was 58,7% man ($n = 81$) en 41,3% vrouw ($n = 57$). De gemiddelde leeftijd van de respondenten was 46,2 jaar ($SD = 12,6$ jaar, range = 24-66 jaar). Vijf respondenten vulden hun leeftijd niet in. De meeste van de respondenten, 58% ($n = 80$) werkten al 10 jaar of langer voor de WUR, gevolgd door 35,5% ($n = 49$) die minder dan vijf jaar voor de WUR werken en 6,5% ($n = 9$) van de respondenten werkten tussen de vijf en negen jaar voor de WUR. 50,7% van de respondenten ($n = 70$) werkten voor Wageningen University en 49,3% voor DLO ($n = 68$). Van de respondenten had 68,1% ($n = 94$) een vast contract en 31,9% ($n = 44$) een tijdelijk contract. Ten slotte werkten de meeste van de respondenten in het onderwijs en onderzoek, 65,9% ($n = 91$), gevolgd door 15,2% ($n = 21$) in onderwijs- en onderzoeksondersteuning, 5,1% ($n = 7$) in administratieve en secretariële ondersteuning en nog eens 5,1% ($n = 7$) in personeel en organisatie, 3,6% ($n = 5$) in management- en bestuursondersteuning, 1,4% ($n = 2$) in facilitaire dienstverlening en 3,6% ($n = 5$) van de respondenten had een ander soort baan of een combinatie van banen.

Uitkomsten onderzoek

In Figuur 1 staan de resultaten van de 138 werknemers van PSG. De gemiddelde score van elke aspect is weergegeven op een schaal van 1 tot 5. Een hoge score geeft aan dat er een goed psychosociaal klimaat is.



Figuur 1. Psychosociale werkomgeving bij PSG: een overzicht van de gemiddelde score van de werknemers per aspect.

* = Op basis van aanbevelingen uit de scriptie is deze score opnieuw berekend. De nieuwe score wordt hier weergegeven.

In Tabel 1 zijn de gemiddelde scores van de werknemers van hoog naar laag onder elkaar gezet om een beter overzicht te geven op welke aspecten werknemers relatief hoog scoren en op welke aspecten ze relatief laag scoren.

Tabel 1

Resultaten van PSG: de gemiddelde scores van de aspecten van hoog naar laag (n = 138)

Subscale	Score
Meaning of work	4.05
Social community at work	4.01
Job autonomy	3.96
Work engagement	3.95
Inclusiveness and social responsibility, trust regarding management	3.94
Social climate, recognition	3.93
Interpersonal conflicts	3.91
Dysfunctional support	3.88
Social support from supervisor	3.86
Organizational commitment	3.84
Cohesion in work teams	3.83
Trust in management (own unit)	3.80
Fairness of the supervisor	3.79
Empowering leadership	3.75
Illegitimate tasks	3.70
Goal clarity	3.67
Innovation	3.66
Trust in next administrative level	3.57
Task completion ambiguity	3.55
Competency demands, role conflict	3.54
Competency demands	3.47
Workaholism	3.45
Resources research and teaching	3.43
Influence on health	3.23
Work family facilitation	3.20
Work to family conflict	2.95
Role overload	2.55

Verder is er onderzocht of er tussen werknemers van Wageningen University en DLO significante verschillen waren tussen de gemiddelde scores op de aspecten, maar dit was niet het geval. Dit betekent dat de werknemers van Wageningen University en DLO ongeveer gelijk scoren op alle aspecten en de psychosociale werkomgeving ongeveer hetzelfde ervaren. Er waren ook geen significante verschillen op alle aspecten tussen mannen en vrouwen.

Tussen niet-Nederlandse en Nederlandse respondenten werd wel een significant verschil gevonden voor het aspect 'empowering leadership' ($F(1,127) = 5.892, p = 0.017$). Niet-Nederlandse respondenten ($n = 25$) ervaren significant meer 'empowering leadership' dan Nederlandse respondenten ($n = 104$). Ook ervaren werknemers met een tijdelijk contract ($n = 43$) significant meer 'empowering leadership' ($F(1,127) = 14.297, p = 0.000$) dan werknemers met een vast contract ($n = 86$). Dit geldt ook voor 'social support from supervisor' ($F(1,130) = 7.076, p = 0.000$). Werknemers met een tijdelijk contract ($n = 41$) ervaren significant meer sociale support van de leidinggevende dan werknemers met een vast contract ($n = 91$). Ook werd dit resultaat gevonden voor het aspect 'resources research and teaching' ($F(1,50) = 4.447, p = 0.040$), wat betekent dat werknemers met een tijdelijk contract ($n = 18$) significant meer ondersteuning wat betreft onderwijs en onderzoek ervaren dan werknemers met een vast contract ($n = 34$).

Als laatste is er nog gekeken naar de relatie tussen verschillende aspecten en leeftijd. Er is één significante relatie gevonden die het vermelden waard is. Het blijkt dat er een zwakke negatieve correlatie is tussen leeftijd en 'work engagement' ($r = -0.326, n = 133, p = 0.000$). Dit betekent dat een

lagere leeftijd zwak samenhangt met een hogere mate van 'work engagement'. Dit geeft aan dat jongere werknemers net iets meer betrokken zijn bij hun werk dan oudere werknemers.

Vervolgstappen

De vervolgstappen zoals hier beschreven zijn overgenomen van de officiële KIWEST handleiding.

