Evaluation of the effectiveness of the workplace health promotion intervention MyBalance

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Preface

This thesis is written as part of the MSc specialization Public Health and Society at Wageningen University. I enrolled in this programme a year ago, after completing my BSc in the same field of study. Conducting my own scientific research project gave me the opportunity to combine and show the skills I have acquired over the past years.

Evaluating MyBalance was a nice task to do. Fortunately, the data collection went smoothly because many employees (including co-founders of MyBalance!) were willing to participate in my research. Furthermore, I appreciate that access to some privacy-sensitive information of Wageningen UR was entrusted to me. When I started my data collection, I was hoping to find innovatory results that would be relevant for workplace health promotion interventions in general. Even though this did not happen, I now realize that my findings are very valuable for future implementation of MyBalance in specific. This could be of great importance for Wageningen UR and I am therefore glad that I can consider my research relevant.

I would like to thank Lenneke Vaandrager for being my supervisor over the past months. During our meetings, she provided me with valuable insights for the evaluation of MyBalance, and helped me to approach this project in a scientific way. I also appreciated the freedom she gave me to work independently. Thank you very much! I would also like to thank John Peeters and Fred Hoek for sharing all the ins and outs about MyBalance with me, which helped me to increase the integrity of my research. Finally, I would like to thank Maria Koelen for her willingness to be the second reader.

I genuinely hope that the findings of my study will be taken into account in future planning and implementation of MyBalance.

Martine Timmer

Wageningen, September 2012

Summary

Introduction: Wageningen University and Research Centre is one of the organizations that actively strives to optimize the health of its employees. In 2011, the department of Corporate Human Resources of Wageningen UR introduced the health promoting intervention MyBalance. MyBalance offers employees of Wageningen UR the opportunity to undergo several physical tests and have a meeting with a councillor in order to gain insight in their health status. If there turns out to be room for improvement, a personal action plan can be developed. Six months after the screening, a second contact moment is planned, in which the progress the participant has made will be discussed.

Problem definition: In 2011, the pilot of MyBalance took place for part of the employees of the Agrotechnology and Food Sciences Group (AFSG). In spring 2012, MyBalance is offered to all employees of AFSG and the employees of the corporate staff (CS+) of Wageningen UR. Even though many recommendations based on the pilot were given and adopted, there are still some uncertainties with respect to the effectiveness of the programme, on both the individual and organizational level.

Aim: The aim of the present study is to measure the self-reported effectiveness of MyBalance on both the individual and organizational level and to identify opportunities for improvement regarding the implementation of the intervention.

Method: For this research, both participants and non-participants from AFSG and CS+ were asked for their experiences with my Balance and the effects the intervention had on them. Ten interviews were conducted with participants from AFSG, and questionnaires were sent to all other participants and non-participants. Additionally, six managers from several organizational layers were interviewed and asked for their experiences with MyBalance and perceptions about it, in order to gain insight in the extent to which MyBalance is incorporated in the organizational management of Wageningen UR.

Results: The findings of this study show that -among the participants- small changes with respect to motivation to live healthy, knowledge about health and feelings of control over their health were measurable. These changes were larger among respondents with an action plan compared to those without an action plan. Almost two thirds of the respondents with an advice reported to have changed their behaviour, taking minor or major steps. With respect to the extent to which MyBalance is embedded in the organization of Wageningen UR, this study shows that some progress can be made. Not all managers seemed to be convinced of the value and effectiveness of MyBalance. Nevertheless, they showed interest in the results and gains of MyBalance, so communicating this information could help them to become more positive about MyBalance and to more actively inform the employees on their departments about the intervention.

Discussion: Even though the changes are self-reported and measured shortly after the test days had taken place, they indicate that MyBalance could be effective on the individual level, if behavioural changes are maintained. The effectiveness of MyBalance is expected to be larger once follow-up is carefully planned and communicated. Furthermore, since the meeting with the councillor does not meet the expectations of many participants, it is recommended to increase their professionalism or to promote the meeting differently. Next to that, the managers could take a more active role in promoting MyBalance and shaping expectations. Finally, it would be recommended to conduct more extensive research on the effectiveness of MyBalance on the long run.

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1. Introduction

According to the Ottawa Charter from the World Health Organization (1986a), health is a resource of everyday life, not the objective of living. For employers, this means that their employees' health is a resource for organizational success. Therefore, promoting employees' health in order to reach maximum employability is an attractive investment within an organization. According to Berntson and Marklund (2007), employability leads in turn to better health and well-being. Health promotion is defined as 'the process of enabling people to increase control over, and to improve their health' (WHO, 1986a).

One of the organizations that acts upon the previous line of reasoning is Wageningen University and Research Centre (Wageningen UR). Wageningen UR has the mission 'to explore the potential of nature to improve the quality of life' (Wageningen UR, 2011a). Therefore, Wageningen UR focusses on the domains *food and food production, living environment* and *health, lifestyle and livelihood.* Furthermore, Wageningen UR actively aims to reflect its mission on its 6.500 employees and 10.000 students (Wageningen UR, 2011a). In order to reach optimal health for the organizations' employees and therewith maximum employability, the department of Corporate Human Resources of Wageningen UR introduced the health promoting intervention MyBalance.

1.1 MyBalance

The aims of MyBalance are to 'offer facilities that enable employees in managing their life, their employability and work ability' and to 'develop an integrated approach on organizational level and individual level to maintain and improve employability' (Wageningen UR, 2011b). The intervention aims to raise awareness for health among the employees of Wageningen University and Research Centre by giving them insight in their health status and pointing them at facilities which could help them to find the right balance between their work and private life (Wageningen UR, 2012a).

1.1.1 Implementation of MyBalance

MyBalance consists of three stages which are described in a brochure for employees of Wageningen UR (Wageningen UR, 2012b).

The first stage is *assessment and consultation*. In this stage, employees are asked to fill out a digital questionnaire on how they feel about their work and career perspectives, their life style and workload. Moreover, they are invited to receive a compact physical scan at organizations' sports centre. During the physical test, several variables such as height, weight, body mass index, fat percentage, blood pressure, and the cholesterol level and the glucose level of the blood are measured. Participants are also informed about whether or not their values are healthy. If some values turn out to be unhealthy according to the used criteria, the participant is informed about what he can do to improve the situation. Next to that, the participants have a meeting with a councillor during which they discuss the results from the questionnaire. This may lead to the identification of issues that the participant is advised to change in order to improve his health and wellbeing. If so, the participant is again informed about actions that can be taken. If the participant wishes so, he can decide to set up a personal action plan, together with the councillor (Wageningen UR, 2012b). Various facilities that will help the participant to reach his goal are listed on an intranet page. They include facilities on the domains physical activity, physical complaints, dealing with work stress, coaching and advise, a healthy life style and prevention (Wageningen UR, 2012c). The individual sports course at a local sports centre that is offered, is only accessible for participants of MyBalance and other facilities are accessible for all employees of Wageningen UR.

In the second stage, the participant *implements the action plan*. Activities depend on the action plan and choices made by the participant. For example, the participant engages more often in physical exercise or

adopts a healthier eating pattern (Wageningen UR, 2012b). If the participant wishes so, it is possible to have one or more contact opportunities with the councillor.

The third stage consists of *conclusion and evaluation.* The participants are asked to fill out a short digital questionnaire six months after the assessment and consultation stage. However, if the participant wishes so, it is possible to have a final contact with the councillor (Wageningen UR, 2012b).

It is noteworthy that participants are explicitly pointed at the fact that the results of their tests are strictly confidential (Wageningen UR, 2012a). The participants manager will not be informed about any results and the participant is in charge of the implementation of the action plan. The only interest of the employer (Wageningen UR) is to achieve maximum employability of the employees of the organization (Wageningen UR, 2012a).

1.1.2 Evaluation of the pilot

In spring 2011, the pilot of MyBalance was conducted and evaluated by Laura van den Hoek (2011). For this pilot, 102 employees of the Agrotechnology and Food Sciences Group (AFSG) were invited to participate in the pilot of MyBalance. Of those 102 employees, 49 employees participated in the pilot. Next to that, another 17 people without invitation signed in to participate in the pilot. Altogether, 68 employees participated in the pilot of MyBalance during three test days at the Food Technology Centre (Wageningen UR building 118) (Van den Hoek, 2011). The physical tests were conducted by Active Living, a private consultant that aims to optimize vitality within organizations (Active Living, 2007). With vitality, they refer to a balance between physical and mental factors that give and take energy (Active Living, 2007). Furthermore, three councillors were involved in the pilot. One of them was an employee at Active Living and the two others were employees from Wageningen UR (Van den Hoek, 2011). Even though now structural follow-up was included in the programme design, participants could request for a second contact moment with the councillor (for example a phone call after a few weeks) after the test days and/or use facilities for health promotion in order to get some support in accomplishing personal goals. However, if no follow up was requested, the participants would not be contacted anymore. The results of the evaluation of MyBalance by Active Living are summarized in Box 1.

According to the evaluation of MyBalance from Active Living, the results of the pilot show that 81% of the participants got more insight in their own health due to the test days. Furthermore, they rated the test days on average with an 8,2. Altogether, 53 from the 75 participants were advised to enroll in follow-up.

Based on the physical test, it was concluded that 48,5% of the participants were overweight, 57,5% had a score for cholesterol that deviated from the healthy norms according to the Dutch College of General Practitioners, and that 10% had a too high blood pressure. Furthermore, five people were referred to their general practitioner and three people were advised to visit their general practitioner.

Based on the analysis of the questionnaires and the meetings with the councilors, it was concluded that most employees had an average risk on burn-out and that 34,8% had a moderate or poor work ability. Furthermore, 9,6% of the participants indicated to experience problems with the fit between their work and their interests, ambitions or capacities

Box 1: Evaluation of MyBalance according to Active Living (2011, internal communication)

Van den Hoek (2011) sent all participants a questionnaire four weeks after the test days. Of those who responded (N=48), 28 people indicated that they had been given some health related advice during the test days. Of these 28 people, 13 responded that they did not do anything with the advice (yet), but 15

responded that they did. Next to that, 60% of the respondents agreed with the statement that the pilot increased their knowledge about their health, 37% agreed with the statement that they have become more aware of their health due to the pilot and 42% agreed with the statement that their motivation to do something about their health had increased as a result of the test days.

On the organizational level, Van den Hoek (2011) examined 'how health is embedded in the organization and the policies of the different departments and facilities within Wageningen UR' (Van den Hoek, 2011). Her results show that health has a central position on the agenda of Wageningen UR. However, health is mainly paid attention to in relation to research and education and not so much in relation to maintaining and improving the health of employees. Van den Hoek (2011) concludes that the mission of Wageningen UR is 'to improve performance and quality of work', but that a concrete action plan to achieve this is missing. Health should be incorporated in the policy of Wageningen UR at all levels of the organization and this is not the case (yet). MyBalance is one way to improve performance and quality of work, but it is not entirely incorporated in the organization (Van den Hoek, 2011).

Van den Hoek (2011) gave various recommendations for improvement of MyBalance. First of all, she recommended to improve the communication about the intervention. Respondents indicated that they wanted to know more about what they could expect from the tests and how long the tests would take. Some respondents were confused about what would happen after the tests. Better communication from Wageningen UR to its employees should take away these types of ambiguities. Second, with respect to the implementation of the advice given by the councillor, it was recommended to give a more concrete advise to the participants in case they should change their behaviour. Instead of pointing participants at the fact that they should adopt a healthier life style, it was recommended to make a tailored action plan together with the participant. In order to be able to make the action plan, the participant should be provided with the way in which they can promote their health and how this can fit into their daily life. Repeating the test after a few months would probably stimulate participants to implement their action plan as well and would also provide participants with insight in the results of their effort to promote their health. On the organizational level, it was mentioned that MyBalance should be embedded in the organizational policy and that MyBalance should be offered to the employees on a regular basis. In this way, the health statuses of employees would be more likely to increase and issues regarding communication would probably decrease, because the intervention would be better known. Finally, with respect to privacy it was suggested to involve only external councillors in the intervention and to conduct the tests in another building than a building close to where most employees of the department work (Van den Hoek, 2011).

1.2 Problem definition

This year, MyBalance is offered to all employees of the Agrotechnology and Food Sciences Group, including the ones who already participated in the pilot, and to members of the corporate staff of Wageningen UR. Most of the recommendations by Van den Hoek (2011) for improvement of the intervention were adopted. There are nine test days for the employees of AFSG, between March 19 and April 11, and six test days between May 9 and June 1 for the corporate staff of Wageningen UR (CS+), including the corporate departments, Wageningen Business School and Wageningen International. The tests are conducted at the organiations' sports centre (Wageningen UR, 2012a). The sports centre is close to where the participants work, but not as close as to the work place as in the pilot. Moreover, conducting the tests at the sports centre has additional advantages; it is expected that people who have to exercise more often are more likely to do so when they have already visited the sports centre before. The sports centre is related to Wageningen UR and offers many sports at low costs for employees of Wageningen UR.

All tests will be conducted by Active Living, so no internal councillors are involved. Furthermore, by means of motivational interviewing, participants should become triggered to develop their own action plan. Just as in the pilot study, participants have the opportunity to request a second contact moment with their councillor if they wish to get extra guidance in the implementation of their action plan. Next to that, all participants will be invited for a follow-up six months after the test day. This is expected to function as an extra driving force to implement the action plan. Wageningen UR and Active Living agreed on an all-in price per participant, independent of the content of the action plan.

Even though many recommendations from the evaluation of the pilot are adopted in the current MyBalance programme, there are still some uncertainties with respect to the effectiveness of the programme. Because the design of the intervention, the organizational structure and the health related outcomes on a personal level are interrelated, this study will evaluate the effects of the intervention at multiple levels. It also contains both an effect and process evaluation of MyBalance. In this matter, the effect evaluation focusses at self-reported health related outcomes of the employees and changes in the organizational structure of Wageningen UR. The process evaluation is conducted in order to find out how the intervention was implemented and how this may has affected the outcomes.

On the organizational level it will be examined to what extent and in what way the intervention is embedded in the policy of Wageningen UR and how this policy is implemented. It will be examined what developments on the organizational level took place in order to improve MyBalance based on the pilot and if the intervention was implemented as planned.

1.3 Aim of the study

The aim of the present study is *to measure the self-reported effectiveness of MyBalance on both the individual and organizational level and to identify opportunities for improvement regarding the implementation of the intervention.* With respect to the self-reported effectiveness of MyBalance on the individual level, it should be noted that only short-term effects can be measured, because this evaluatory study takes place shortly after the test days. However, the evaluation of the intervention may result in important findings that should be taken into account for future implementation of the intervention.

2. Theoretical background

In this chapter, the theoretical background of workplace health promotion will be discussed. Workplace health promotion is defined as 'all combined efforts of employers, employees and society to improve the health and wellbeing of people at work' (Robroek et al., 2011). Various models and theories will be included. Even though many health related interventions focus at the individual, encouraging him to make healthy choices, health promotion is also possible through improving the environment, for example by adjusting the organizational culture (Ulich and Wülser, 2009, as cited by Goldgruber & Ahrens, 2010). Hawe et al. (2009) even state that interventions can be seen as 'a critical event in the history of a system, leading to the evolution of new structures of interaction and new shared meaning', also emphasizing that interventions are more than a set of activities.

This chapter starts with requirements for healthy organizations and ways to create healthy organizations. Because MyBalance will be evaluated at both the organizational and the individual level, the subsequent paragraph will be devoted to individual empowerment. Next to that, literature on the evaluation on health promoting interventions will be discussed. The chapter will serve as a basis for the establishment of the research questions and the research methods for the present study.

2.1 Requirements for a healthy organization

According to Salanova (2009, as cited by Salanova et al., 2011; and cited by Nielsen et al., 2010), there should be a balance between three factors in order to establish a healthy and resilient organization. Resilience refers to the 'capability of individuals and systems to cope successfully in the face of significant adversity or risk' (Koelen and Lindström, 2005). As depicted in the model (Figure 1), these three factors are healthy practices and resources, healthy employees and healthy organizational outcomes. *Healthy practices and resources* include tasks (for example, the variety of tasks), social aspects (for example social support from colleagues and healthy leadership) and organizational practices (for example human resource management). *Healthy employees* possess feelings of self-efficacy, engagement, optimism, resilience and hope. *Healthy organizational outcomes* include high organizational performance and corporate social responsibility (Salanova, 2009, as cited by Salanova et al., 2011; and cited by Nielsen et al., 2010).

Figure 1: Healthy and resilient organization model (Salanova, 2009, as cited by Salanova et al., 2011).