De resultaten van de KIWEST kunnen gepresenteerd worden in plenaire sessies in de verschillende groepen die mee hebben gedaan met de KIWEST of in een plenaire sessie voor heel PSG. Tijdens die plenaire sessies is het belangrijk om de aanwezigen actief bij het verhaal te betrekken, door bijvoorbeeld te vragen of de resultaten in hun lijn der verwachting liggen of om ze te vragen mee te denken met eventuele acties die ontwikkeld kunnen worden om de psychosociale werkomgeving te verbeteren. Het nu is namelijk zaak om de resultaten te vertalen naar concrete acties. Tijdens de plenaire sessie kunnen de werknemers opgedeeld worden in groepjes om hierover na te denken en het is aan te raden ze de acties die ze bedenken op te laten schrijven op een flip-chart. Uiteindelijk is het de taak voor de managers om de acties die het meeste genoemd worden en die haalbaar zijn om uit te voeren op te nemen in een actieplan. In dit actieplan komen verschillende zaken te staan: de concrete actie, wat er nodig is om de acties uit te voeren, wie erbij betrokken zijn, wie er verantwoordelijk is en een deadline wanneer de acties voltooid moeten zijn. Een aantal voorbeelden van acties die ontwikkeld en geïmplementeerd zijn: het verbeteren van de frequentie, structuur en inhoud van bijeenkomsten, het ontwikkelen en verbeteren van routines, een systematiek ontwikkelen om beter met competentieontwikkeling om te gaan en het op maat maken van sociale evenementen en plekken op het werk om te socializen met collega's. Als laatste is het belangrijk om de acties te evalueren. Na een bepaalde tijd kan er een vragenlijst uitgestuurd worden om te kijken of de acties geïmplementeerd zijn zoals bedacht en wat het effect ervan is.

8.9 Appendix IX: Pattern matrix

Pattern Matrix^a

	#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Jobaut	42							0.38										0.60			0.34					0.33			
	44																	0.96							0.34				
	50									0.31							0.34	0.64											
	53							0.68																					-0.31
Task	25										0.32																		0.33
	29							0.74																					
	32							0.88																					
Empl	70	0.77																											
	71	0.59																											0.37
	72	0.77																											
Ssup	74	0.66																									0.50		
	75	0.63																											
	78	0.86																											
Recog	62	0.73																											
	64	0.99																											
	67	0.75																											
Cohc	7																												-0.53
	21												0.53						0.34										
	23																			0.30									
Sco	1																												
	9												0.50																
	10												0.83												-0.32				
Inclusiv	19																				0.45								
	20																0.80								0.32				
	22																0.73	0.41											
	24																0.44	0.39							0.85				
Scimate	4				-0.31																		-0.30						
	12												-0.44																
	16	0.41																											
	18													0.69															
	8				0.37																								
Comp	27	0.31																											-0.31
	33																												
	36						0.31						0.38																
Goal	38											0.31															0.41		
	46											0.39									0.99								
	41											0.84																	

Master Thesis Maaïke Cornelissen

	#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Innovation	39																												
	43																		0.49										
	49																		0.54										
	47															0.37			0.90										
Rrestea	54								0.80																				
	55								1.01																				
	56								0.59																				
	57								0.55																			0.79	
Fair	73	0.84																											
	76	0.45																											
	77	0.74																											
Trustm	59	0.60																											
	61												0.94			-0.32		0.30											
	65	0.39																											0.35
Trustunit	68	0.32																					0.81						
	58	0.63											0.43																
	60	0.70																											
	63	0.68																											
	66	0.62																											
Trustnext	69	0.69																											
	79					0.80																							
	80					0.85																							
	81					0.91																							
	82					0.88																							
Illegitask	83					0.90																							
	40															1.25													
	45																		0.48	0.48									
	48															0.94			0.30										
Dysfuncsup	51															0.30													
	2																				1.02								-0.47
	5				0.41																				0.38				
	6				0.53																								0.36
	11				0.94																								
	13				0.84																								
Incon	15				0.93																								0.31
	3												0.43																
	14																												
	17											0.48																	

Master Thesis Maaïke Cornelissen

	#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Roleont	26											0.79																	
	30						0.35						0.35			0.31													
	31																												
	35																												
Roloy	28						0.91																						
	34						0.95																						
	37						0.78																						
Mean	86		0.48																										
	89							0.68																					
	99							0.83																					
Work engagement	110		0.93																										
	111		0.95													-0.35													
	112		0.66																										
	113		0.85																										
	114		0.76													0.33													
	115		0.65								0.33																		
	116		0.40												0.39														
	117		0.35												0.85														
	118														0.86														
Wfamfac	87								0.80																				
	88								0.66																				0.32
	94								0.84																				
	96															-0.44						-0.37				0.33			1.00
Wfamco	85			0.66																									
	90																						-0.90						
	92			0.59																									
	98			0.71																									
Com	84										0.32															-0.35			
	91																												
	97																										0.81		0.45

	#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28			
Workaholism	100						0.59																									
	101						0.36									0.35																
	102			0.42																				0.83								
	103						0.51																									
	104	-0.35		0.40														-0.30					0.31									
	105						0.45																									
	106			0.69																					0.34							
	107																															
	108			0.89																												
	109			0.86																												
IH	93			0.51																												
	95			0.59																												

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 46 iterations.

Only values similar or above 0.3 are displayed.

8.10 Appendix X: Rating scheme occupational health psychology experts

Rate the following subscales on relevance (1-4) for inclusion into the questionnaire. The aim is to reduce the number of subscales, but that it remains an adequate measure for the psychosocial work environment. The focus is on content validity and discriminant validity.

- 1 = can be removed
- 2 = might be removed
- 3 = cannot be removed
- 4 = definitely cannot be removed

A description of the subscales is provided in a separate document.

Furthermore, every expert is asked to elaborate on why he or she thinks the subscale should be included or could be excluded from the KIWEST and if he or she has any remarks on the items.

Resources related to individual task completion

Subscale	Rating expert
Job autonomy 42. I have a sufficient degree of influence in my work. 44. I can make my own decisions on how to organize my work. 50. There is room for me to take my own initiatives at work. 53. I manage my work situation in the direction I want.	1 2 3 4
Task completion ambiguity 29. I determine when my work assignments are completed. 25. I know when a task is completed. 32. It is up to me to assess when I have completed a work assignment.	1 2 3 4
Empowering leadership 71. My immediate superior encourages me to participate in important decisions. 72. My immediate superior encourages me to speak up when I have a different opinion. 70. My immediate superior contributes to the development of my skills.	1 2 3 4
Recognition 64. My work is recognized and appreciated by my unit management. 67. I am respected by my unit management. 62. I am treated fairly by my unit management.	1 2 3 4
Social support from supervisors 75. My immediate superior listens to me when I have problems at work. 78. My immediate superior gives me the help and support I need from him/her. 74. My immediate superior listens to me when I have problems at work.	1 2 3 4
Competency demands 27. I am expected to continually develop my competence. 33. The nature of my work means I continually have to develop and think in new ways. 36. I feel pressure to continually learn new things in order to manage my work tasks.*	1 2 3 4

Resources related to colleague fellowship

Subscale	Rating expert
Cohesion in work teams 21. In our unit, we stand together in trying to reach our performance goals. 23. I'm happy with my unit's level of task commitment. 7. This unit gives me ample opportunities to improve my personal performance.	1 2 3 4
Social community at work 9. There is a good atmosphere between me and my colleagues. 10. There is a good sense of fellowship between the colleagues at my unit. 1. I feel that I am part of a community at my unit.	1 2 3 4

Inclusiveness and social responsibility 19. Men and women are treated as equals in my unit. 20. In my unit, there is room for employees of a different ethnic background or religion. 22. In my unit, there is room for older employees. 24. In my unit, there is room for employees with various illnesses or disabilities.	1 2 3 4
Social climate 12. The climate in my unit is competitive. 16. The climate in my unit is encouraging and supportive. 8. The climate in my unit is distrustful and suspicious.* 18. The climate in my unit is relaxed and comfortable. 4. The climate in my unit is rigid and rule-based.	1 2 3 4

Resources related to organizational unit

Subscale	Rating expert
Goal clarity 38. What is expected of me is clearly expressed. 46. I have a clear understanding of which tasks constitute my job. 41. I feel that the objectives of my job are diffuse and unclear.*	1 2 3 4
Innovation 39. My unit is constantly evolving to meet the employees' needs. 47. In my unit, no one listens to new suggestions and ideas.* 49. My unit is flexible and continually adapts to new ideas. 43. My unit is open-minded and adapts to changes. 52. My unit strives to retain status quo rather than to change.*	1 2 3 4
Resources research and teaching 54. I get the administrative support I need for planning and implementation of teaching and examinations. 55. I get the administrative support I need for my research. 56. I get the technical support I need for my research. 57. I get the support I need for internationalization of my research.	1 2 3 4
Fairness of the supervisor 76. My immediate superior distributes work assignments fairly. 73. My immediate superior treats the employees fairly. 77. My immediate superior treats the employees impartially.	1 2 3 4
Trust regarding management 68. My unit management trusts the employees to do their work well. 59. I can trust information from my unit management. 61. My unit management withholds important information from the employees.* 65. It is possible for the employees at my unit to express their views.	1 2 3 4
Trust in unit management – own unit 60. I can expect my unit management to treat me in a consistent and predictable way. 58. My unit management is always reliable. 63. My unit management is open and honest with me. 69. I am confident that I can trust my unit management. 66. I have complete confidence in my unit management.	1 2 3 4
Trust in next administrative level 79. I can expect the management of the next administrative level to treat me in a consistent and predictable way. 80. The management of the next administrative level is always reliable. 81. The management of the next administrative level is open and honest with me. 82. I am confident that I can trust the management of the next administrative level. 83. I have complete confidence in the management of the next administrative level.	1 2 3 4