An important characteristic of the model is that it assumes interaction between the three factors. For example, healthy organizational outcomes are not only viewed as a result of healthy practices and resources and healthy employees, but also as a resource for healthy practices and resources and healthy

employees. According to the same logic, the model assumes that health practices and resources influence the competences of the employees *and* that the competences of the employees influence healthy practices and resources. This shows that organizational issues should not only be approached top-down, but also bottom-up. Therefore, it is recommended that workplace health promotion interventions should also include all three aspects of the organization (Nielsen et al., 2010).

2.1.1 Employability

According to Wrzesniewski et al. (1997), people see their work as either a job, a career or a calling. If they see their work as a job, their main focus is the fact that they need a job in order to make money and pay their bills, a necessity instead of something that gives them joy. If they see their work as part of their career, the focus is on advancement. In case they see their work as a calling, people see their work as the fulfilling of socially useful work and enjoy this (Wrzesniewski et al., 1997). Depending on how people see their work, they will be either open or reluctant to develop their own competences, which is related to their employability.

In literature, there is no unambiguous definition of employability. Berntson and Marklund (2007) state that employability relates to how easy it is for someone to find a new job. Adopting the theory of Forrier and Sels (2003, as cited by Berntson & Marklund, 2007), they assume there are three different levels of employability; employability refers to governmental policy aiming to reach full national employment, it refers to the managerial aspect of being able to match the supply and demand of labour and it refers to the individuals' perception regarding job prospects (Forrier & Sels, 2003, as cited by Berntson and Marklund, 2007). Nauta et al. (2009) approach employability as a requirement for both individual and organizational success. They adopt the definition of employability from Van der Heijde and Van der Heijden (2005, as cited by Van der Heijde & Van der Heijden, 2006) that employability refers to 'the continuous fulfilling, acquiring, or creating of work through the optimal use of one's competences'. According to this definition, organizations have to create a setting that supports individual development and individuals have to be open to this type of development. In this study, the definition of Van der Heijde and Van der Heijden (2005, as cited by Van der Heijde & Van der Heijden, 2006) will be adopted in order to examine how an employer can reach maximum employability by an health promotion intervention among its employees.

2.2 Creating a healthy organization

But how to meet the requirements for a healthy and resilient organization? The WHO (1986a) defined five health promotion action areas that deserve attention in health promotion, which apply to health promotion on the individual level, but also to health promotion on the organizational level. Of these action areas, four are especially important for workplace health promotion. They will be discussed below. The remaining health promotion action area as defined by the WHO (1986a) is *reorient health services,* which refers to an intersectoral approach of health promotion at all levels. Because this research focusses on health promotion of the work setting, mainly including employer and employee, this action area will not be discussed any further.

2.2.1 Building healthy policy

The first action area is *building healthy policy*. In building healthy policies, the key is to put health on the agenda. This applies to all sectors (not just the health sector) at all levels. In order to create healthy policies, policy makers have to be aware of the fact that they will influence health of others in their decisions. On a national level, laws can contribute to the establishment of healthy work settings. For example, the working conditions act provides rules that should ensure a safe and healthy work environment. The act assumes input from both employer and employee; employers are required to meet

the norms that are set and employees are responsible for the use of measures taken in order to ensure safe and healthy working conditions. On the organizational level, building healthy policy refers to creating healthy practices and resources, as mentioned in the model for a healthy and resilient organization by Salanova (2009, as cited by Salanova et al., 2011). It includes all actions and facilities that enhance or promote the health of employees. For example, regular team meetings in order to discuss what is going on at the work floor and if there are any problems that should be solved help to create a healthy work environment in which people like to work.

Building a healthy policy is very complex. Many stakeholders are involved, and not all of them are aware of the health related consequences of their decisions. The aim of making the healthy choice the easy choice applies to them as well (WHO, 1986a). With respect to health promotion in the work setting, this means that health promotion should be incorporated in the organizational policy.

2.2.2 Creating supportive environments

The second area for health promotion is *creating supportive environments*. The environment influences health both in a direct way, and through complex interactions with behaviour, genetics and health care systems (Commers et al., 2006). Various types of environments can be either supportive or unsupportive for peoples' health status, including the physical, economic, political and sociocultural environment (Swinburn et al., 1999, as cited by Kremers et al., 2006). Thus, once health has been integrated in the organizations' policy, healthy behaviour should be stimulated and facilitated by the employees environment. For example, when employees are given the opportunity to change and have a shower at the work place, this may reduce barriers with respect to going to work by bike.

This 'healthy settings approach' is also applied in a Healthy Universities expanded model for conceptualising and applying the healthy settings approach to higher education (Dooris et al., 2010). According to Dooris et al. (2010) a healthy university

> *'aspires to create a learning environment and organisational culture that enhances the health, well-being and sustainability of its community and enables people to achieve their full potential.'*

The definition emphasizes the effects of the environment on the individuals accomplishments. In their model, Dooris et al. (2010) describe several inputs, focus areas, processes, deliverables and impacts that affect this environment. They underline the relation between processes and methods. For example, they point out that organizational development and change management can be operationalized with high visibility of innovative health-related projects (Dooris et al., 2010).

2.2.3 Developing personal skills

A third action area of relevance in workplace health promotion is *developing personal skills.* The WHO (1986a) refers to 'supporting personal and social development through providing information, education for health and enhancing life skills'. This should empower people to make healthy choices (WHO 1986a). Developing personal skills focusses on the capacities of the individual. It leads to healthy employees, who positively influence the organizational outcomes and practices and resources (Salanova, 2009, as cited by Salanova et al., 2011). Paragraph 2.3 focusses on how empowerment helps individuals to make healthy choices.

2.2.4 Strengthening community action

The fourth action area that should be taken into account is *strengthening community action*. In this action area, it is emphasized that health promotion interventions should be both top-down and bottom up; the target group should be involved with the intervention, at all stages of its development. Doing so will result in an intervention that suits the target group, which is associated with higher effectiveness. Community action is also emphasized by Koelen and Lindström (2005), who state that in health promotion, it is

essential that people operate as active participating subjects. Strengthening community action is depicted in the model for a healthy and resilient organization by Salanova (2009, as cited by Salanova et al., 2011) by the arrow from healthy employees to healthy practices and resources; employees taking actions which directly or indirectly result in better working conditions.

2.3 Individual empowerment

In workplace health promotion interventions, individual approaches towards healthy lifestyles and risk reductions are popular (Rocha et al., 2010, as cited by Robroek et al., 2011). These interventions are often aimed at empowering participants to make healthy choices. According to the definition of Nutbeam (1998a), 'in health promotion, empowerment is a process through which people gain greater control over decisions and actions affecting their health'. Nutbeam further states that there are differences between 'individual empowerment', referring to individual skills, and 'community empowerment', referring to increases in empowerment due to community action for health. Since MyBalance targets at individuals, empowering them to improve their health, the focus in this study is on changes in individual empowerment.

Koelen and Lindström (2005) conducted a literature study and identified four factors that influence individual empowerment, which are all related to feelings of control. The first factor consists of *outcome expectations*. Outcome expectations refer to the perceived relation of performing certain behaviour and the behavioural outcome. For example, if people do not feel that a change in diet will lower their weight, they are probably not willing to put effort in changing their diet. Second, the *perceived health locus of control* influences empowerment as well. It refers to the expectation of the conformity between an act and the outcomes of this act (Rotter, 1966, a cited by Koelen & Lindström, 2005). It relates to the extent to which people feel their health status is a result of their own behaviour. According to Koelen and Lindström (2005), people can be classified as either internals, who feel that their behaviour influences their health, and externals, who feel that their behaviour does not have any effect on their health. Third, *learned helplessness* refers to a perceived lack of control over the situation, which is a result of a bad experience in the past. One failure will not automatically lead to strong feelings of learned helplessness, but repeated failure may convince the individual of its incapability to change his behaviour. A fourth concept that influences individual empowerment is *perceived self-efficacy*. Perceived self-efficacy is not so much about the outcomes of behaviour, but focuses on the beliefs about performing the behaviour itself. If a person does not feel able to perform the behaviour needed to reach a specific goal, he will not even try to perform the behaviour, even if he is actually capable of doing so. Perceived self-efficacy is directly related to a specific type of behaviour.

As the concepts which are previously described show, both motivation and knowledge are important with respect to feelings of empowerment. In order to take the right decisions and actions affecting their health, people have to know what these right decisions and actions are and have to be motivated to show the correct behaviour. The concepts motivation and knowledge will be discussed below.

2.3.1 Motivation

The more determined a person is to adopt a healthy lifestyle, the more likely he is to succeed. Determination depends on the extent to which someone mentally conforms with the intention to live healthy (Sheldon & Elliot, 1999) and thus with the extent to which someone is intrinsically motivated.

According to Deci and Ryan (1985), different types of motivation exist. In their model, they assume the two extremes to be intrinsic and extrinsic motivation. In case of intrinsic motivation, people perform certain behaviour because they enjoy to do so, whereas in case of extrinsic motivation, people perform certain behaviour because of external influences that motivate them.

Feelings of locus of control, learned helplessness, perceived self-efficacy and outcome expectations interact with motivation. They can either impede or reinforce feelings of motivation to perform desired behaviour. For example, if a person does not belief that certain behaviour will lead to a certain outcome, he will be unmotivated to perform the desired behaviour. On the contrary, if he does belief that the behaviour will lead to the desired outcome, motivation to perform the behaviour will increase. Motivating people to perform the right behaviour is therefore part of empowering them to make healthy choices. In accordance with the definition of empowerment, this is a process.

2.3.2 Knowledge

In many health promotion interventions, one of the ways used in trying to improve people's health is to provide them with knowledge about healthy behaviour. Increasing knowledge and contributes to giving people greater control over decisions and actions affection their health; it empowers them to make healthy choices.

A concept of relevance with respect to knowledge is health literacy. Literacy in its simplest meaning refers to the ability to read and write (Peerson and Saunders, 2009). However, in health literacy, the concept is taken to a next level. Health literacy is defined by Nutbeam (1998a) as 'cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health'. So being able to read and write enlarges the feelings of control with respect to health seeking behaviour. If people feel able to promote and maintain their health due to the skills they possess, they are more likely to be motivated to do so. Nutbeam (1999, as cited by Peerson & Saunders, 2009) added in another paper that literacy has three important components. First, functional literacy refers to the basic reading and writing skills needed to follow simple messages. Second, interactive literacy are the more advanced skills to interpret and apply the message correctly. Third, critical literacy is the ability to critically analyse the information provided, to increase awareness for problems and to participate in action barriers (Nutbeam, 1999, as cited by Peerson & Saunders, 2009).

However, it has to be noted that increasing peoples cognitive skills will not automatically result in healthy behaviour. Knowledge about healthy behaviour is a requirement for people to consciously make healthy choices, but they also need the skills to translate their good intentions into actual health behaviour.

2.4 Evaluation of interventions for health promotion

In this paragraph, some issues that have to be included while evaluating health promotion interventions are discussed. A distinction will be made between effect evaluations, which aim to measure outcomes in health promotion, and process evaluations, which aim to understand the process of an intervention (Nutbeam, 1998b). It should be noted that the process and the outcomes cannot be assessed separately, because the way the intervention is implemented (process) influences the outcomes (effect). A process evaluation should therefore be considered as a means to build evidence for the outcomes of the intervention (Nutbeam, 1998b). Combining both an effect evaluation and a process evaluation for health promotion intervention is therefore recommended.

2.4.1 Effect evaluation

According to a meta-analysis on the effectiveness of workplace health promotion and primary prevention interventions by Goldgruber and Ahrens (2010),

> *'the greatest results can be achieved with comprehensive programs, including relational and behavioural elements that are oriented on theories of behavioural change and that consider organizational culture as well as individual needs'.*

However, in many health promotion interventions, it is complex to determine the value of the intervention and to decide whether or not the intervention was successful (Nutbeam, 1998b). For example, it can often be questioned whether changes in human behaviour are a result of the intervention or the result of other factors in the individuals' environment (e.g. Koelen et al., 2001). Next, it will be discussed what the possible results of workplace health promotion interventions can be and how effectiveness can be defined.

In his outcome model for health promotion as depicted in Figure 2, Nutbeam (1998b) distinguishes three types of outcomes that can be due to an health promotion intervention. The first type of outcomes are *health and social outcomes*. These type of outcomes are the ultimate goal of health promotion. They include reductions in mortality, morbidity and disability and increases in quality of life, functional independence and equity. Health and social outcomes are rather abstract, and can often only be measured on the long run. On this level, it is hard to decide whether or not the outcomes can be attribute to the intervention, because many factors influence these type of outcomes. The ultimate goal of health promotion is based upon *intermediate health outcomes*; the determinants of health and social outcomes. Nutbeam (1998b) identifies healthy lifestyles, effective health services and healthy environments as these determinants and states that health promotion should increase control over these determinants. On the next level, the *health promotion outcomes* are direct results of the health promotion actions, and empower people to achieve the intermediate health outcomes. They include higher levels of health literacy, better social influence and action and better public policy and organizational practice. The *health promotion actions* that are needed in order to achieve this outcomes, are education, facilitation and advocacy. By focussing on either education, facilitation or advocacy, different outcomes will be achieved. A final note that should be made on the model is that the model not only assumes interaction between the different levels of outcomes, but also assumes interaction within these levels (Nutbeam, 1998b).

Figure 2: Outcome model for health promotion (Nutbeam, 1998b).

In MyBalance, both education, facilitation and advocacy are applied. First of all, advocacy is needed to gain permission to develop and implement the intervention and to ensure it gets as much attention as it needs. Once the test days take place, the employees have the opportunity to gain insight into their own health status (facilitation, education) and many options for health improvement are offered (facilitation, education). If the intervention reaches its aims, changes in the three health promotion outcomes should all be measurable as well, even as the intermediate health outcomes and the health and social outcomes. However, the intermediate health outcomes and health and social outcomes will be only measurable on the long run, when the effects of the intervention are embedded in the organization and in the participants' lives. Therefore, measuring the effectiveness of the intervention in this study will be limited to measuring changes in health promotion outcomes.

2.4.2 Process evaluation

As stated above, evaluating the process of an intervention is needed in order to identify factors that contributed to the success or failure of the intervention (Nutbeam, 1998b). Based on a literature study, Robroek et al. (2007) state that the three main factors that could lead to ineffectiveness of work place health promotion interventions are low/selective participation, little adherence to the intervention and a too short duration of the intervention which does not result in sustainable behavioural change. The process evaluation will be helpful in improving the interventions in order to reach optimal success and to decide whether or not the intervention can be transferred to other settings (Nielsen et al., 2010). It involves the examination of what has been done, by whom and how it has been done, in order to answer the questions whether or not the intervention was implemented as planned and what other processes may have led to the measured outcomes (Nutbeam, 1998b). For example, an intervention that seems to address a relevant issue but is implemented poorly may lead to a negative assessment of the intervention as a whole, although the initial setup was fine. A process evaluation will help to trace problems and solutions which can contribute to the improvement of the intervention.

2.4.3 Stage of the intervention and evaluation

In his paper, Nutbeam (1998b) emphasizes that the stage of the intervention determines to a certain extent the way the evaluation should be approached. According to Nutbeam et al. (1990, as cited by Nutbeam 1998b), the six stages that can be distinguished are the problem definition (what is the problem?), solution generation (how might it be solved?), testing innovation (did the solution work?), intervention demonstration (can the programme be repeated/refined?), intervention dissemination (can the programme widely be reproduced?) and programme management (can the programme be sustained?). In the third, fourth and fifth stage, the emphasis of the intervention gradually changes from the assessment of the outcome towards the understanding of the process. Since MyBalance has already been tested in a pilot and adjusted based on the results of the pilot, this study will focus both on the effects of the intervention and on the process and refinement of the intervention. Attention will be paid to the effectiveness on the organizational level or MyBalance and the effectiveness on health on the individual level. Outcomes on the organizational level should not be confused with the process of the intervention; they are results of processes on the organizational level.

2.4.4 Triangulation in evaluatory research

In papers on health promotion research, readers are often pointed at the synergetic effects of triangulation, or the combination of different methods to answer the same research questions (e.g. Koelen et al., 2001; Nutbeam, 1998b). In this way, findings of one method can be checked and compared with findings of the other method (Bowling & Ebrahim, 2005, p. 233). It increases the internal validity of the study, which makes it a valuable approach in evaluatory research.