Demands related to individual task completion

Subscale	Rating expert
Illegitimate tasks 40. I must carry out work which I think should be done by someone else.* 51. I must carry out tasks that I think are unfair that I should do.* 45. I must carry out work that put me into awkward positions.* 48. I must carry out tasks that I think are unfair that I should do.*	1 2 3 4
Dysfunctional support 11. People in my unit sometimes help me in a difficult situation, but support me reluctantly.* 15. People in my unit sometimes help me in a difficult situation, but combine this with reproaches.* 6. People in my unit sometimes help me in a difficult situation, but expect everlasting gratitude.* 2. People in my unit sometimes help me in a difficult situation, but do not support in way that is matter-of-factly.* 13. People in my unit sometimes help me in a difficult situation, but do so with a reproachful tone or gaze.* 5. People in my unit sometimes help me in a difficult situation, but indicate that I should have dealt with the problem myself.*	1 2 3 4
Interpersonal conflicts 3. My work is hampered by power struggles and territorial thinking in my unit.* 14. In my unit, intrigues impair the working climate.* 17. In my unit, there is a great deal of tension due to prestige and conflicts.*	1 2 3 4
Role conflicts 35. I have to do things that I feel should be done differently.* 26. I am often given assignments without adequate resources.* 30. I frequently receive incompatible requests from two or more people.* 31. My job involves tasks that are in conflict with my personal values.*	1 2 3 4
Role overload 37. I have enough time to do what is expected from me at work. 28. It happens quite often that I have to work under heavy time pressure.* 34. I frequently have too much to do at work.*	1 2 3 4

Commitment to work

Subscale	Rating expert
Meaning of work 89. My work is meaningful. 99. I feel that the work I do is important. 86. I feel motivated and involved in my work.	1 2 3 4
Utrecht Work Engagement Scale (UWES) <ul style="list-style-type: none"> - Engagement, vigor <ul style="list-style-type: none"> 110. At my work, I feel bursting with energy. 111. At my job, I feel strong and vigorous. 112. When I get up in the morning, I feel like going to work. - Engagement, dedication <ul style="list-style-type: none"> 113. I am enthusiastic about my job. 114. My job inspires me. 115. I am proud of the work that I do. - Engagement, absorption <ul style="list-style-type: none"> 116. I feel happy when I am working intensely. 117. I am immersed in my work. 118. I get carried away when I am working. 	1 2 3 4
Work to family <ul style="list-style-type: none"> - Facilitation <ul style="list-style-type: none"> 87. The things I do at work help me deal with personal and practical issues at home. 	1 2 3 4

<p>88. The things I do at work make me a more interesting person at home.</p> <p>96. Having a good day at work makes me a better companion when I get home.</p> <p>94. The skills I use at work are useful for things I have to do at home.</p> <ul style="list-style-type: none"> - Conflict <p>90. My job reduces the effort I can give to activities at home.*</p> <p>92. Stress at work makes me irritable at home.*</p> <p>98. My job makes me feel too tired to do the things that need attention home.*</p> <p>85. Job worries or problems distract me when I am at home.*</p>	
<p>Organizational commitment</p> <p>84. I am happy to tell others about my workplace.</p> <p>91. I would recommend a close friend to apply for a position at my workplace.</p> <p>97. I feel that my workplace is of great importance to me.</p>	<p>1 2 3 4</p>
<p>Dutch Workaholism Scale (DUWAS)</p> <ul style="list-style-type: none"> - Working excessively <p>100. I seem to be in a hurry and racing against the clock.*</p> <p>101. I find myself continuing to work after my co-workers have called it quits.*</p> <p>103. I stay busy and keep many irons in the fire.*</p> <p>105. I spend more time working than on socializing with friends, on hobbies or on leisure activities.*</p> <p>107. I find myself doing two or three things at one time, such as eating lunch and writing a memo, while talking on the telephone.*</p> <ul style="list-style-type: none"> - Working compulsively <p>102. It is important to me to work hard even when I do not enjoy what I am doing.*</p> <p>104. I feel that there's something inside me that drives me to work hard.*</p> <p>106. I feel obliged to work hard, even when it is not enjoyable.*</p> <p>108. I feel guilty when I take time off work.*</p> <p>109. It is hard for me to relax when I'm not working.*</p>	<p>1 2 3 4</p>
<p>Work-related sense of coherence – WORK-SOC</p> <p>119. Manageable / unmanageable</p> <p>120. Meaningless / meaningful*</p> <p>121. Structured / unstructured</p> <p>122. Easy to influence / impossible to influence</p> <p>123. Insignificant / significant</p> <p>124. Clear / unclear</p> <p>125. Controllable / uncontrollable</p> <p>126. Unrewarding / rewarding*</p> <p>127. Predictable / unpredictable</p>	<p>1 2 3 4</p>
<p>Influence on health</p> <p>95. My work has a negative influence on my health.*</p> <p>93. My work has a positive influence on my health.</p>	<p>1 2 3 4</p>

*= reversed scored.

8.11 Appendix XI: Remarks on the items for shortening the KIWEST

Shortening the KIWEST by reducing the number of items is a complex task, since most of the experts argued that, for research purposes, at least three items needed to be included in a subscale to be valid. Since a lot of subscales of the KIWEST consist of only three items, there are not a lot of possibilities for removing items. However, there are some subscales with more than three items, which can be shortened according to (two or more) experts.

For example, the subscale **dysfunctional support** consist of six items and three experts argue that items 13 and 15 are very similar. Probably one of those items can be removed without doing any harm to the content. This also holds for the items 43 and 49 from the subscale **innovation**.

Also, two experts have remarks on the subscale **influence on health**. This subscale is different from the other ones, since it only consists of only two items (and does not meet the minimum requirement of three). These two experts argue that the two items measure the same thing and one item is probably enough.

Furthermore, the subscale for measuring **work engagement (the UWES)** can definitely not be shortened according to experts, since the version used in the KIWEST is already the short one.

8.12 Appendix XII: Quotes of the experts

The experts were asked why they thought the subscale could be removed or should be kept. For each subscale the (relevant part of the) answer of the expert is displayed below. The **green color** means the expert thinks the subscale should stay, the **red color** means the expert thinks the subscale could be removed, the **blue color** means the answer of the expert was inconclusive (no rating) and the **purple color** means the expert focused on convergent validity only (and not on discriminant validity and content validity) and the answer was not used for calculating the expert mean of the subscale.

Job autonomy (4)

Expert	Remarks
Expert A (4)	“Job autonomy is one of the key dimensions of job resources.”
Expert B (4)	“Job autonomy appears as a very important job resource in research. You can have a lot of work pressure, but this might be okay as long as you have sufficient autonomy in your work.”
Expert C (4)	“Autonomy is always found to be one of the most essential and predictive job resources.”
Expert D (4)	“A feeling of freedom in your work is very important.”
Expert E (4)	-

Task completion ambiguity (2.1)

Expert	Remarks
Expert A (2.5)	“This subscale is in line with the subscale job autonomy and seems less important to me content-wise.”
Expert B (2)	“I prefer goal clarity over this one.”
Expert C (2)	“It does not look essential to me.”
Expert D (3)	“I think it is important that people know or can determine themselves when a task is completed – they need to be able to set achievable goals for themselves.”
Expert E (1)	“This subscale is overlapping with the subscale job autonomy.”

*Expert A could not choose between rating this subscale as a two or a three. Therefore, the score is a 2.5.

Empowering leadership (3.5)

Expert	Remarks
Expert A (2)	“Empowering leadership is an important job resource, but there are other leadership scales in this questionnaire that are more important to keep, in a university environment, than empowering leadership, like recognition.”
Expert B (4)	“Empowering leadership is an important aspect for university employees, because it can make a difference. It is important that the management or the direct supervisor takes people seriously and keeps participating.”
Expert C (-)	“Either the subscale empowering leadership or social support from supervisors can be picked, two sub dimensions related to the supervisors are not necessary.”
Expert D (4)	“Empowering leadership is really determinative and a prerequisite for performing well at work. Empowering means inspiring your employees, reinforce them and connect them with each other. Its importance can be seen when looking at autonomous teams, they are floating sometimes, because there is no (empowering) leadership.”
Expert E (4)	“Although the subscales empowering leadership, recognition and social support concern the same broad topic (quality of leadership of supervisor/management), it is not possible to just remove one of them.”

Recognition (3.4)

Expert	Remarks
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Expert A (4)	"This subscale is more important to keep than empowering leadership, especially for university employees."
Expert B (2)	"You can wonder whether the subscale empowering leadership or recognition is more important... I prefer empowering leadership."
Expert C (3)	-
Expert D (4)	"This subscale should stay in the KIWEST, because it appears important from research on sustainable employability. Recognition comes at place four, after health, work-life balance and physical demands/work pressure."
Expert E (4)	"Although the subscales empowering leadership, recognition and social support concern the same broad topic (quality of leadership of supervisor/management), it is not possible to just remove one of them."

Social support from supervisors (3.3)

Expert	Remarks
Expert A (4)	"I think this subscale is more important in a university environment than empowering leadership. It is an important topic, similar to job autonomy."
Expert B (4)	"This is an important job resource and slightly different from empowering leadership. It is more informal."
Expert C (3)	"Either the subscale empowering leadership or social support from supervisors can be picked, two sub dimensions related to the supervisors are not necessary."
Expert D (1)	"This subscale is in line with the subscale empowering leadership. Social support can be seen a part of empowering leadership. When there is empowering leadership, there must be social support from the supervisor as well."
Expert E (4)	"Although the subscales empowering leadership, recognition and social support concern the same broad topic (quality of leadership of supervisor/management), it is not possible to just remove one of them."

Competency demands (3)

Expert	Remarks
Expert A (2)	"I tend to see this subscale as less important to include, since everyone at the university scores high on this."
Expert B (3)	"It appears from research that it is important that highly educated employees, such as university employees, are challenged in their work, in order to be sustainable employable."
Expert C (2)	-
Expert D (4)	"The development of skills and competences is really important, especially in a world that is rapidly changing/digitalizing."
Expert E (4)	-

Cohesion in work teams (2.8)

Expert	Remarks
Expert A (2)	"There is a lot of overlap between the subscales cohesion in work teams and social community at work, content-wise. I prefer this subscale, instead of cohesion in work teams, because these items represent the construct better."
Expert B (-)	"Either the subscale cohesion in work teams or social community can be removed, since they show overlap. However, I cannot indicate which one."
Expert C (3)	-
Expert D (2)	"This subscale shows overlap with social community. I think the items of social community represent the construct better, so that subscale should be kept and this one can be removed."
Expert E (4)	-

Social community (3.5)

Expert	Remarks
Expert A (4)	"There is a lot of overlap between the subscales cohesion in work teams and social community at work, content-wise. I prefer this subscale, instead of cohesion in work teams, because these items represent the construct better."
Expert B (-)	"Either the subscale cohesion in work teams or social community can be removed, since they show overlap. However, I cannot indicate which one."
Expert C (2)	"I do not really see if this is a strong predictor of overall well-being".
Expert D (4)	"I think this subscale is stronger than cohesion in work teams. Since they overlap, I think this subscale can be kept and cohesion in work teams can be removed."
Expert E (4)	-

Inclusiveness and social responsibility (3)

Expert	Remarks
Expert A (3)	"I think this subscale is important to include, because it is different than the subscales social community and social climate. It plays at a higher level, on an organizational level rather than on a unit level, but it can show how inclusiveness and social responsibility are being taken care of within the university, which is important."
Expert B (3)	"It is an important subscale from a societal and vitality point of view."
Expert C (1)	"Sounds to me like a scale of a complete different construct."
Expert D (3)	"This is important, because we do not view this as an issue in the Netherlands, but this is a blind spot in many studies."
Expert E (2)	"Bad scale. Attitude towards women does not have anything to do with the attitude towards immigrants."