The three types of triangulation that can be distinguished, are data source triangulation, researcher triangulation and methods triangulation (Koelen et al., 2001; Nutbeam, 1998b). *Data source triangulation* refers to using multiple data sources, such as policy documents, participants of the intervention, and client records. In the present study, data source triangulation will be applied, as will be discussed in chapter 4. *Researcher triangulation* refers to the involvement of more than one researcher in the data collection and analysis. It prevents a researcher bias, especially in qualitative research, where the interpretation of data can be very subjective. Since the present study will be conducted by one researcher, no researcher triangulation will be applied. *Methods triangulation* refers to using multiple methods in order to compare results from one method to the other. This may refer to the collection of both qualitative and quantitative data, but also to the collection of multiple types of qualitative (or quantitative) data. Methods triangulation reduces the chance on misinterpretation of the data (Koelen et al., 2001; Nutbeam, 1998b). In the present study, methods triangulation will also be applied as well.

3. Research questions

The aim of the present study is *to measure the self-reported effectiveness of MyBalance on both the individual and organizational level and to identify opportunities for improvement regarding the implementation of the intervention*. The main research question of the present study is:

What is the effectiveness of MyBalance on the individual and organizational level and how can the effectiveness be improved?

The sub questions are as follows;

1. What changes in knowledge, motivation and empowerment regarding health behaviour are reported as a result of MyBalance?
2. What changes in health behaviour are reported as a result of MyBalance?
3. What is the perception of employees of Wageningen UR regarding MyBalance?
4. To what extent is MyBalance incorporated in the operational management of Wageningen UR?
5. What factors in the process of MyBalance contributed to the measured outcomes of MyBalance?

In order to clarify the main concepts that will be used in this study, they will be operationalized below.

Effectiveness	In this study, effectiveness of MyBalance will be measured on the individual level and on the organizational level. On the individual level, the focus will be on self-reported changes in health promotion outcomes due to MyBalance, including changes in empowerment, motivation and knowledge and changes in health behaviour. On the organizational level, effectiveness will be measured as the extent to which MyBalance is embedded in the operational management and as the extent to which it set health on the organizational agenda.
Employability	In this study, the definition of Van der Heijde and Van der Heijden (2005, as cited by Van der Heijde & Van der Heijden, 2006) will be adopted, focussing on the development of individual competences. Employability is defined as 'the continuous fulfilling, acquiring, or creating of work through the optimal use of one's competences'.
Empowerment	In this study, Nutbeams (1998a) definition of empowerment will be adopted, referring to 'a process through which people gain greater control over decisions and actions affecting their health'. In changing empowerment, it is assumed that people have to operate as active participating subjects (Koelen & Lindström, 2005), influenced by their feelings of control (health locus of control, learned helplessness, perceived-self efficacy and outcome expectations).
Health behaviour	Changes in health behaviour due to participation in MyBalance will be measured as observed changes in 'activities undertaken by an individual, regardless of actual or perceived health status, for the purpose of promoting, protecting or maintaining health, whether or not such behaviour is objectively effective towards that end', in accordance with the definition in the Health Promotion Glossary (WHO, 1986b).
Knowledge	Changes in knowledge due to participation in MyBalance will be measured as changes in 'cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health' (1998a). It is reflected in understanding of actions that can be taken in order to improve the individuals health status.
Motivation	Changes in motivation due to participation in MyBalance will be measured as changes in willingness to take action to improve the individuals health status (Nutbeam, 1998a). Attention will be paid to differences in intrinsic and extrinsic motivation with respect to the effectiveness of MyBalance, taking into account that the councillors from Active Living use the technique of motivational interviewing.
Operational management	In measuring the extent to which health and MyBalance are embedded on the organizational level, attention will be paid to actions taken in the operational management, operationalized as actions taken by boards, department leaders, managers of business-units, and professors of chair groups.

4. Methodology

This chapter describes the research methodology that has been applied. Elements that will be addressed are the study design, the data collection methods, the study participants and sample selection, and the methods for data analysis.

4.1 Study design

In measuring the effectiveness of an intervention, it would be a logical step to apply a pre-test-post-test study design. In this way, the initial situation can be compared with the situation after the intervention and the difference can be (partly) attributed to the intervention. However, due to the fact that the intervention had already started by the time this evaluatory study started, a cross sectional study design is chosen for the present study. This design serves 'to describe the frequency or level of a particular attribute in a defined population or sample at one point in time' (Bowling & Ebrahim, 2005, p. 602). The attributes that were studied on the individual level are the perception employees of Wageningen UR have of MyBalance, self-reported changes in empowerment, motivation and knowledge regarding health behaviour, and self-reported changes in health behaviour due to MyBalance. For the evaluation on the organizational level, the attribute that was be studied is the extent to which MyBalance is incorporated in the operational management of Wageningen UR. An advantage of the cross sectional study design as opposed to the pre-test-post-test design is the prevention of a post-test effect. Figure 3 gives an overview of steps that were taken in this study. They will be discussed below.

Figure 3: Steps taken in this study

4.2 Data collection methods

An overview of the data collection methods and an indication of their relevance for each sub question is given in Table 1. A clarification is given below. A more detailed description of the study participants and sample selection is given in paragraph 4.3.

Table 1: Overview of data collection methods and indication of their relevance for each research question.

	Sub question 1	Sub question 2	Sub question 3	Sub question 4	Sub question 5
Literature study	*	*			* * *
Interviews with participants	* * *	* * *	* * *	* *	* *
Questionnaires for participants	* *	* *	* *	*	* *
Questionnaires for non-participants			* *	*	* *
Interviews with managers		*	* * *	* * *	* * *
Reports from Active Living					*
Thesis pilot study MyBalance	*	*		*	*

4.2.1 Literature study

This study started with a literature study, as is reported in chapter 2. The literature study was conducted to gain insights in the (possible) outcomes of MyBalance on the individual level and how they can examined. This information was used for development of the instruments for data collection. Furthermore, the literature study provided information about how the process of a health promotion intervention can be evaluated, which was of relevance for sub question 5.

4.2.2 Interviews with participants

The sub questions 1 and 2 are related to the self-reported outcomes of MyBalance on the individual level. In order to answer them, it was chosen to conduct several semi-structure in-depth interviews with participants, because this would allow participants to explain the effects MyBalance had (or had not) on them extensively. Moreover, it conducting qualitative interviews with participants of MyBalance would also provide a lot of insight in their overall perceptions about MyBalance (sub question 3) and –to a lesser extent- issues related to sub question 4 and 5.

Since the qualitative interviews with participants were of relevance for all sub questions, a variety of topics was included in the topic list. More specifically, topics that were addressed were experienced changes in empowerment, motivation, and knowledge regarding health behaviour due to MyBalance, changes in health behaviour due to MyBalance, the perception of MyBalance and organizational issues, practicalities and the perceived embedding of MyBalance on the organizational level. A topic list can be found in appendix A.

For all interviews, it was proposed to conduct them at the respondents office, in order to minimize the effort the interviewees had to take and therewith to increase the response rate. Furthermore, all respondents were informed at invitation that the interviews would be recorded.

4.2.3 Questionnaires participants and non-participants

In order to check the findings of the qualitative interviews with participants for the entire target group, all other participants were invited to fill out an online questionnaire in which issues similar to those of the interviews with participants were addressed. Next to that, non-participants of MyBalance were also invited to fill out an on-line questionnaire, in which they could express their perceptions about the intervention. Non-participants were defined as people who were invited to participate in MyBalance but did not visit the sports centre for one of the test days (even if they had set-up an appointment). The results of the questionnaires gave less relevant information compared to the results of the interviews, because respondents did not always clarify their answer in the questionnaires.

Participants and non-participants were separately invited to fill out the questionnaire by e-mail. The e-mail for participants was explicitly directed towards people who did participate in MyBalance, and provided with the subject ‘Evaluation MyBalance’. The e-mail for non-participants was given the subject ‘Evaluation (non-)participants MyBalance’ and included an invitation for the evaluation of MyBalance, independent whether or not they had participated, emphasizing that the questionnaire was also directed at non-participants. All invitations were sent in June, two months after the middle of the wave of test days for employees at AFSG and approximately one month after the test days for employees of CS+, so only short-term effects could be measured.

Even though it was known who participated in MyBalance and who did not, the questionnaire started with the question whether or not the respondent had visited one of the test days of MyBalance, to categorize him as a participant or non-participant. A flow-chart of the questionnaire can be found in appendix C. An intermezzo on the questionnaire development can be found on page 30 and 31, after the results of the interviews with participants are discussed. The questionnaire was sent to several members of the project group MyBalance for a pre-test and adjusted based on their findings.

4.2.4 Interviews with managers

For additional data about the extent to which MyBalance is embedded in the operational management of Wageningen UR and the process evaluation, interviews with several managers of various organizational layers were conducted. The interviews with the managers were mainly of relevance for the sub questions 3, 4 and 5. During these in-depth interviews, the focus was on if and how the interviewees were involved with the intervention, if they communicated it to the employees on their department, the way they received information about MyBalance from other stakeholders within Wageningen UR and other issues that could have contributed to the effects of the intervention. A topic list can be found in appendix B.

4.2.5 Other data sources

Next to the data derived in this study, the evaluation of the pilot by Laura van den Hoek (2011) and the reports that Active Living wrote after the test days were also included in this research as data sources. The evaluation of the pilot of MyBalance was mainly used as background information, providing insights in how and why MyBalance was developed and what aspects would deserve in the present study. The reports from Active Living included results of both the physical and the mental test on a group level, and the results of the evaluations of the test days that Active Living conducted among the participants. However, it should be taken into account that Active Living is a private consultant that does not conduct academic research, so only limited value was given to this additional data source. The reports from Active Living with respect to AFSG and CS+ can be found in respectively appendix K and L.

4.3 Study participants and sample selection

Broadly speaking, there were three groups of people involved in the evaluation of MyBalance, namely the participants, non-participants and the people involved with MyBalance on the organizational level (managers). Some overlap between the groups is present, because the managers were also invited to participate and are therefore included in the groups of participants and non-participants too. Furthermore, all three groups could be divided in two groups again: those people employed at the Agrotechnology and Food Sciences Group and those people employed as corporate staff.

In Figure 4, the rough sample selection per target group is outlined. Due to limited time for the research, it was chosen to limit the interviews to one group of employees; either the employees of AFSG or the employees of CS+. Because the first wave of test days was planned for the employees of AFSG and the second for the employees of CS+, it was chosen to select participants and managers from AFSG for qualitative research. They were expected to report the effects of MyBalance in a more valid way than the employees of CS+, because the data collection took place very shortly after the test days for CS+.

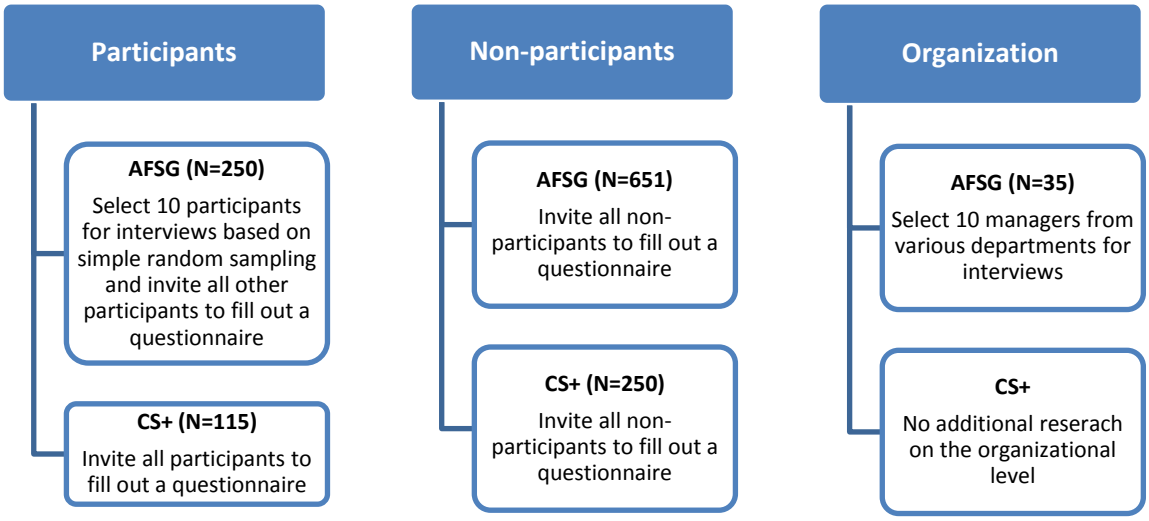

Figure 4: Rough sample selection per target group.

Participants

As discussed before, it was chosen to include participants of MyBalance in this study. From the Agrotechnology and Food Sciences Group (AFSG), exactly 900 people were invited by e-mail to participate in MyBalance, of which 247 people participated and 653 people did not participate in MyBalance (two of them were also employed at CS+ and participated in MyBalance during the test days for CS+). Next to that, three people signed themselves up without being invited by e-mail, which resulted in 250 participants.

For the interviews with participants, ten people were selected by means of simple random sampling and invited to participate in the study. This number of participants is chosen because Van den Hoek (2011) experienced theoretical saturation after conducting qualitative research with ten participants of MyBalance. If some of the invited people were not willing to participate, other people from the target group were randomly selected and invited to replace them until ten people are willing to participate.

In a second step, questionnaires were sent to the other participants of AFSG and the participants of CS+. From the remaining 240 participants of AFSG, one person was excluded because of her involvement with MyBalance on the organizational level, and two persons were not invited because they were not employed at Wageningen UR anymore. Eventually, 237 participants of AFSG were invited to fill out the questionnaire.

From the corporate staff, 371 people were invited to participate in MyBalance. This group included 10 people who were invited to participate in MyBalance before, because they were also employed at AFSG, so 361 people were invited for the first time. Two people signed themselves up without being invited by e-mail. A total number of 115 participants of CS+ participated in My Balance during the second wave of test days. One person was not invited to fill out a questionnaire, because of his involvement with MyBalance on the organizational level. Eventually, 114 participants of CS+ were invited to fill out questionnaires, including the 2 people who were employed at both AFSG and CS+ and participated during the second wave of test days.

Non-participants

The non-participants were included in this study in order to find out if there may have been a selection bias with respect to participation in MyBalance and to identify possible reasons why employees did not participate, which is part of the process evaluation of the intervention.

Of the 651 non-participants of AFSG, two people were not invited to fill out a questionnaire because of their involvement with MyBalance on the organizational level. Another two people were excluded, because they were also employed at CS+ and participated in MyBalance during one of the test days in the second wave. Eventually, 647 non-participants of AFSG were invited to fill out a questionnaire. Of the 250 non-participants from CS+, one person was excluded, because of his involvement with MyBalance on the organizational level, resulting in 249 non-participants invited to fill out a questionnaire.

Organization

Even though the participants were asked for information about the organizational structure of MyBalance, additional research for the evaluation on the organizational level was conducted. Because this study aims to find opportunities for improvement of the implementation of the intervention, the focus was on the operational management. Interviews were conducted with managers of several departments. The target group was defined by a list from the head of the Human Resource Management of AFSG, which included all managers within AFSG that were provided with more information about MyBalance than other employees were provided with, and who had a managerial role on their department.

The aim was to include a total number of 10 managers in the sample from a variety of departments in order to gain insights in the perceptions of MyBalance of managers from different organizational layers. If selected managers turned out to be unwilling to participate, other subjects from the target group were randomly selected and invited to replace them. Because different organizational procedures were planned for the managers of AFSG and the managers of CS+, (managers of CS+ were asked to take a more active role in providing information about MyBalance to their employees than managers of AFSG) and limited time for the study, it was chosen to include only managers from AFSG in the target group.

4.4 Method for data analysis

For the analysis of the data derived in the interviews, the programme Atlas.ti 6.2 was used. All recorded interviews were transcribed and coded according to a coding scheme that included the different topics addressed during the interviews. After all interviews were transcribed, statements that applied to the same topic were collected, compared and described in the report. Some quotes were translated from Dutch to English, but the original quotes are included in the report as footnotes as well.

With respect to the data derived in the questionnaires, the data were analysed using SPSS statistics, version 20. The results from the (non-)participants from AFSG and the (non-)participants from the corporate staff were first examined in order to find out if there were any significant differences on the reported scores for certain topics, and described in tables with descriptive statistics afterwards. Furthermore, it was examined whether or not there were relevant significant differences related to the self-reported effectiveness of MyBalance on the individual level among participants that reported to have received advice during the test day and those who did not. Additionally, it was examined whether or not there were relevant significant differences among participants and non-participants regarding a possible selection bias with respect to participation in MyBalance. The answers given to the open questions were categorized based on their content and described in the report and appendices.

In the discussion section of this report, a triangulation approach is applied. The results of the literature study, interviews with participants and managers, and questionnaires among participants and non-participants are taken together and compared. Furthermore, the findings are discussed in relation to the results of the report that Active Living wrote after the test days. Only limited value is attached to these reports, because Active Living is a private consultant that does not conduct academic research.

5. Results

In this chapter, the results of the study are discussed, starting with the programme reach (paragraph 5.1). Next, attention will be paid to the results of the interviews with participants of MyBalance (paragraph 5.2), followed by the results of the questionnaires among participants (paragraph 5.3) and non-participants (paragraph 5.4), and a comparison between those two (paragraph 5.5). Finally, the results of the interviews with people involved with the organization of MyBalance will be discussed (paragraph 5.6).

5.1 Programme reach

From the Agrotechnology and Food Sciences Group (AFSG), exactly 900 people (453 men and 447 women) were invited by e-mail to participate in MyBalance and three people (1 man and 2 women) signed themselves up without being invited by e-mail. During the nine test days that were planned, 270 places were available, of which 267 were filled. Because 28 people did not show up, eventually 239 employees of AFSG participated in MyBalance during the first wave of test days (100 men and 139 women).

Some employees had filled out the questionnaire but had not managed to set up an appointment for the test days in the given period. These people were invited to set up an appointment during the test days for the corporate staff of Wageningen UR, which 11 people did. Altogether, 250 of the employees from AFSG went to one of the test days, of which 247 were invited by e-mail (response rate = 27,44%).

From the corporate staff of Wageningen UR, CS+, 371 people (157 men and 214) women) were invited to participate in MyBalance. (This group included 10 people who were invited to participate in MyBalance before, because they were also employed at AFSG.) Furthermore, two people (1 man and 1 woman) signed themselves up without being invited by e-mail. During the six test days that were planned, 135 places were available for CS+, of which 130 were filled. Because 4 people did not show up during the test day, eventually 126 employees (50 men and 76 women) participated in MyBalance during the test days for CS+, of which 11 people were actually employed at AFSG. Altogether, 115 of the employees from CS+ went to one of the test days, of which 113 were invited by e-mail (response rate = 30,46%).

5.2 Results qualitative interviews participants AFSG

In this paragraph, the results if the interviews with 10 participants of MyBalance from AFSG will be discussed. Next to the self-reported results of the tests and outcomes of MyBalance, other issues such as the provision of information about MyBalance and perceptions of the intervention will be addressed.

5.2.1 Acquisition participants

As stated before, the aim was to include ten people in the qualitative research among participants of MyBalance, working at AFSG. Participants were randomly selected by means of simple random sampling and invited by e-mail to participate in an interview. Eventually, 35 people were selected, of which ten were willing to participate in an interview. Three of the selected people did not show up during the test day and were therefore not invited for an interview, and one of them was not employed at Wageningen UR anymore. The interviews with the Dutch respondents (see Table 2) were conducted in Dutch, the other interviews in English.

5.2.2 Description participants

A short description of each participant is given in Table 2. The sample included four men and six women, with the average age of 36 years. Eight participants were Dutch, one was Chinese and one Ugandan. The respondents seemed to be paying attention to their health and scored predominantly healthy according to the criteria of Active Living. One of the respondents decided to make an action plan based on

unexpected results of the tests. Six other people reported to have experienced some room for improvement of their health status, but three of them were already involved in some kind of action plan and the three others did not feel the urge to make an action plan because of a lack of severity to do so. One person reported to be in good health according to the tests, but despite that intended to start exercising as a result of MyBalance.

Table 2: Description respondents interviews participants AFSG.

Resp.	Age	Gender	Nat.	Reason for participation	Self-reported results of the tests	Action plan as a result of MyBalance
1	59	Female	Dutch	Wanted to improve her endurance and to lose weight.	Needs to lose weight and to reduce the cholesterol.	Is now enrolled in a personal programme at a local sports centre and will have an appointment with her GP after three months to check the cholesterol level.
2	40	Female	Dutch	Expected to be in good health and wanted a confirmation of this. Was also curious to find out what the tests would be like.	Turned out to be in good health, but did not meet the norms for exercising and the norm for abdominal girth.	None.
3	38	Male	Dutch	Is currently losing weight and saw MyBalance as an stimulant to pay extra attention to this	Turned out to be in good health, but needs to lose a little more weight.	To go mountain biking twice a week. Continues his own action plan next to that.
4	41	Male	Dutch	Was curious to get to know his health status - 'How am I doing?'	Turned out to be in good health.	None.
5	28	Female	Dutch	Has a chronic disease and has recently been ill for a while. Was interested in how she is doing with respect to physical health now. Was not interested in mental health, because she is already consulting a psychologist for that.	Results of the physical test turned out to be better than expected. During the meeting with the councillor some issues were identified, but no issues where she was not aware of yet.	To start exercising. Continues her own action plan next to that.
6	27	Female	Chinese	Felt like she needed to exercise more and wanted to know her current health status.	Turned out to be in good health, the results of the physical test were better than expected	To start exercising.
7	26	Female	Dutch	Thought it would be nice to participate. Is also currently losing weight and wanted to see you she was doing.	Turned out to be in good health, but still needs to lose weight.	None. Continues her own action plan.
8	27	Male	Dutch	Has heart diseases running in his family and therefore wants to keep track of his own health. Had recently been to a cardiologist, but this cardiologist did not measure the sugar level.	Turned out to be in good health, but a little over weight.	None.
9	42	Female	Dutch	Did not have a health check up for a while and was interested in some aspects of her physical health that had never been measured before..	Turned out to be in good health, but did not meet the norms for exercising.	None.
10	33	Male	Ugandan	Thought it would be good to volunteer, because the programme was probably offered for something beneficial.	Turned out to be in good health, but did not meet the norms for exercising.	None.

5.2.3 Self-rated health status

In order to quickly gain insight in the participants' health states, all participants were asked to rate their own health and to clarify what aspects they took into account while making the assessment. All participants that answered the question rated their own health with a sufficient mark, ranging from 7 to 9,5. Two respondents mentioned the fact that they did not know how to rate their own health as a reason to participate in MyBalance. While making the assessment, most respondents only took physical health into account. They often referred to their weight and diet. After asking them whether or not they included mental health in their assessment, most respondents said they did not do so, but acknowledged the importance of mental health. One respondent explicitly distinguished physical health and well-being when she assessed her own health.

5.2.4 Provision of information about MyBalance

All respondents were asked how they got to know about MyBalance. They all answered to be informed about it by e-mail. Next to that, six respondents mentioned to have read about MyBalance on intranet, either because the page opens automatically or because they had actively looked for information. These people were also asked if they watched the movie on intranet. One person responded she did so, but felt that the movie was too long in duration:

> *Respondent 7: 'Yes, I did watch [the movie]. But it was a lot of talking, and then I thought 'yes..' it may have been shorter. Shorter and more enthusiastic. Boom, is great, nice, you should do this. You will get to know this and this and this. [...] Just very clear, boom boom boom.'*[1]

Seven respondents said they did not communicate with their manager about MyBalance at all. One of the respondents mentioned to have heard about MyBalance from the team manager during an informal team meeting. According to her, the team manager showed to be predominantly positive about MyBalance, but did not explicitly state that he would value it a lot if employees would participate. Respondent 7 said she had asked her manager a question about the costs of participation in MyBalance, but her manager could not answer this question. Eventually, she got an e-mail from the directress from AFSG in which she read that participation would be free. Respondent 9 turned out to have received some additional information about MyBalance because of her relation with the management team of AFSG. She did not personally inform the people at her department about MyBalance but she did arrange that information about MyBalance would be provided via the newsletter of the department. The main aim of this was to inform temporary employees that -even they were not personally invited to participate in MyBalance-, they would be welcome to do so.

Most of the respondents said to have a rough idea of what would happen during the test day and for most of them this was sufficient. Three respondents said to be very well informed about what would happen during the test day. Furthermore, three respondents said to have consulted colleagues or to have been consulted by colleagues for information in order to gain more insight in what could be expected from the test day. Some of the issues that were mentioned as being unclear were whether or not participants had to bring sportswear and what could be expected from the meeting with the councillor.

5.2.5 Reasons to participate in MyBalance

Most participants mentioned interest in and curiosity to their current health status as the main reason they participated in MyBalance. They approached MyBalance as a single measurement to see how they were doing and sometimes mentioned they were especially triggered to participate by the fact that the cholesterol level and sugar level of the blood were measured, because they had never measured those

[1] Ja, [dat filmpje] heb ik toen gekeken. Maar dat was vooral veel gepraat, en toen dacht ik 'ja..' het had korter gemogen. Korter en enthousiaster. Boem, is gaaf, leuk, moet je doen. Je krijgt dit en dit en dit te weten. [..] Gewoon heel duidelijk, boem boem boem.

levels before. Some participants stated that they assumed to be healthy and wanted a confirmation of this. One respondent explicitly mentioned that she appreciated the accessibility of MyBalance:

> *Respondent 2: 'Because the first time, with the pilot, I thought 'oh you really have to have a problem to go there'. This time, it was more put as a sort of check and that it is nice to see how you are doing [..], so that's why I thought 'oh, I am actually curious'.*[2]

However, she also implicitly noted that this easy accessibility may have made it more difficult for people who know they need to improve their health to participate in MyBalance:

> *Respondent 2: 'I pay attention to my health, I am not overweight and I exercise enough, so I dared to go, let me put it like that [laughs]. I think it's easier if you think 'I'm doing everything all right', to go there... [..] I always think it is very brave if people go who just, well, are a little overweight or if you think 'oh, am I feeling okay?'*[3]

The three respondents who were already implementing an action plan before they went to the test day all said that they approached MyBalance as a way to see how they were doing so far. One of them stated that he participated to give his own action plan an 'extra impulse'. Respondent 1 supports this:

> *Respondent 1: 'I always want to improve [my health], but that doesn't always work out. You need to have a big stick'*[4]

All respondents mentioned reasons to participate in MyBalance related to their physical health, but none of them mentioned a reason to participate in MyBalance related to their mental health. One respondent explicitly mentioned not to be interested in her mental health, because she already consults a psychologist for her mental well-being.

5.2.6 Test results

When being asked for the results of the tests, all respondents initially referred to their physical health. The main test results of each respondent are described in Table 2. Most respondents turned out to be in good health and not surprised by the test results. One responded did not expect her cholesterol level to be too high, even though she has had a too high cholesterol level before. Some respondents were positively surprised by the test results.

After being asked for their experiences of the meeting with the councillor, most respondents stated that everything was all right or that the meeting did not give them any new insights. Some of the respondents mentioned to experience some work stress or to have some worries related to their work, but they all took those issues for granted because of the current situation they were in. They reported not to have gotten any advice during the meeting with the councillor for solving their issues. None of the respondents showed to have appreciated the meeting with the councillor a lot.

Action plans and implementation

Four respondents decided to set up some sort of action plan as a result of the test day. Respondent 1 wanted to lower her cholesterol and to improve her condition. She now pays extra attention to her diet and also immediately signed up for an individual course at a local sports centre, which is paid for by

[2] Want de eerste keer had ik, toen die pilot was, dacht ik echt van 'ja, je moet echt wel een probleem hebben wil je daar naartoe gaan'. En nu werd het veel meer gebracht als van nouja een soort van check en het is ook leuk om te kijken hoe je ervoor staat [..], dus daarom dacht ik van 'oh, ja ik ben eigenlijk wel benieuwd'.

[3] Ik let wel op gezondheid, ik ben niet te dik en ik sport genoeg, dus ik durfde er wel heen zal ik maar zeggen [lacht]. Volgens mij is het makkelijker als je namelijk denkt van 'nou dat doe ik allemaal wel goed', om erheen te gaan.. [..] Ik vind het altijd wel knap als mensen erheen gaan die gewoon, ja, toch wat overgewicht hebben of dat je denkt van 'oe, zit ik wel lekker in m'n vel?'.

[4] Ik wil [mijn gezondheid] altijd verbeteren, maar dat lukt meestal niet. Je moet een stok achter de deur hebben.

Wageningen UR. Last year, she also participated in the pilot of MyBalance, but the individual course at the local sports centre was not offered at that time. Even though the course does not take at the organizations' sports centre, it is financed by Wageningen UR. She explicitly stated to appreciate the fact that the course does not take place at the organizations' sports centre:

> *Respondent 1: 'Yes, [in the pilot] it was just for the [organizations' sport centre]. And now, I like that it is also at that gym. That is what I chose to do and I feel it is more nice and pleasant. [..] [Last year] it was just at the [organizations' sports centre]. And then in the middle of all these students, you'll feel.. and if you cannot catch up.. then you cannot do it and then you are not really motivated to hold on to it.'*[5]

In three months, when this course is finished, she will go to her general practitioner to measure her cholesterol level again.

Respondent 3 was already successfully involved in his own action plan to lose weight, but decided at the test day to go mountain biking more often. More specifically, he decided to go mountain biking twice a week, once in the weekend and once on a weekday. He said to have done so for a while right after the test day, but did not hold on to it. By the time of interviewing, it has already been three or four weeks ago since he went mountain biking for the last time. With respect to the implementation of the action plan, he shows to feel positive about the way the advice was formulated:

> *Respondent 3: 'I also have a young family with two little children and sometimes it happens 'I want to exercise, but it just never gets to it' and eh.. yeah then he said 'well, then you do it once on a weekday and once during the weekend'. I thought that was a good advice, because it gives some kind of guidance.'*[6]

With respect to the implementation of the action plan, the respondent repeatedly stated that the councillor was asking too much compared to what was feasible to the respondent:

> *Respondent 3: '.. and then he said 'why don't you just do it?'. And then he was pushing a little bit and then I thought 'what am I doing here?'. Yeah, sometimes it just doesn't get to it'*[7]

> *Respondent 3: 'If it is somewhat possible, I would like to do it, but it has to be practical off course'*[8]

When asked for an action plan, respondent 5 reported not to have set up an action plan, because she was already involved in her own action plan to improve her wellbeing (at work). However, she also said the following:

> *Respondent 5: 'The only thing is that I have not been exercising for a while, because I have been ill for a while, so that is something that I wanted to start doing again, and it was also stimulated to do so, because my condition turned out to be below average, which I already expected.'*[9]

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[5] Ja, [bij de pilot] was het alleen maar voor de [sportcentrum van Wageningen UR] he. En nu, ik vind het wel fijn dat het nu bij die sportschool is. Daar heb ik voor gekozen en dat vind ik toch wel fijner en prettiger. [..] Toen was het alleen bij [het sportcentrum van Wageningen UR]. En dan voel je je tussen al die studenten.. en als je al niet zo mee kan komen.. dan lukt het je niet en dan ben je niet echt gemotiveerd om het vast te houden.

[6] Ik heb nog een jong gezin met twee kleine kinderen en dan is het best wel eens een keer 'ik wil wel sporten, maar het komt er gewoon niet van' en eh.. ja toen zei die 'ja dan doe je het een keer door de weeks en een keer in het weekend'. Dat vond ik wel een goed advies hoor, dan heb je een beetje een richtlijn

[7] ..en ja daarvan iets had ie van waarom doe je dat nou niet? En toen zat hij wel een beetje te pushen en toen had ik wel zo iets van 'wat doe ik hier?'. Ja, dat komt er gewoon vaak ook niet van.

[8] Als het enigszins kan, dan wil ik het wel doen, maar het moet wel praktisch blijven natuurlijk.

[9] Het enige is dat ik een tijdje niet gesport heb, omdat ik een tijdje ziek ben geweest, dus dat is iets wat ik weer wilde oppakken en dat werd ook gestimuleerd om dat te gaan oppakken, omdat m'n conditie onder gemiddeld was, wat ik wel had verwacht ook.

At the time of interviewing, she did not start exercising but was still planning to do so. When being asked why she did not start exercising yet, she first said she did not really know and then mentioned that she had been busy at work. Later on during the interview, when it was discussed what sports she would like to do, she said she might have postponed exercising because she expected it to be a confronting experience:

> *Respondent 5: '..so that are [sports] that I would really like to do, but my condition is just very bad, so .. it is just that... I don't know.. maybe I haven't done it because it is just very confronting, if you start exercising when you are doing so badly.'*[10]

Respondent 6 reported that her test results were better than she expected and that all the results could be considered healthy. However, at the time of the test day, she was not involved in any sports activities and felt it would be better to change this. During the interview, she reported not to have started to exercise yet, because she had been busy visiting a conference and moreover, she needed three hours a day to travel from and to her work. She was planning to start aerobics and swimming the next month, after she had moved closer to her work and the organizations' sports centre.

Respondent 7 did not make an action plan during the test day, but decided to continue her own action plan in losing weight. At the test day, she had asked for more information about a project that should stimulate employees to go to their work by bike. If employees signed up for this project, they would receive a small monetary reward for each kilometre they travelled from or to their work by bike. Respondent 7 did eventually not sign up for this project because she would not make much money with it, because the distance from her house to her work is only two kilometres. Besides, she already travelled by bike, so she decided just to continue to do so.