Social climate (3)

Expert	Remarks
Expert A (3)	"I think this is an important topic".
Expert B (4)	"This is relevant, because for instance a bureaucratic and competitive environment can have an influence on how people feel and how they experience their workplace".
Expert C (2)	"Good sub dimension, bad items. Higher score leads to better climate or competitive climate?"
Expert D (4)	"Basically, this is about organizational culture. This is interesting, because organizational culture can have an influence on whether employees like their workplace or not".
Expert E (1)	"Some questions overlap with the subscales cohesion in work teams and social community."

Goal clarity (3.6)

Expert	Remarks
Expert A (3)	"This subscale seems more important to me than task completion ambiguity. These are in line with one another."
Expert B (3)	"I prefer this subscale over task completion ambiguity."
Expert C (4)	-
Expert D (4)	"It is important that people know why do I work here, what am I doing it for."
Expert E (4)	"This is a much broader scale compared to task completion ambiguity."

Innovation (3)

Expert	Remarks
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Expert A (3)	-
Expert B (3)	“This variable is important, especially when looking at sustainable employability. Flexibility plays a role in this.”
Expert C (3)	-
Expert D (2)	“Innovation is more important for the organization itself than for the individual employees. Developing competences, which also has to do with this subscale, is more important and has a bigger influence on health and well-being.”
Expert E (4)	-

Resources research and teaching (3.8)

Expert	Remarks
Expert A (3)	-
Expert B (4)	“This is a really important resource that is really work-relieving. If there is sufficient support in resource and teaching it is time saving, which academics will find pleasant.”
Expert C (4)	-
Expert D (4)	“When facilitation in work processes is not taken care of, academics will have to devote a lot of time and effort to this, resulting in strain.”
Expert E (4)	-

Fairness of the supervisor (3)

Expert	Remarks
Expert A (4)	-
Expert B (-)	“I cannot give a rating to this subscale, since it is not familiar to me and I have not seen it in research before.”
Expert C (3)	-
Expert D (2)	“This subscale overlaps with empowering leadership. When there is a supervisor that is unfair, this supervisor will not empower his employees either.”
Expert E (1)	“Construct is important, but the items are too much the same.”

Trust regarding management (1.3)

Expert	Remarks
Expert A (1)	“This subscale is very similar to trust in unit management. When comparing the two, I prefer trust in unit management.”
Expert B (2)	“I would remove this subscale and keep the other two, trust in own unit and trust in next administrative level.”
Expert C (-)	“I guess only one or two of these trust dimensions could be picked. To select all is redundant.”
Expert D (1)	“Trust in own unit is most important and therefore I prefer this subscale over the other trust scales.”
Expert E (-)	“Trust regarding management or trust in unit management can be left out. These scales show a lot of overlap. The distinction between department and own unit does not become clear.”

Trust in unit management – own unit (3.3)

Expert	Remarks
Expert A (4)	“I prefer this subscale over trust in next administrative level, since university employees have most to do with the management of their own unit.”
Expert B (3)	“I cannot say if trust in unit management or trust in next administrative level is more important, since there can be different trust levels for different layers of management.”

Expert C (-)	"I guess only one or two of these trust dimensions could be picked. To select all is redundant."
Expert D (3)	"University employees have most to do with this form of management (of their own unit)."
Expert E (-)	"Trust regarding management or trust in unit management can be left out. These scales show a lot of overlap. The distinction between department and own unit does not become clear."

Trust in next administrative level (2)

Expert	Remarks
Expert A (2)	"University employees can have different trust levels for different layers of management. However, for the sake of shortening the KIWEST, I think this subscale is less important to include than trust in unit management."
Expert B (3)	"I cannot say if trust in unit management or trust in next administrative level is more important, since there can be different trust levels for different layers of management."
Expert C (-)	"I guess only one or two of these trust dimensions could be picked. To select all is redundant."
Expert D (2)	"The next administrative level is quite distant and therefore trust in unit management is more important."
Expert E (1)	"The next administrative level is too distant. Some items assume there is personal contact with this level, which not always the case."

Illegitimate tasks (2.6)

Expert	Remarks
Expert A (2)	"This subscale overlaps with the subscale role conflict."
Expert B (2)	"I can imagine it plays a role for some people, but it is not that necessary to include."
Expert C (3)	-
Expert D (2)	"I think illegitimate tasks can be seen as a part of role conflict. When someone has to perform illegitimate tasks, role conflict will be the result."
Expert E (4)	-

Dysfunctional support (2.2)

Expert	Remarks
Expert A (3)	"I think this subscale is interesting and relevant, because it is the opposite of social support."
Expert B (3)	"Social support is an important resource, so I can imagine the opposite can also be of influence for the health and well-being of employees. The negative effect can be big, so it is relevant to examine."
Expert C (2)	-
Expert D (2)	"It is the opposite of social support. When someone has no social support at work, he or she will score high at this subscale. Social support is already measured, so it is not necessary to measure this again, in the form of dysfunctional support. These subscales might not be completely in line, but overlapping enough to say dysfunctional support is redundant."
Expert E (1)	"It does not seem relevant to me."