Critical attitude

When discussing the results of the tests, six of the respondents had some critical remarks about their test results or the norms that were used by Active Living. Three respondents mentioned not to meet Active Living's norms for a healthy amount of exercise while they felt they exercised enough. None of them decided to exercise more often based on the test results.

> *Respondent 2: 'I did not meet the norm for exercising, well I can't imagine that. I don't believe that, that I don't meet the norm, but that may be my own... [..] I play volleyball twice a week, a training and a match, and then, cycling every day to my work and around town to drop off my children, so I think that is pretty eh.. pretty good.'*[11]

> *Respondent 9: 'I did meet the duration, but not the frequency, so I had a low score on that item. [..] Look, I exercise twice a week, I am not going to adjust that. I have three children and work four days a week, so I am glad that I can manage to exercise twice a week'*[12]

Another norm that was mentioned as being too strict is the norm for abdominal girth:

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[10] ..dus dat zijn [sporten] die ik wel echt heel leuk zou vinden, alleen m'n conditie is gewoon heel slecht, dus.. het is een beetje.. ik weet het niet… misschien dat ik het ook nog niet gedaan heb omdat het gewoon heel confronterend is, als je dan weer gaat sporten als het zo slecht gaat.

[11] Ik voldeed ook niet aan de norm van beweging, nou daar kan ik me bijvoorbeeld helemaal niets bij voorstellen. Dat geloof ik helemaal niet, dat dat zo is, maar dat is misschien m'n eigen..[..] Ik volleybal twee keer in de week, een training en een wedstrijd, en dan ja, fietsen iedere dag naar m'n werk en het hele dorp rond om m'n kinderen overal te droppen en weer op te halen, dus dat vind ik best wel eh.. best wel goed.

[12] Ik kwam wel aan de tijd, maar niet aan de frequentie, dus had ik toch een lage score op dat item. [..] Kijk, ik sport 2 keer per week, dat ga ik niet aanpassen. Ik heb drie kinderen en vier dagen werk, dus ik ben blij dat ik twee keer in de week sport.

Respondent 2: 'And my abdominal girth was not all right.. Well, I am.. I said that at the department and everybody said 'oh, in that case I don't dare to go! If you are already too fat.. then eh.. forget about it.' And then I really can't... I really don't get how that is possible.'[13]

Furthermore, several participants had some doubts about the validity of the cycling test. They questioned whether this test was intensive enough to measure condition and whether people who were used to cycling would be advantaged compared to people who are not used to cycling, independent of the amount to which they may be engaged in other sport activities.

Respondent 3: 'Cycling suits me, I think, but running doesn't, so if they would have put me on a running machine, I would probably have had different score.'[14]

Next to that, one respondent mentioned that the results of the cycling test may not have been accurate because the participant has a lot of input in this test, for example when it comes to the intensity:

Respondent 9: 'And what if I am 10% wrong, what kind of effect will that have? But that is merely because of scientific thinking; 'well, how reliable is this and if I say yes now, or later, or if I had said something else, would it have mattered?''[15]

5.2.7 Outcomes of MyBalance for participants

In this paragraph the self-reported outcomes of MyBalance for participants will be discussed. They relate to (changes in) health knowledge, motivation, feelings of control with respect to health and health awareness.

Knowledge about health behaviour

Overall, the respondents seemed to be very well aware of their health and to know a lot about health in general. With respect to physical health, none of the respondents explicitly mentioned to have gained new insights related to healthy behaviour or norms that should be met, excluding the fact that Active Living sometimes used other norms than the participants, which were perceived as being too strict. With respect to wellbeing and mental health, one respondent mentioned to have gained some new insights based on the questions asked in the questionnaire beforehand:

Respondent 2: 'Those questions about ehm.. there were questions about how you are feeling at work, or how ehm.. whether or not you are tired when you get up, -these things did not apply to me-, but they made me think 'oh, so these are questions that give signals about how you feel'. So I thought that was useful to know'.[16]

Knowledge about personal health

All respondents reported to have gotten to know more about their physical health, mainly referring to their cholesterol level, sugar level of the blood and blood pressure. Respondent 1 mentioned she did not know that her cholesterol level was too high and for the other respondents the measured values were 'nice to know' because they had never been measured before or they were considered as a confirmation

[13] M'n buikomvang die was niet goed... Nou, ik ben echt.. ik zei dat hier in de gang en iedereen zei 'nou, dan durf ik niet eens meer te gaan! Als jij al te dik bent, dan eh.. laat maar zitten'. En dan kan ik me ook echt.. snap ik ook niet hoe dat kan.

[14] Fietsen ligt me wel, denk ik, maar hardlopen totaal niet, dus als ze me op een hardloopband hadden gezet, dan had ik een heel andere score gehad waarschijnlijk.

[15] En wat als ik er nu 10% naast zit, wat voor effect heeft dat dan? Maar dat is meer vanuit je wetenschappelijk denken van 'oh ja, hoe betrouwbaar is dit en als ik nu ja zeg of straks of dat ik dan toch iets anders gezegd had, had dat dan uitgemaakt?'

[16] Die vragen over ehm.. er waren allemaal vragen van hoe je in je werk zit ofzo, of hoe eh, of je moe op staat of niet, -dat had ik allemaal niet-, maar toen dacht ik wel ' oh dat zijn vragen die ook signalen geven dat je dan niet goed in je vel zit ofzo' . Dus dat vond ik dan ook wel handig om te weten.

of the expectation that they were healthy. Three respondents mentioned the 'confirmation that they are healthy' as their main outcome of MyBalance.

Condition was another variable that was often mentioned when respondents were asked about the results. None of the respondents reported to know his or her condition exactly before they went to the test day. Some respondents expected their condition to be lower than what it should be. These expectations were in most cases confirmed and in some cases disproved because the condition turned out to be healthy. None of the respondents expected to have a good condition but turned out to be wrong.

With respect to BMI, all respondents who turned out to be overweight reported to be aware of this before they went to the test day. Some respondents mentioned to know their fat percentage before the test day as well, while one other respondent mentioned knowledge about her fat percentage as a valuable outcome of the tests. None of the respondents with a healthy BMI reported to have expected to have an unhealthy weight.

Several respondents mentioned to appreciate the fact participants got an overview of their test results to take home so they could have a second look at it whenever they wanted or even to compare the results in case they would participate in similar tests in the future.

With respect to mental health, none of the respondents said to have gained new insights during the meeting with the councillor and some even said they felt that the meeting with the councillor did not have any additional value at all. About half of the respondents mentioned to feel fine and therefore did not discuss any relevant issues with the councillor in detail. The other half of the respondents did report to experience some stress or issues at work but they also stated they were already aware of this before they went to the test day. One of the respondents who already consults a psychologist and reported not to have gained any new insights of the meeting did report to have gained new insights from filling out the digital questionnaire:

> *Respondent 5: 'But there were also many questions about collaboration with your manager, for example, and how you feel, and that was all, well, for me to get some facts straight that was very useful, it made me think 'oh yes this is true and this isn't'*[17]

Knowledge about facilities that Wageningen UR offers

Even though many respondents turned out to be in good health, all of them were asked if they –due to MyBalance- had gotten to know more about the health related facilities that Wageningen UR offers, more specifically, about the sports centre and/or the courses listed on the intranet page of MyBalance. Two respondents replied that they had gotten to know more about the courses that Wageningen UR offers. Respondent 1 knew about some of the courses before she went to the test day, but did not know the individual course at the local sports centre. Respondent 7 stated that she vaguely knew about the courses before she went to the test day, but now feels more likely to go there once she needs them. Furthermore, three respondents replied that they knew about the courses and five respondents mentioned that they are aware of the fact that they can exercise at the organizations sports centre or already did so.

Motivation to live healthy

All five respondents without any action plan reported not to experience any changes in motivation to live healthy compared to before they participated in MyBalance. All of them intended to continue their lives just the way they did. The two of them who did not meet all the healthy norms for exercising reported not

[17] Maarja er gingen ook heel veel vragen over samenwerking met je leidinggevende, bijvoorbeeld, en hoe zit je zelf in je vel en dat was ook allemaal wel, ja om voor mij dingen op een rijtje te zetten ook allemaal wel handig, dat ik dacht 'oh ja dat is zo, en dat is niet zo'.

to feel any urge to change their behaviour, partly because their critical attitude towards the norms that were used:

> *Respondent 2: 'And if they say things, then I think 'well, is that true?', 'No, I actually don't think so', and then I didn't do anything with what they said.'*[18]

The five respondents with an own action plan or an action plan as a result of MyBalance all reported to feel more motivated to live healthy due to MyBalance and two of them mentioned increased feelings of motivation as their main outcome of MyBalance. However, the issues they mention that have changed their motivation varied a lot. Respondent 1 and 6 reported to be feel more motivated to live healthy because of the results of the tests. They both say that they (always) want to improve their health, and the test results showed some room for improvement. Respondent 3 said to feel more motivated to go mountain biking as a result of the test day, but also admits that he has not been mountain biking for a while at the time of interviewing. Respondent 5 stated that visiting the test day did not increase her motivation that much, except for the fact that her condition turned out to be better than she expected which reduces the barrier to start exercising, but mentioned that filling out the digital questionnaire before she went to the test day increased her motivation to make healthier choices:

> *Respondent 5: 'Well, in the beginning I ate more fruit and vegetables, because I thought 'yes, why don't I just do that? It can't be that hard.' And it has diminished a bit now, but fruit… I do eat more fruit than before I took the test. Even though, off course I knew before that I have to eat two pieces of fruit […] because especially, with all those questions I had to answer, every time I thought 'oh yes, oh yes, oh yes'. I know it, but I don't do it. So that has changed.'*[19]

Respondent 7 initially stated that her motivation to live healthy did not change due to MyBalance. However, she also noted that she considered the results of her tests as a target for future tests. With respect to losing weight and her physical health, she now knows where she is at right now and does not want to score worse in future measurements. She also critically noted that she could have been more motivated to live healthy by the councilor if he had given her a target. A colleague of her got the advice to challenge herself and to sign up for a running contest, which respondent 7 imagined to be very motivating while she herself got a complement on her current weight loss and no further challenge.

One of the recommendations based on the pilot of MyBalance was to provide participants with a questionnaire six months after they went to one of the test days. The main aim of this questionnaire was to motivate people to implement their action plan if they had made one. Out of the ten respondents, one respondent was vaguely aware of the fact that she could expect a second contact moment, because her manager told this in a group meeting. Some of the other respondents indicated that they would have appreciated a second moment, for example because it would be rewarding to measure improvements in their health status after six months or because it would make participants feel that they are not left alone with an action plan. Respondent 6 did not know about the questionnaire, but showed to become more motivated to start exercising at the moment she heard of it:

> *Respondent 6: 'After six months, okay, so I still have some time. I will do it next month, definitely.'*

[18] Als er dan dingen gezegd worden, dan denk je wel van 'nou, is dat zo?', 'Nee, dat vind ik eigenlijk niet', en dan heb ik er dus niets mee gedaan.

[19] Hm.. nou ik heb wel in het begin echt meer fruit en groente gegeten, omdat ik dacht van 'ja waarom doe ik dat eigenlijk niet? Zo moeilijk kan het toch niet zijn.' En het is wel weer een beetje verwaterd, maar met fruit.. fruit eet ik wel echt meer dan voordat ik die test had gedaan. Terwijl, tuurlijk wist ik daarvoor ook wel dat ik twee stuks fruit moest eten, [..] want vooral, volgens mij die vragen die je moest invullen, toen dacht ik echt elke keer 'oh ja, oh ja, oh ja', ik weet het wel, maar ik doe het niet. Dus dat is wel veranderd.

Control over own health

None of the respondents seems to have experienced a sustainable increase in control over his or her own health due to MyBalance. Respondent 1 assumes that her action plan will help to increase her condition and to lower her cholesterol level, but in order to measure the effectiveness, she will have a second measurement of her cholesterol level by her general practitioner after she has finished the course at the local sports centre.

Furthermore, with respect to physical health, all respondents seem to directly relate their health status to their behaviour. They gave various examples of things they do in order to influence their health, most of them related to exercising and nutrition. Respondent 8 admits that he is a little overweight, but does not feel the urge to change his behaviour because he feels he can control it in the future:

> *Respondent 8: 'And if I go running, I'll lose it in a second'*[20]

When it comes to the performance of healthy behaviour, some respondents reported that they do not always feel able to perform the right behaviour, often due to a lack of time. The most prevalent example given is 'wanting to exercise, but not knowing when'. They often stated that they accepted this situation, because of their own priorities. For example, some of the respondents were PhD students who expected to be very busy temporarily, and intended to exercise more often after they had finished their PhD project. Furthermore, two respondents mentioned to experience some work stress, but they both passively attributed this to 'the current situation they were in', without intending to change that current situation.

Health awareness

When being directly asked for what the respondents gained from MyBalance, half of them replied to have experienced an increase in health awareness. Two of them mentioned the questionnaire as the main source of health awareness, while the other three attributed their experienced increase of awareness of their own health to the intervention as a whole.

> *Respondent 10: 'I also learned a lot.. you have to keep a close watch at your daily health, basically. It is not just something that you can take for granted but, because it is directly related to how well you perform at your work or how well you interact with your fellow-colleagues, overall you can improve on your quality of life. So is some kind of.. like wake-up call.'*

5.2.8 Perceived strengths and weaknesses of MyBalance

All respondent had a very positive opinion about the fact that MyBalance is offered to the employees and most of them even added that they would participate again in a few years if they would have the option. Strengths of the intervention that are identified by the respondents are generally the fact that something is offered to employees to make them feel more fit, the fact that participation is voluntary instead of compulsory, and the fact that MyBalance is perceived as very accessible (more accessible than going to a general practitioner). Next to that, many respondents mentioned that they felt that the test days were very well-organized and that the staff was very friendly.

Even though the overall opinion of MyBalance was very positive, all respondents were asked if they would know any points of improvement of MyBalance. The issues that were mentioned by the participants, can be categorized into three groups; communication about MyBalance, the test days, and participation.

With respect to communication about MyBalance, the major point of improvement that was mentioned by multiple participants was communication about follow-up. None of the respondents had read the brochure on intranet in which the three phases of MyBalance were described, so for some of them it was

[20] En als ik een keertje ga hardlopen, dan is het er zo weer af.

unclear what would happen after the test day, especially when no action plan was made. Some respondents had even asked the employees of Active Living or the hostess at the test day, but they could not provide the respondents with satisfying answers. Minor issues that were mentioned to be unclear were whether or not the participants had to bring sportswear and who would pay for the costs of participation in MyBalance. Furthermore, the only respondent who watched the movie on intranet stated that the movie was too long and contained too much talking.

In relation to the test days, several respondents mentioned that they felt the measurements taken could be more extensive or in-depth, although they could not identify what exactly could be added to the list of issues that were measured. Furthermore, two respondents mentioned that the employees of Active Living they met were very young. Especially in the case of young councillors, this may have made the respondents feel inhibited to share their personal problems or may have given them the feeling that the councillors were not capable enough of giving the right advice. Other respondents questioned the quality of the councillor as well, without attributing this to his or her age. Respondent 7 felt that the councillor could have taken a more progressive role:

> *Respondent 7: 'We were allowed to call them, but maybe if a coach notices that you are doing very badly, than it should be the other way around. Like 'hey, this is not okay, in three months we should make a call to see how you are doing' and eh… 'did it improve, or not?'. I think that in that way more will be achieved compared to eh.. if people are not feeling very well, like 'mwah, mwah', than nothing will change.'*[21]

In contrast, respondent 3 felt that the councillor was too pushy:

> *Respondent 3: '[..] someone who says 'Why don't you just do it? Why don't you exercise more often?'. That is a little bit aggressive. Or aggressive, that sounds ehm.. it is pretty direct, like 'you have to' and eh.. that caused a little irritation.'*[22]

Respondent 9 felt that the coaches could have given more concrete advise, adjusted to the target group:

> *Respondent 9: 'I didn't hear many people saying things like 'well, they really gave me... something useful'. While I know that many people have the need for coaching or are looking 'well, how do I get through all these e-mails' or 'how do I deal with that?'. Because you can reason very specifically what the biggest issues are and now it is more like a general tool that is applied. So it could.... yeah it could be a bit more costumer friendly.'*[23]

Another point of improvement she mentioned with respect to tailoring the intervention to the target group was to give participants -next to the printout of the scores related to their physical health- a printout of some of their scores related to the questionnaire they filled out. Many respondents are mainly interested in their physical health, which importance is emphasized by the printout of their scores, while respondent 9 expected that many people in this target group need to pay extra attention to their mental

[21] Je mocht zelf bellen, maar misschien als een coach ziet dat het heel slecht gaat, dat het dan misschien andersom moet werken. Van 'hee dat gaat niet goed, daar moet over drie maanden eens gebeld worden van goh hoe gaat het nu eigenlijk met u?' en eh.. 'is er al wat verbeterd, of niet?'. Ik denk dat daar meer mee bereikt dan eh.. als mensen toch slecht in hun vel zitten van 'mwah, mwah', dan verandert er ook niks.

[22] [..] iemand die dan zegt van 'ja waarom doe je dat dan niet? Waarom doe je niet meer sporten?' Dan gaat dat op een beetje een agressieve manier. Of agressieve, dat klinkt nou eh… of nou wel op een directe manier van 'je moet meer' en eh.. dat wekte wel een beetje irritatie.

[23] Ik heb niet veel mensen gehoord die echt zeiden van 'nou daar heb ik echt nou eens eh.. iets in handen waar ik wat mee kan'. Terwijl ik wel weet dat heel veel mensen behoefte hebben aan coaching of aan het zoeken van 'goh hoe kom ik altijd door die e-mails' of 'hoe ga ik daarmee om?'. Want je kan al heel specifiek beredeneren wat de grootste problemen zijn en dit is nu meer een algemeen tooltje wat je toepast. Dus je zou wel.. ja je zou het al wel klantvriendelijker kunnen maken.

health instead of physical health. A final issue she noted of which she felt it could be better, was the laid-back attitude of the staff she met at the test day:

> *Respondent 9: 'I entered the room, but I found it.. eh.. collegiate in the way people were sitting, hanging, [..] so it made me think like 'if you want to do it this way, then you should not try to work in the Randstad'.'*[24]

Finally, with respect to the participation, a few respondents mentioned that they felt that mainly the healthy employees participated in MyBalance. Even though they acknowledged that it does not have to be a problem when healthy people participate, they stated that more could be gained from MyBalance if the 'unhealthy' people would participate too. Respondent 3 even thought that MyBalance would not be cost-effective due to the selective participation:

> *Respondent 3: 'You invest money in it, and it doesn't yield anything, I don't think so. It will be mainly the healthy people who participate.'*[25]

All respondents who said something about this topic agreed that participation should not be compulsory, because voluntary participation is valued as one of the strengths of the intervention.

5.2.9 Conclusion interviews participants MyBalance AFSG

Based on the results of the interviews with participants of MyBalance, it can be concluded that the participants were generally very positive about MyBalance. Most of the participants in the sample reported to be in good health according to the norms of Active Living. The participants who were advised to improve their health were often well aware of their current health status before they went to the test day and expected the advice or were already implementing an own action plan. With respect to changes in knowledge, all respondents reported to have experienced an increase of knowledge about their own health, mainly referring to their physical health, which was also the part of MyBalance which attracted them the most. Next to that, half of the respondents reported to feel more motivated to live healthy due to MyBalance, and half of the respondents experienced an increase of health awareness. None of the respondents seems to have experienced a sustainable increase in control over his or her own health due to MyBalance. With respect to the communication about MyBalance, the invitation to participate by e-mail and the messages on intranet were the participants' main sources of information about MyBalance. These messages prepared the respondents sufficiently for the test days, but for most participants it remained unclear what would happen after the test days, if anything. Finally, many respondents had some critical remarks about MyBalance. The meeting with the councillor was often put forward as the part of MyBalance that needed the most improvement, because the councillor was not always perceived as being very motivating.

[24] Ik kwam daar de ruimte binnen, maar ik vond het.. ehm.. zeg maar vrij studentikoos in de manier waarop de mensen zaten, hingen, [..] dat ik denk van 'als je het op die manier doet, ga niet in de randstad werken'.

[25] Je stopt er geld in en levert het nou echt heel veel op, dan denk ik het niet. Het zullen vooral de gezonde personen zijn die meedoen.

Intermezzo: questionnaire development

After the interviews with participants of MyBalance were conducted, a questionnaire was developed for measuring the extent to which the answers from the participants applied to the entire group of participants. The non-participants were also invited to fill out a questionnaire. The main aim of this part of the study was to gain insight in the reasons why they did not participate in MyBalance. A flow-chart of the questionnaire can be found in appendix C.

Even though it was known who participated in MyBalance and who did not, the questionnaire started with the question whether or not the respondent had visited one of the test days of MyBalance. In this way, non-participants would not feel accused from not participating in MyBalance, and respondents who had initially set up an appointment but did not go to the test day would only receive the questions applicable to them.

Questions for participants MyBalance

In the questionnaire for participants, the issues raised during the interviews were checked for their relevance for the entire sample. Additionally, some items based on the theoretical framework were included.

First, participants were asked how they became aware of MyBalance and what their main reason(s) to participate was/were, given several options based on the interviews and the option to select multiple options. Next to the given options, they had the opportunity to add extra options by entering them in a text box. In the subsequent question, participants were asked if MyBalance gave them any new insights with respect to their own health. This question and the possible answers were based on the questionnaire used by Van den Hoek (2011).

In the next cluster of questions, it was examined whether or not the participants had made any action plan, to what action areas those plans were related and if and how the participants had implemented them. However, because some respondents during the interviews did not understand what was meant with the term 'action plan', the term 'advice' was used, just as was done in the questionnaire of Van den Hoek (2011). The given action areas to which the advice could be related were based on five themes that were distinguished in the internal documents about MyBalance (Wageningen UR, 2011b), namely exercise, nutrition, alcohol use, smoking and relaxation, supplemented by cholesterol level, sugar level and blood pressure because these items were often mentioned by the interviewees and the options 'job satisfaction' and 'career development' due to the nature of the study. The item for measuring if the participants did anything with the advice they got was based on the questionnaire of Van den Hoek (2011), supplemented by an additional option in case the participant had done something with the advice without using the facilities that Wageningen UR offers to cover all possible options.

In the following part of the questionnaire, the participants were asked to indicate the extent to which they agreed with several statements related to the outcomes of MyBalance, on a 5-point scale. The items were inspired by the questionnaire of Van den Hoek (2011), but strongly adjusted. For measuring changes in motivation, it was decided to include two items, one measuring the perceived increase of motivation right after the test day and one measuring the perceived increase of motivation at the moment of filling out the questionnaire, so possible changes in time with respect to motivation could be identified. Furthermore, in order to avoid confusion related to the meaning of the points on the scale, all statements were formulated in a way that a high score would indicate a lot of change and a low score would mean no

change. Additionally, the scale points were labelled 'not at all', 'slightly', 'moderately', 'very', and 'extremely', as was suggested in a study by Rohrmann (1998) on verbal scale point labels.

The subsequent question was meant to quickly measure how the participants assessed the physical screening, the meeting with the councillor and the communication about MyBalance from Wageningen UR. Assessment was done by rating the elements on a scale of 1 (very bad) to 10 (excellent). Moreover, because the items were presented together, participants were expected to compare the items and rate them relative to each other.

Questions for non-participants MyBalance

As said before, the main aim of the questionnaire among non-participants was to gain insight in their reasons why they did not participate in MyBalance. This questions was asked to the non-participants in an open question, so they would not be steered in answering the question.

Questions for both participants and non-participants

In the next part of the questionnaire, both participants and non-participants were asked to rate their overall health, job satisfaction, performance of their department and performance of Wageningen UR. These items were inspired on the healthy and resilient organization model by Salanova (2009, as cited by Salanova et al., 2011). However, it was chosen to include as few items as possible, which is why the items are not exactly representative for the three elements of the healthy and resilient organization according to Salanova (2009, as cited by Salanova et al., 2011). A five-point scale was used, with scale points labelled 'poor', 'fair', 'good', 'very good', and 'excellent' in order to establish a unambiguous meaning of the scale-points among all respondents.

The item to measure the health of the employees was adopted from Cunny and Perri (1991), who showed support that this was the best item to measure self-rated health with one item. In relation to healthy practices and resources, the respondents were asked to indicate how satisfied they were with their jobs. Dolbier et al. (2005) identified the item 'Are you satisfied with your job as a whole?' as a valid single-item to measure job satisfaction. However, because this formulation did not fit the chosen scale, the item was formulated as 'How would you rate your satisfaction with your job as a whole?'. Measuring organizational output was done by asking the respondents how they would rate the performance of their own department and the performance of the organization, allowing to gain insight in how the employees think their department is relatively doing.

After the main questions, participants and non-participants were given the option to write their comments and suggestions for improvement for MyBalance.

In the last part of the questionnaire, participants and non-participants were asked how they would categorize their jobs (based on the different groups of employees that were invited for MyBalance), their gender and age. If the respondents indicated that they were employed at AFSG, they were asked if they had participated in the pilot of MyBalance and if so, if they had noticed any differences between the pilot and the large-scale implementation of MyBalance. This was an open question, so respondents would not be steered in their answers and feel free to address anything they wanted.

5.3 Results questionnaires participants AFSG and CS+

The results of the questionnaires among participants of MyBalance from both AFSG and CS+ will be discussed in this paragraph. After the analysis of the composition of the group of respondents, it will be described how respondents became aware of MyBalance, what their reasons to participate were and if they got any new insights, advices to work on and other outcomes in terms of health knowledge, motivation, control over their own health and behavioural changes. Subsequently, a short over assessment of MyBalance according to the respondents will be given, and their comments and suggestions for improvements will be shortly discussed.

5.3.1 Response rate

As stated above, 237 participants from AFSG and 114 participants from CS+ were invited for quantitative research. Of these 351 participants, 228 participants started to fill out the questionnaire (response rate = 65.0%). Four respondents were excluded from the analysis, because they only answered the first question of the survey. The data from the remaining 224 respondents were analysed (response rate = 63.8%)

5.3.2 Examination of the possible differences between groups of participants

Because MyBalance is a workplace health promotion intervention, it was first examined whether there were any differences between several groups based on the department the respondents were employed or the functions they had. Respondents were asked how they would categorize their job, with the options AFSG/CS+ and within AFSG the options DLO/WU and scientific/supportive staff. Nine of the 224 respondents did not indicate how they would categorize their jobs, so they were not included in the analyses. The analyses were done by means of independent sample t-tests, taking p=0.05. The respondents in the different groups were compared with respect to how they rate their own overall health and job satisfaction. Additionally, it was checked whether there were any significant differences between the groups with respect to age and gender (1=male, 2=female), but less importance was given to these demographic characteristics due to the nature of the study. According to Levine's test for equality of variances, in most cases equal variances could be assumed. It will be indicated if this was not the case.

The first groups of respondents that were compared were the respondents from DLO, distinguished based on having a scientific or supportive function. The scientific and supportive staff of DLO turned out to be similar with respect to self-rated health (t(47)=0.276, p=0.784), job satisfaction (t(47)=0.861, p=0.394), and age (t(45)=-0.369, p=0.714), but the composition of the groups differed significantly with respect to gender (t(24.091)=-2.391, p=0.025, equal variances not assumed); the scientific staff from DLO included 58.3% men and 41.7% women and the supportive staff included 23.1% men and 76.9% women. Because more importance is given to self-rated health and job satisfaction, the groups will be considered similar.

Next, the respondents from WU were compared based on having a scientific or a supportive function. The scientific and supportive staff of WU turned out to be similar with respect to self-rated health (t(94)=-2.46, p=0.806), job satisfaction (t(94)=-0.706, p=0.482), and gender (t(94)=0.744, p=0.459), but the scientific staff turned out to be significantly younger (M=34.48, SD=11.038) than the supportive staff (M=45.54, SD=10.313, t(89)=-4.820, p=0.000). Again, because more importance is given to the self-rated health and job satisfaction, this differences will be ignored for further analyses.

Considering the respondents from DLO and the respondents from WU homogeneous groups, the two groups were compared based on the same characteristics as before. No significant differences between the respondents from DLO and the respondents from WU with respect to self-rated health (t(143)=-1.404, p=0.162), job satisfaction (t(143)=-0.769, p=0.443), and gender (t(143)=-1.202, p=0.231) could be identified, but the respondents from DLO turned out to be significantly older (M=44.06, SD=9.192) than the respondents from WU (M=38.98, SD=12.006, t(116.529)=2.766, p=0.007, equal variances not

assumed). Because the groups only differ with respect to age, but not with respect to self-rated health or job satisfaction, the groups will be considered similar and treated as one group; employees of AFSG.

In the next step, the respondents from AFSG and the respondents from CS+ were compared. The groups turned out to be similar with respect to self-rated health ($t(213)=0.454$, $p=0.650$), job satisfaction ($t(213)=-0.403$, $p=0.687$), and gender composition ($t(213)=0.287$, $p=0.774$), but the respondents from AFSG were significantly younger ($M=40.71$, $SD=11.354$) than the respondents from CS+ ($M=47.59$, SD=9.778, $t(132.243)=4.350$, $p=0.000$, equal variances not assumed). Again, more importance is given to the similarity of the self-rated health and job satisfaction due to the nature of the study, which is why the groups will be considered similar.

Finally, the participants were compared based on their function; either scientific or supportive, in which all respondents of CS+ were considered supportive staff. The scientific and supportive staff turned out to be similar with respect to self-rated health ($t(213)=-0.420$, $p=0.675$), job satisfaction ($t(213)=0.085$, $p=0.932$), and gender composition ($t(213)=-0.743$, $p=0.458$), but the scientific staff turned out to be significantly younger ($M=38.13$, $SD=11.288$) than the supportive staff ($M=46.61$, $SD=9.887$, $t(176.307)=-5.563$, $p=0.000$, equal variances not assumed).

Taken the previous analyses together, it can be concluded that no significant differences with respect to self-rated health or job satisfaction could be identified within the groups of participants of MyBalance. However, the respondents that classified themselves as 'scientific staff from WU' turned out to be much younger ($M=34.48$, $SD=11.038$) than the other respondents. Because more importance is given to differences in non-demographic variables due to the nature of the study, the results of the quantitative research will not be separated by age group. Even though no differences could be identified with respect to self-rated health and job satisfaction between the employees of the different departments, some of the results will be specified to department (AFSG or CS+), because different procedures regarding communication were applied in these departments with respect to the implementation of MyBalance.

5.3.3 Description participants

In Table 3, the demographic characteristics of the participants of MyBalance that responded to the survey are described, specified by department they are employed. The response rate in the table refers to the number of participants that filled out the questionnaire as a part of the number of participants of MyBalance. Nine respondents could not be categorized with respect to the department they are employed (either AFSG or CS+), so the given response rates are lower than the actual response rates.

Table 3: Descriptive statistics participants MyBalance.

	AFSG	CS+	Overall	Missing values
Response rate[1] (%)	(145/237)*100=61,2	(70/114) *100=61,4	(224/351)*100=63,8	N=9
Gender (m/f)	61 / 84	28 / 42	91 / 129	N=4
Age in years[2]	*M* = 40.7 *SD* = 11.4 (N=138)	*M* = 47.6 *SD* = 9.8 (N=61)	*M* = 43.0 *SD* = 11.4 (N=204)	N=20

[1] *Response rate = ($N_{respondents}$ / $N_{participants\ MyBalance}$) * 100*
[2] *Mean (M) and standard deviation (SD)*

5.3.4 How participants became aware of MyBalance

All respondents were asked how they became aware of MyBalance, given various options and the ability so select multiple answers. Table 4 shows the frequency that a given option was selected and the percentage of the population that selected that option.

Table 4: How participants became aware of MyBalance, frequencies and percentages.

	AFSG (N=145)		CS+ (N=70)		Unknown (N=9)		Overall (N=224)	
	N	%	N	%	N	%	N	%
Invitation by e-mail	121	83.4	56	80.0	7	77.8	**184**	**82.1**
Intranet	46	31.7	21	30.0	2	22.2	**69**	**30.8**
Movie on intranet	8	5.5	2	2.9	-	-	**10**	**4.5**
My manager told me about it	16	11.0	14	20.0	2	22.2	**32**	**14.3**
Mo colleagues told me about it	12	8.3	13	18.6	2	22.2	**27**	**12.1**
Other	3	2.1	3	4.3	-	-	**6**	**2.7**

As the table shows, most of the respondents found out about MyBalance due to the invitation by e-mail and for 115 respondents, this was the only source that made them became aware of MyBalance. Intranet ranks second in the list of how respondents became aware of MyBalance. An interesting difference between the respondents of AFSG and the respondents of CS+ is the number of people that heard about MyBalance from his or her manager; of the respondents of AFSG 11.0% indicated to have heard about MyBalance from his or her manager (none of them categorized his or her job as 'WU, scientific staff'), while 20% of the respondents of CS+ heard about MyBalance from their manager. A similar difference could be identified between the number of participants that heard about MyBalance from colleagues; 8.3% of the respondents from AFSG versus 18.6% from the respondents of CS+. The movie on intranet was viewed by 10 respondents, who represent 4.5% of the total number of respondents.