Interpersonal conflicts (3.6)

Expert	Remarks
Expert A (4)	-
Expert B (4)	"When this plays a role, it can have a large effect on the health and well-being of university employees."

Expert C (2)	-
Expert D (4)	"Interpersonal relations are very important for work motivation."
Expert E (4)	-

Role conflict (3.8)

Expert	Remarks
Expert A (4)	-
Expert B (4)	-
Expert C (3)	-
Expert D (4)	"This one is more important than illegitimate tasks."
Expert E (4)	-

Role overload (4)

Expert	Remarks
Expert A (4)	-
Expert B (4)	"This is often an issue."
Expert C (4)	-
Expert D (4)	-
Expert E (4)	-

Meaning of work (3.4)

Expert	Remarks
Expert A (4)	-
Expert B (4)	"Meaning of work can have a large influence on motivation, engagement and the health and well-being of employees."
Expert C (1)	"In case organizational commitment and engagement are there, this subscale is redundant."
Expert D (4)	"This is where it all starts."
Expert E (4)	-

Utrecht Work Engagement Scale (UWES) (4)

Expert	Remarks
Expert A (4)	-
Expert B (4)	"Well-known scale and used a lot."
Expert C (4)	"This is the strongest employee well-being concept of the 2000s, a must stay."
Expert D (4)	"Nicely complements meaning of work."
Expert E (4)	-

Work to family (facilitation/conflict) (3.4)

Expert	Remarks
Expert A (4)	-
Expert B (3)	"Facilitation and conflict are both important. However, the negative effect of work to family conflict is greater than is positive effect of work to family facilitation."
Expert C (2)	"It does not seem on of the most important components of the KIWEST to me."
Expert D (4)	-
Expert E (4)	-

Organizational commitment (3)

Expert	Remarks
Expert A (4)	-

Expert B (3)	"When you are committed and feeling good, this is an indication that you like your job. However, some items overlap a bit with the subscale meaning of work."
Expert C (3)	"Useful scale."
Expert D (4)	-
Expert E (1)	"Organizational commitment is indirectly measured by the subscale meaning of work and engagement."

Dutch Workaholism Scale (DUWAS) (2.5)

Expert	Remarks
Expert A (4)	-
Expert B (2)	"This is type A behavior, which is not that common anymore these days. The people that show this behavior are working all the time, they do everything at the same time and always keep going. I think at universities this is not so much an issue, this subscale suits profit firms better."
Expert C (1)	Workaholism is a personality trait and has very little room to be improved or influenced through work characteristics. Moreover, the overall percentage of workaholic people is significantly small in the general population."
Expert D (3)	"I think other subscales are more important, but I think it should be kept."
Expert E (4)	-
Expert F (1)	"This subscale seems not so relevant to me, because it almost never happens that people are addicted to their work."

WORK-SOC (1.8)

Expert	Remarks
Expert A (2)	-
Expert B (2)	"I do not think it is clear what you measure with this subscale, because some of the items show overlap with other subscales, such as meaning of work."
Expert C (1)	"I do not understand how this information can be useful."
Expert D (2)	"It is too vague."
Expert E (2)	"This subscale overlaps with all other subscales."

Influence on health (2.6)

Expert	Remarks
Expert A (4)	-
Expert B (3)	"This is often not measured, because you almost always take outcome measures like health, employability etc. So, it is an interesting subscale to include."
Expert C (1)	"It is really hard to determine whether job directly has an influence on health."
Expert D (4)	-
Expert E (1)	"This subscale seems redundant to me, because the engagement subscale is already included."

8.13 Appendix XIII: Calculations discriminant validity analysis

Core calculations:

<p>Job autonomy – Task completion ambiguity</p> <p>AVE job autonomy = $((0.653)^2 + (0.434)^2 + (0.531)^2 + (0.777)^2) / 4 = 0.37511375$ AVE task completion ambiguity = $((0.226)^2 + (0.710)^2 + (0.732)^2) / 3 = 0.36366666$</p> <p>SIC = $(0.690)^2 = 0.4761$</p> <p>AVE job autonomy (0.38) < SIC (0.48) AVE task completion ambiguity (0.36) < SIC (0.48)</p> <p>→ Overlap.</p>
<p>Task completion ambiguity – Goal clarity</p> <p>AVE task completion ambiguity = $((0.226)^2 + (0.710)^2 + (0.732)^2) / 3 = 0.36366666$ AVE goal clarity = $((0.712)^2 + (0.718)^2 + (0.729)^2) / 3 = 0.51796$</p> <p>SIC = $(0.189)^2 = 0.035721$</p> <p>AVE task completion ambiguity (0.36) > SIC (0.04) AVE goal clarity (0.52) > SIC (0.04)</p> <p>→ No overlap.</p>
<p>Trust regarding management – Trust in management (own unit)</p> <p>AVE trust regarding management = $((0.476)^2 + (0.572)^2 + (0.664)^2 + (0.526)^2) / 4 = 0.317833$ AVE trust in management (own unit) = $((0.908)^2 + (0.916)^2 + (0.866)^2 + (0.795)^2 + (0.784)^2) / 5 = 0.7320314$</p> <p>SIC = $(1.059)^2 = 1.121481$</p> <p>AVE trust regarding management (0.32) < SIC (1.12) AVE trust in management (own unit) (0.73) < SIC (1.12)</p> <p>→ Overlap.</p>
<p>Social support from supervisors – Dysfunctional support</p> <p>AVE social support from supervisors = $((0.858)^2 + (0.796)^2 + (0.716)^2) / 3 = 0.627$ AVE dysfunctional support = $((0.417)^2 + (0.539)^2 + (0.231)^2 + (0.867)^2 + (0.878)^2 + (0.776)^2) / 6 = 0.44042$</p> <p>SIC = $(0.384)^2 = 0.147456$</p> <p>AVE social support from supervisors (0.63) > SIC (0.15) AVE dysfunctional support (0.44) > SIC (0.15)</p> <p>→ No overlap.</p>

Additional calculations:

<p>Empowering leadership – Recognition</p> <p>AVE empowering leadership = $((0.781)^2 + (0.803)^2 + (0.797)^2) / 3 = 0.629993$ AVE recognition = $((0.846)^2 + (0.860)^2 + (0.819)^2) / 3 = 0.71$</p> <p>SIC = $(0.752)^2 = 0.565504$</p>
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AVE empowering leadership (0.63) > SIC (0.57)
 AVE recognition (0.71) > SIC (0.57)

→ No overlap.

Empowering leadership – Social support from supervisors

AVE empowering leadership = $((0.781)^2 + (0.803)^2 + (0.797)^2) / 3 = 0.629993$
 AVE social support from supervisors = $((0.858)^2 + (0.796)^2 + (0.716)^2) / 3 = 0.627$

SIC = $(0.917)^2 = 0.840889$

AVE empowering leadership (0.63) < SIC (0.84)
 AVE social support from supervisors (0.63) < SIC (0.84)

→ Overlap.

Recognition – Social support from supervisors

AVE recognition = $((0.846)^2 + (0.860)^2 + (0.819)^2) / 3 = 0.71$
 AVE social support from supervisors = $((0.858)^2 + (0.796)^2 + (0.716)^2) / 3 = 0.627$

SIC = $(0.827)^2 = 0.683929$

AVE recognition (0.71) > SIC (0.68)
 AVE social support from supervisors (0.63) < SIC (0.68)

→ Overlap.

Cohesion in work teams – Social community

AVE cohesion in work teams = $((0.709)^2 + (0.604)^2 + (0.577)^2) / 3 = 0.400142$
 AVE social community = $((0.680)^2 + (0.532)^2 + (0.644)^2) / 3 = 0.38672$

SIC = $(1.025)^2 = 1.050625$

AVE cohesion in work teams (0.40) < SIC (1.05)
 AVE social community (0.39) < SIC (1.05)

→ Overlap.

Illegitimate tasks – Role conflict

AVE illegitimate tasks = $((0.668)^2 + (0.641)^2 + (0.531)^2 + (0.574)^2) / 4 = 0.3671355$
 AVE role conflict = $((0.682)^2 + (0.463)^2 + (0.567)^2 + (0.522)^2) / 4 = 0.268807382$

SIC = $(0.939)^2 = 0.881721$

AVE illegitimate tasks (0.37) < SIC (0.88)
 AVE role conflict (0.27) < SIC (0.88)

→ Overlap.

UWES – Organizational commitment

AVE UWES = $((0.419)^2 + (0.583)^2 + (0.589)^2 + (0.804)^2 + (0.906)^2 + (0.90)^2 + (0.650)^2 + (0.748)^2 + (0.710)^2) / 9 = 0.513969666$
 AVE organizational commitment = $((0.411)^2 + (0.733)^2 + (0.699)^2) / 3 = 0.398270333$

SIC = $(0.631)^2 = 0.398161$

AVE UWES (0.51) > SIC (0.40)
 AVE Organizational commitment (0.40) > SIC (0.40)

→ No overlap.

UWES – Meaning of work

$$\text{AVE UWES} = ((0.419)^2 + (0.583)^2 + (0.589)^2 + (0.804)^2 + (0.906)^2 + (0.90)^2 + (0.650)^2 + (0.748)^2 + (0.710)^2) / 9 = 0.513969666$$

$$\text{AVE meaning of work} = ((0.855)^2 + (0.860)^2 + (0.640)^2) / 3 = 0.62674$$

$$\text{SIC} = (0.691)^2 = 0.477481$$

$$\text{AVE UWES (0.51)} > \text{SIC (0.48)}$$

$$\text{AVE meaning of work (0.63)} > \text{SIC (0.48)}$$

➔ No overlap.

Meaning of work – Organizational Commitment

$$\text{AVE meaning of work} = ((0.855)^2 + (0.860)^2 + (0.640)^2) / 3 = 0.62674$$

$$\text{AVE organizational commitment} = ((0.411)^2 + (0.733)^2 + (0.699)^2) / 3 = 0.398270333$$

$$\text{SIC} = (0.741)^2 = 0.549081$$

$$\text{AVE meaning of work (0.63)} > \text{SIC (0.55)}$$

$$\text{AVE organizational commitment (0.40)} < \text{SIC (0.55)}$$

➔ Overlap.