5.3.5 Reasons to participate

The respondents were asked what their main reason(s) to participate was/were. Several options were given, and respondents had the opportunity to select multiple answers. Table 5 describes the frequency a certain answer was selected, specified by department the participants were employed and the percentage of the total number of respondents of that department that selected the answer.

Table 5: Reasons to participate in MyBalance, frequencies and percentages.

	AFSG (N=145)		CS+ (N=70)		Unknown (N=9)		Overall (N=224)	
	N	%	N	%	N	%	N	%
I wanted to know more about my physical health	100	69.0	45	64.3	5	55.6	**150**	**67.0**
I wanted to know more about my mental health	36	24.8	11	15.7	5	55.6	**52**	**23.2**
I wanted a confirmation that I am healthy	60	41.4	33	47.1	2	22.2	**95**	**42.4**
I had some problems regarding my physical and/or mental health	16	11.0	7	10.0	-	-	**23**	**10.3**
It was requested by the manager	3	2.1	6	8.6	-	-	**9**	**4.0**
Something else	11	7.6	7	10.0	2	22.2	**20**	**8.9**

As the results show, 67% of the respondents reported to have participated in MyBalance because they were interested in their physical health. The reason 'I wanted a confirmation that I am healthy' was selected by 42.4% of the participants and ranks second in the list of most selected reasons. Interest in mental health was less often mentioned as reason to participate in MyBalance; 23.2% of the respondents selected this option.

Twenty respondents selected 'something else'. Eleven respondents clarified that they were curious, of which some added that they were curious for the results and others that they were curious for what would be tested and how the tests would be conducted. Four respondents said they wanted to improve their health and went to MyBalance for help.

5.3.6 New insights due to MyBalance

Table 6 describes how often several answers were selected on the question whether or not MyBalance provided the respondents with new insights on their personal health.

Table 6: New insights due to MyBalance, frequencies and percentages.

	AFSG (N=145)		CS+ (N=70)		Unknown (N=9)		Overall (N=224)	
	N	%	N	%	N	%	N	%
No	54	37.2	24	34.3	4	44.4	**82**	**36.6**
Yes, in my physical health	80	55.2	44	62.9	5	55.6	**129**	**57.6**
Yes, in my mental health	16	11.0	7	10.1	3	33.3	**26**	**11.6**
Yes, in the facilities that Wageningen UR offers	12	8.3	1	1.4	1	11.1	**14**	**6.3**
Yes, in something else	2	1.4	-	-	1	11.1	**3**	**1.3**

As the results show, 36.6% or the respondents reported that they did not gain any new insights with respect to their health. This means that 63.4% of the respondents did gain new insights. Almost all members of this group reported to have gained new insight in their physical health. The respondents that reported to have gained more insight in something else clarified that 'the tested things were okay', that they got 'tips about finding a balance' and that they got insight in 'lifestyle'.

Table 7: Cross tabulation physical health

		Wanted to know more about physical health	
		Yes	No
Got to know more about physical health	Yes	100	29
	No	50	45

Table 8: Cross tabulation mental health

		Wanted to know more about mental health	
		Yes	No
Got to know more about mental health	Yes	16	10
	No	36	162

However, comparing the respondents that wanted to know more about their physical or mental health with those who got to know more about these aspects of their health (as is done in respectively Table 7 and Table 8), it turns out that several respondents reported to have gotten to know more information about their physical and/or mental health while they were not initially interested in this. Vice versa, there were also respondents who did not get to know more about their mental and/or physical health while their interest in this was a reason to participate in MyBalance in the first place.

5.3.7 Advices the respondents got

Because some respondents of the interview did not understand what was meant with an 'action plan' the respondents of the questionnaire were asked if they had gotten any advice from the person two took the physical measurements or from the councillor. Of the 224 respondents, 131 respondents (58.5%) reported to have gotten some advice. Table 9 shows the action areas to which they reported the advice(s) was/were related. Respondents were given several options and could select multiple answers.

Table 9: Action areas of the advice, frequencies and percentages.

	AFSG (N=81)		CS+ (N=45)		Unknown (N=5)		Overall (N=131)	
	N	%	N	%	N	%	N	%
Exercise	45	55.6	24	53.3	3	60.0	**72**	**55.0**
Nutrition	11	13.6	10	22.2	1	20.0	**22**	**16.8**
Alcohol	2	2.5	1	2.2	-	-	**3**	**2.3**
Smoking	2	2.5	2	4.4	-	-	**4**	**3.1**
Relaxation	21	25.9	9	20.0	1	20.0	**31**	**23.7**
Cholesterol-level	9	11.1	11	24.4	2	40.0	**22**	**16.8**
Sugar level	3	3.7	2	4.4	-	-	**5**	**3.8**
Blood pressure	9	11.1	6	13.3	-	-	**15**	**11.5**
Job satisfaction	13	16.0	9	20.0	-	-	**22**	**16.8**
Career development	5	6.2	2	4.4	-	-	**7**	**5.3**
Something else	7	8.6	1	2.2	-	-	**8**	**6.1**

Of the eight respondents who reported to have gotten advice in another action area than the given options, six respondents said their advice was to lose weight, without specifying how they would do this.

The 131 participants who said to have gotten some sort of advice from either the person who took their physical screening or the councillor, rated the advice on average as 6.82 (*SD*=1.627) on a scale of 1 (very bad) to 10 (excellent). The participants from AFSG gave on average a score of 6.93 (*SD*=1.473) and the participants from CS+ gave an average score of 6.60 (*SD*=1.924), but these scores do not differ significantly ($t(73.070)=0.987$, $p=0.327$, equal variances not assumed).

Of all respondents who rated their advice, 26 respondents added an explanation to the score they gave. Some respondents who gave the low scores added that the advice was not tailored enough, for example because no concrete action plan was made or because the used standards for physical health were directed at Dutch people, while non-Dutch people participated in MyBalance as well. Interesting explanations from the respondents who gave the advice a 5 or 6 were that they would have expected a more detailed advice or more detailed tests, (for example more detailed tests to measure cholesterol), that they did not get any new advice and were not motivated to change their behaviour with the current advice, and that they felt they did not get enough advice with respect to their specific situation. Respondents who gave their advice a 7 or higher added that the advice they got was 'logical', formulated in a way that they could implement it, motivating, relevant and/or personal.

In the next question, respondent were asked if they did anything with the advice they got, given various options and the opportunity to select one of them. Table 10 shows the results.

Table 10: Reported action taken after receiving advice, frequencies and percentages.

	AFSG (N=81)		CS+ (N=45)		Unknown (N=5)		Overall (N=131)	
	N	%	N	%	N	%	N	%
Yes, I did so using the facilities that Wageningen UR offers	8	9.9	3	6.7	0	1	**11**	**8.4**
Yes, I changed my behaviour without the facilities of WUR	35	43.2	24	53.3	3	60	**62**	**47.3**
Yes, something else: …	6	7.4	6	13.3	1	20	**13**	**9.9**
No, because: …	32	39.5	12	26.7	1	20	**45**	**34.4**

Of the thirteen respondents who selected the option "Yes, something else: ..", twelve respondents clarified their answer. Seven of them said that they had been to their general practitioner, and three increased their awareness with respect to the action area(s) they got advice to. Furthermore, 39 of the 45 respondents who selected the option "No, because:...", added a clarification too. Nineteen of them clarified that they did not do anything with the advice they got *yet* or that the advice they got could not be implemented on the short term. Eleven respondents said that they got the advice to continue the way they did or that it was 'not really necessary' to change something. Seven respondents reported that they did not do anything with the advice because the advice was bad, not specific enough or not new to them.

5.3.8 Outcomes of MyBalance

All respondents were asked to what extent their motivation to live healthy had increased, to what extent they learned how to live more healthy and if they changed their behaviour, all due to the test day. Scores were given on a 5-point scale, 1=not at all, 2=slightly, 3=moderately, 4=very, 5= extremely. In Table 11, the mean scores (M) and standard deviations (SD) are given.

Table 11: Mean scores and standard deviations for outcomes on motivation, knowledge, control and behaviour due to MyBalance

	AFSG	CS+	Overall
MyBalance increased my motivation to live healthy right after the test day	*M* = 2.28 *SD* = 1.094 (N=142)	*M* = 2.26 *SD* = 1.171 (N=69)	*M* = 2.28 *SD* = 1.119 (N=216)
MyBalance increased my motivation to live healthy now	*M* = 2.17 *SD* = 0.959 (N=143)	*M* = 2.16 *SD* = 1.039 (N=67)	*M* = 2.18 *SD* = 0.989 (N=215)
Due to MyBalance, I learned how to live more healthy	*M* = 1.61 *SD* = 0.819 (N=140)	*M* = 1.54 *SD* = 0.700 (N=68)	*M* = 1.61 *SD* = 0.798 (N=213)
Due to MyBalance, I feel more in control over my own health	*M* = 1.81 *SD* = 0.960 (N=142)	*M* = 1.68 *SD* = 0.899 (N=69)	*M* = 1.77 *SD* = 0.936 (N=216)
Due to MyBalance, I changed my behaviour	*M* = 1.68* *SD* = 0.828 (N=142)	*M* = 2.06* *SD* = 1.056 (N=69)	*M* = 1.81 *SD* = 0.922 (N=216)

Scores were given on a 5-point scale, 1=not at all, 2=slightly, 3=moderately, 4=very, 5= extremely

** Significant difference between participants from AFSG and CS+, taking p=0.05.*

Frequency graphs are attached in appendix D. As the table shows, the respondents scored on average somewhere between 'not at all' and 'slightly' when they rated the extent to which they learned how to live more healthy, the extent to which they feel more in control over their own health due to MyBalance and the extent to which they changed their behaviour due to MyBalance. On average, they report to have felt more motivated to live healthy right after the test day than they feel motivated to live more healthy now, and both values are between 'slightly' and 'moderately'.

Additionally, it was tested whether there were any significant differences between the scores on the statements from the respondents who did get any advice at the test day, and the respondents who did not. As Table 12 shows, the respondents who got advice scored significantly higher on all items, taking p=0.05. The frequencies that answers were given are reported in the graphs in appendix E.

Table 12: Comparison outcomes MyBalance for respondents with and without advice.

	Advice	No advice	Independent sample T-test
MyBalance increased my motivation to live healthy right after the test day	M = 2.53 SD = 1.132 (N=129)	M = 1.91 SD = 0.996 (N=87)	$t(199.493) = 4.238$ p = 0.000*
MyBalance increased my motivation to live healthy now	M = 2.41 SD = 0.959 (N=128)	M = 1.84 SD = 0.938 (N=87)	$t(213) = 4.292$ [1] p = 0.000*
Due to MyBalance, I learned how to live more healthy	M = 1.81 SD = 0.861 (N=127)	M = 1.30 SD = 0.575 (N=86)	$t(210.973) = 5.168$ p = 0.000*
Due to MyBalance, I feel more in control over my own health	M = 1.91 SD = 0.968 (N=130)	M = 1.56 SD = 0.849 (N=86)	$t(214) = 2.726$ [1] p = 0.007*
Due to MyBalance, I changed my behaviour	M = 2.15 SD = 0.923 (N=128)	M = 1.33 SD = 0.673 (N=88)	$t(213.214) = 7.536$ p = 0.000*

Scores were given on a 5-point scale, 1=not at all, 2=slightly, 3=moderately, 4=very, 5= extremely.
** = Significant difference, taking p=0.05.*
[1] *Equal variances assumed according to Levine's test for equality of variances, taking p=0.05.*

5.3.9 Short assessment of MyBalance

All respondents were asked to rate the physical screening, the meeting with the councillor and the communication about MyBalance from Wageningen UR on a scale of 1 (very bad) to 10 (excellent). The 220 respondents who gave their scores assessed the physical screening on average with a 7.11 (SD=1.480), the meeting with the councillor with a 6.34 (SD=1.772) and the communication about MyBalance from Wageningen UR with a 7.22 (SD=1.130). On all aspects, the respondents from AFSG gave slightly higher scores compared to the respondents from CS+, but no significant differences were found (physical screening: $t(213)$=0.242, p=0.809; meeting with councillor: $t(213)$=0.146, p=0.884; communication: $t(213)$=0.840, p=0.402).

5.3.10 Assessment health, job satisfaction, performance of the department and organization

Both participants and non-participants were asked to rate their own health, job satisfaction, the performance of the department they work and the overall performance of the organization. Table 13 describes the scores the non-participants gave on a 5-point scale, 1=poor, 2=fair, 3=good, 4=very good, 5= excellent.

Table 13: Mean scores and standard deviations assessment health, job satisfaction, performance department and organization.

	AFSG	CS+	Overall
Compared with other people your age, how would you rate your own health?	*M* = 3.10 *SD* = 0.761 (N=145)	*M* = 3.16 *SD* = 0.911 (N=70)	*M* = 3.13 *SD* = 0.831 (N=220)
How would you rate your satisfaction with your job as a whole?	*M* = 3.18 *SD* = 0.863 (N=145)	*M* = 3.13 *SD* = 0.867 (N=70)	*M* = 3.16 *SD* = 0.881 (N=220)
How would you rate the performance of the department you work?	*M* = 3.26 *SD* = 0.753 (N=145)	*M* = 3.07 *SD* = 0.754 (N=69)	*M* = 3.19 *SD* = 0.758 (N=219)
How would you rate the overall performance of Wageningen UR?	*M* = 3.11 *SD* = 0.660 (N=144)	*M* = 3.13 *SD* = 0.731 (N=68)	*M* = 3.12 *SD* = 0.681 (N=217)

Scores were given on a 5-point scale, 1=poor, 2=fair, 3=good, 4=very good, 5= excellent.

As the results show, all respondents rate all aspects somewhere between 'good' and 'very good'. In addition to this, no significant differences between the respondents from AFSG and the respondents from CS+ could be identified. In paragraph 5.5, the results from the participants and non-participants will be compared.

5.3.11 Comparison large scale implementation of MyBalance with the pilot

All respondents that did not select the option "Concern staff +" while categorizing their job were asked if they participated in the pilot of MyBalance last year. Of all 150 respondents who got the question, nine respondents indicated they participated in the pilot of MyBalance last year. They were asked in an open question if they had noticed any differences between the pilot and the large-scale implementation of MyBalance in the next question. Six respondents answered that they did not notice any differences. Two respondents mentioned that they got information about nutrition last year, but did not get the information this year and one of them also said to have gotten information about the facilities that Wageningen UR offers last year, but not this year. Finally, one respondent indicated that the appointment system was better this year and that MyBalance was perceived as 'more efficient'.

5.3.12 Comments and suggestions for improvements

In one of the final questions of the questionnaire, the respondents were given the opportunity to give comments and/or suggestions for improvements on MyBalance. They will be described below. Even though many issues raised can be both considered as a comment or suggestion for improvement, they will be reported under the heading that the respondents gave to it. Because of the low number of responses to these questions, no distinction between answers from employees of AFSG and answers from employees of CS+ will be drawn.

Comments on MyBalance

A total number of 74 relevant comments was given on MyBalance, of which some comments were related to multiple aspects of MyBalance. In Table 14, some topics that were often addressed are listed, including some issues that were frequently reported regarding these topics. A more complete and detailed description of the comments is given in appendix F.

Table 14: Overview common topics for comments and their frequency

Topic	Frequency
General appreciation of the programme	18
Tests and accuracy of the tests - Tests were too basic or minimal (e.g. no specification HLD and LDL while measuring cholesterol level of the blood) - Individual problems (e.g. injuries) did not allow the participant to do the cycling test and no alternative test was offered	18
Competences of employees of Active Living - They were not able to answer all questions (e.g. because they were too young) - They did not always give useful advice - They did not seem to have proper education - The meeting was too superficial	16
Follow-up after the test day - Participants indicated that they would like to participate again or to have a similar test in the near future - Some participants complained that 'nothing was done' with their test results	16
MyBalance did not meet the expectations it raised - Participants expected a long-term programme instead of a single screening	4
Practical issues related to communication about MyBalance	5

Suggestions for improvements

Of all respondents, 65 respondents gave one or more suggestions for improvements. However, because some of the suggestions were considered irrelevant or too vague to analyse, eventually 59 suggestions for improvement of MyBalance were analysed. In Table 15, some topics that were often addressed are listed, including some issues that were frequently reported regarding these topics. A more complete and detailed description of the comments is given in appendix G.

Table 15: Overview common topics for suggestions for improvements and their frequency

Topic	Frequency
Tests and accuracy of the tests - More tests should be included (e.g. specification HLD and LDL while measuring cholesterol level of the blood) - Cycling tests does not give accurate results, it should be accompanied by additional test - Various suggestions in favour and against including a meeting with a councillor	19
Competences of employees of Active Living - They need to have a higher level of professionalism	23
Follow-up after the test day - It will be good if MyBalance is offered on a regular basis - There should be follow-up shortly after the test days	10
Practical issues - Communicate if people have to bring sports wear - Find a better location or arrange it better	5
Practical issues related to communication about MyBalance - Better communication about what can be expected of MyBalance	7

5.3.13 Summary main results questionnaire participants MyBalance

The results of the questionnaires among participants of MyBalance show that most respondents found out about MyBalance due to the invitation by e-mail and/or information on intranet. Two thirds of the respondents were interested in their physical health, and about a quarter in their mental health. Up to 42.4% of the respondents indicated to have participated in MyBalance because they wanted a conformation that they were healthy. However, MyBalance did not accomplish the expectations of all respondents. From all respondents, 57.6% reported to have gotten new insights due to MyBalance with respect to their physical health, and 11.6% with respect to their mental health, and some of them did not select this interest as a reason to participate in MyBalance. Of the 224 respondents, 132 respondents reported to have gotten health related advice during the test day. Most advices were related to exercising, relaxation, job-satisfaction and cholesterol-levels. The advices were given on average a 6.82 on a scale of 1 (very bad) to 10 (excellent). At the time of filling out the questionnaire, 65.6% of the respondents that got any advice reported to have done something with the advice. When assessing increases in motivation to live healthy, respondents report that the statements apply 'not at all' to 'slightly' to them, and when assessing increases in health knowledge, perceived control over their own health and changes in behaviour, the respondents report that the statements apply 'slightly' to 'moderately' to them. When rating their own health, job satisfaction, performance of the department they work and performance of the organization, respondents score 'good' to 'very good' on all items. In a short assessment of some elements of MyBalance, respondents give the physical screening a 7.11, the meeting with the councillor a 6.34 and the communication about MyBalance a 7.22 on a scale of 1 (very bad) to 10 (excellent). Many respondents gave comments and suggestions for improvements on the accuracy of the tests, the competences of the employees they met on the test day (especially the councillors) and communication in order to raise the right expectations of the test days and provide potential participants with sufficient information. Next to that, some respondents gave suggestions in favour of follow-up after the test day.

5.4 Results questionnaires non-participants AFSG and CS+

All non-participants from both AFSG and CS+ were invited by e-mail to fill out a digital questionnaire. The results of their questionnaires will be described in this paragraph. First, the composition of the group of respondents will be examined and described, followed by the reported reasons not to participate in MyBalance and the respondents' assessments of their own health, job satisfaction, performance of the department they work and the overall performance of Wageningen UR. Finally, the comments and suggestions for improvements will be discussed.

5.4.1 Response rate

As discussed before, 649 non-participants from AFSG and 249 non-participants from CS+ were invited for qualitative research. Of the 896 non-participants, 221 participants started to fill out the questionnaire (response rate = 24.7%), but 31 responses were excluded from the analysis because the corresponding respondents only answered the question whether or not they went to the sports centre for one of the test days. The data from the remaining 190 respondents were analysed (response rate = 21.2%).

5.4.2 Examination of possible differences between groups of non-participants

The non-participants from the different departments of Wageningen UR were compared with an independent sample t-test in order to identify possible significant differences between the groups. It should be noted that 23 respondents could not be categorized with respect to the department they are employed, so these respondents were not included in the analyses. The groups were compared with respect to demographic composition of the group (age and gender, 1=male and 2 =female) and with

respect to how they rated their own overall health and job satisfaction, taking p=0.05. According to Levine's test for equality of variances, in all cases except one, equal variances could be assumed.

First, a comparison was made between the scientific and supportive staff from DLO. No significant differences between the scientific and the supportive staff from DLO with respect to age (t(15)=-0.638, p=0.533), gender (t(15)=1.265, p=0.225), self-rated overall health (t(15)=1.137, p=0.274) and job satisfaction (t(15)=-0.783, p=0.446) could be identified. Therefore, the groups of respondents from the scientific and supportive staff from DLO will be considered similar and therefore treated as one group.

Next, the scientific and the supportive staff from WU were compared. No significant differences between the scientific and the supportive staff from WU with respect to gender (t(86)=-0.681, p=0.498), self-rated overall health (t(85)=0.744, p=0.549) and job satisfaction (t(85)=0.675, p=0.502) could be identified. The respondents from the scientific staff turned out to be significantly younger (M=32.07, SD=8.526) than the respondents from the supportive staff (M=43.86, SD=12.226, t(28.704)=-4.111, p=0.000, equal variances not assumed). However, because more importance is given to self-rated overall health and job comparison than to demographic characteristics due to the nature of the study, the respondents from the scientific and the supportive staff from WU will be considered similar and therefore treated as one group.

In the subsequent step, the staff from DLO and the staff from WU were compared with respect to the same characteristics as before. No significant differences between the staff from DLO and the staff from WU with respect to gender (t(103)=-1.209, p=0.229), self-rated overall health (t(102)=0.452, p=0.652) and job satisfaction (t(102)=-1.533, p=0.128) could be identified, but the staff from DLO turned out to be significantly older (M=40.88, SD=9.212) than the respondents from the staff from WU (M=35.14, SD=10.866, t(98)=2.031, p=0.045). Again, because more importance is given to self-rated overall health and job comparison instead of demographic characteristics due to the nature of the study, the respondents from the staff from DLO and the staff from WU will still be considered similar.

Another dimension along which the non-participants that filled out the questionnaire could be compared was whether they were employed as scientific staff or as supportive staff, independent of the categorization as employee at AFSG or CS+, considering all employees at CS+ supportive staff. No significant differences between the scientific and the supportive staff with respect to gender (t(165)=0.510, p=0.742) and self-rated overall health (t(165)=2.633, p=0.351) could be identified, but the scientific staff turned out to be significantly younger (M=33.47, SD=9.140) than the supportive staff (M=45.88, SD=10.385, t(155)=-7.904, p=0.000) and more satisfied with their jobs (M=3.58, SD=0.712) than the supportive staff (M=3.27, SD=0.769, t(164)=2.633, p=0.009). Again, more importance is given to the self-rated overall health and the job satisfaction than to the demographic characteristics of both groups, which is why the significant difference in average ages of both groups will be ignored for further analyses. Without including the employees of CS+ in this analysis, no significant difference between the scientific and supportive staff with respect to job satisfaction could not be proven (t(102)=0.939, p=0.350), so in a final analysis, the respondents from AFSG will be compared to the respondents of CS+ in order to identify relevant differences between those groups of non-participants.

No significant differences between the employees of AFSG and the employees of CS+ were found with respect to gender (t(165)=-0.573, p=0.568) or self-rated overall health (t(164)=-0.134, p=0.894), but the groups differed significantly with respect to age and job satisfaction. The respondents from AFSG turned out to be significantly younger (M=36.12, SD=10.780) than the respondents of CS+ (M=46.89, SD=9.676, t(155)=6.246, p=0.000). With respect to job satisfaction, the respondents from AFSG turned out to score higher on the item for job satisfaction (M=3.54, SD=0.723) than the respondents from CS+ (M=3.21, SD=0.771, t(164)=-2.764, p=0.006). Therefore, in the following part of this paragraph, the results will be specified with respect to job categorization; AFSG or CS+.

5.4.3 Description non-participants

Descriptive demographic data of the non-participants is are outlined in Table 16. With respect to the response rates, it should be noted again that 23 respondents could not be categorized with respect to the department they are employed (either AFSG or CS+), and therefore the given response rates are lower than the actual response rates.

Table 16: Descriptive statistics non-participants MyBalance.

	AFSG	CS+	Overall	Missing values
Response rate[1] (%)	(105/647)*100=16,2	(62/249) *100=24,9	(190/896)*100=21.2	N=23
Gender (m/f)	36 / 69	24 / 38	63 / 110	N=17
Age in years[2]	*M* = 36.1 *SD* = 10.8 (N=100)	*M* = 46.9 *SD* = 9.7 (N=57)	*M* = 40.2 *SD* = 11.5 (N=162)	N=28

[1] *Response rate = ($N_{respondents}$/ $N_{participants\ MyBalance}$) * 100*
[2] *Mean (M) and standard deviation (SD)*

5.4.4 Reasons not to participate in MyBalance

All non-participants were asked to answer the open question why they did not participate in MyBalance. A total number of 190 respondents answered this question, of which 171 respondents gave one reason why they did not participate in MyBalance and 19 respondents gave two reasons to participate. A total number of 209 reasons was given, of which 13 were too vague to be analysed. They will not be included in further analysis. The remaining 196 answers can be classified as in Table 17.

Table 17: Reported reasons not to participate in MyBalance and frequency.

Reason	Frequency AFSG	Frequency CS+	Frequency unknown	Frequency overall
No time/hindered	36	271	7	**70**
No interest	17	12	2	**31**
Not necessary: healthy enough	14	8	3	**25**
Not necessary: already in a programme	1	1	-	**2**
No expected new insights in own health	19	9	3	**31**
Privacy concerns	4	4	2	**10**
Forgotten to register	4	3	-	**7**
Unclear communication	5	-	1	**6**
Negative advice from colleagues	1	4	-	**5**
Not working in Wageningen	3	1	2	**6**
Other	1	1	1	**3**
Total:	**105**	**70**	**21**	**196**

Of the 70 respondents who gave a time-related reason not to participate in MyBalance, thirteen people clearly added that they *wanted to* make an appointed or even had made an appointed, but were hindered to go to the test day.

The categories 'no interest' and 'not necessary: healthy enough' cannot be very clearly distinguished. Of the 31 respondents who said that they were not interested in participation in MyBalance, about a quarter

gave answers that could be meant as 'being not interested to participate in MyBalance because of feeling healthy enough', but because of uncertainty, only the respondents who explicitly stated that they felt healthy enough were categorized in the latter category. Respondents who stated that 'they did not feel the need to participate' where therefore categorized as not being interested to participate in MyBalance.

A total number of 27 respondents explicitly stated that they did not feel that participation in MyBalance was necessary, of which 25 respondents reported to feel healthy and/or balanced and two respondents reported to be participating in medical fitness or physiotherapy. Next to that, 31 respondents stated that they did not expect to gain any new insights from participation in MyBalance. The 11 respondents who reported that they participated in the pilot of MyBalance –with or without connecting this to the fact that they did not expect to get new relevant information by participating this year- were also included here.

5.4.5 Assessment health, job satisfaction, performance of the department and organization

Both participants and non-participants were asked to rate their own health, job satisfaction, the performance of the department they work and the overall performance of the organization. Table 18 describes the scores the non-participants that filled out the questionnaire gave on a 5-point scale, 1=poor, 2=fair, 3=good, 4=very good, 5= excellent.

Table 18: Mean scores and standard deviations assessment health, job satisfaction, performance department and organization.

	AFSG	CS+	Overall
Compared with other people your age, how would you rate your own health?	*M* = 3.21 *SD* = 0.821 (N=104)	*M* = 3.19 *SD* = 0.865 (N=62)	*M* = 3.20 *SD* = 0.826 (N=178)
How would you rate your satisfaction with your job as a whole?	*M* = 3.54* *SD* = 0.723 (N=104)	*M* = 3.21* *SD* = 0.771 (N=62)	*M* = 3.41 *SD* = 0.778 (N=178)
How would you rate the performance of the department you work?	*M* = 3.57* *SD* = 0.709 (N=103)	*M* = 3.06* *SD* = 0.765 (N=62)	*M* = 3.37 *SD* = 0.773 (N=177)
How would you rate the overall performance of Wageningen UR?	*M* = 3.44* *SD* = 0.637 (N=103)	*M* = 3.21* *SD* = 0.727 (N=62)	*M* = 3.34 *SD* = 0.682 (N=177)

Scores were given on a 5-point scale, 1=poor, 2=fair, 3=good, 4=very good, 5= excellent.
** Significant difference between participants from AFSG and CS+, taking p=0.05.*

The respondents from CS+ score significantly lower on the items job satisfaction ($t(164)=-2.764$, $p=0.006$), performance of the department they work ($t(163)=--4.330$, $p=0.000$), and overall performance of Wageningen UR ($t(163)=-2.103$, $p=0.037$) than the respondents from AFSG. Nevertheless, on all items, both the non-participants from AFSG and CS+ score between 'good' and 'very good'.

5.4.6 Comparison large scale implementation of MyBalance with the pilot

All non-participants were asked if they had participated in the pilot of MyBalance last year. From the 190 respondents, 114 respondents answered this question, of which 11 respondents (all employed at AFSG) reported that they participated in the pilot of MyBalance. In the subsequent question, these 11 respondents were asked if they had noticed any differences between the pilot of MyBalance and the large-scale implementation. All 11 non-participants answered that they did not notice any differences or that they felt that this question was not applicable to them because they did not participate this year.

5.4.7 Comments and suggestions for improvements

In one of the final questions of the questionnaire, the respondents were given the opportunity to give comments and/or suggestions for improvements on MyBalance. They will be described below.

Comments on MyBalance

A total number of 40 relevant and clear comments was given on MyBalance. A list of the addressed topics and some issues that were mentioned often is given in Table 19. In appendix H, the comments are discussed more in depth.

Table 19: Overview common topics for comments and their frequency

Topic	Frequency
General appreciation of the programme	23
Communication about MyBalance - Both positive and negative comments, either supporting the provision of more information about MyBalance or opposing this	7
Privacy - Participants expressed their doubts about their data being kept away from their employer	4
Setting up an appointment for a test day - It took a lot of effort to set up an appointment - Filling out the questionnaire took too long	4
The effectiveness of MyBalance	2

Suggestions for improvements

In the questionnaire for non-participants, seventeen relevant and clear suggestions for improvements of MyBalance were given. The topics they addressed are listed below in Table 20. A more detailed description of the given suggestions can be found in appendix I.

Table 20: Overview common topics for suggestions for improvements and their frequency

Topic	Frequency
Communication about MyBalance - Employees should not be forced to participate	8
Tests and accuracy of the tests	5
Setting up an appointment for a test day - Offer MyBalance after working hours as well	4

5.4.8 Summary main results questionnaire non-participants MyBalance

Based on the responses on the questionnaire for non-participants, it can be concluded that the respondents were generally positive about the fact that MyBalance was offered to them, even though some of them questioned the extent to which their privacy could be assured and others felt that the way they were approached was too pushy. The most frequent reason why the respondents did not participate in MyBalance was ‘no time’, followed by ‘no interest’ and ‘no expected insights in their own health’. All respondents rated their own health, job satisfaction, performance of the department they work and overall performance of Wageningen UR somewhere between ‘good’ and ‘very good’, although the respondents of CS+ score significantly lower on the three latter items.

5.5 Comparison participants and non-participants

In addition to the analysis of the responses from the 214 participants and 190 non-participants of MyBalance, the responses from the participants and non-participants were compared in order to identify differences between the groups, which may have influenced the decision on participation. Table 21 describes scores on all items that were asked to both participants and non-participants.

Table 21: Comparison participants and non-participants in mean scores and standard deviations for assessment health, job satisfaction, performance department and organization, age and gender.

	Participants	Non-participants
Compared with other people your age, how would you rate your own health?[1]	*M* = 3.13 *SD* = 0.831 (N=220)	*M* = 3.20 *SD* = 0.826 (N=178)
How would you rate your satisfaction with your job as a whole?[1]	*M* = 3.16* *SD* = 0.881 (N=220)	*M* = 3.41* *SD* = 0.778 (N=178)
How would you rate the performance of the department you work?[1]	*M* = 3.19* *SD* = 0.758 (N=219)	*M* = 3.37* *SD* = 0.773 (N=177)
How would you rate the overall performance of Wageningen UR?[1]	*M* = 3.12* *SD* = 0.681 (N=217)	*M* = 3.34* *SD* = 0.682 (N=177)
Gender (1=male, 2=female)	*M* = 1.59 *SD* = 0.494 (N=220)	*M* = 1.64 *SD* = 0.483 (N=173)
Age in years	*M* = 43.00* *SD* = 11.354 (N=204)	*M* = 40.17* *SD* = 11.528 (N=162)

[1] *Scores were given on a 5-point scale, 1=poor, 2=fair, 3=good, 4=very good, 5= excellent.*

** Significant difference between participants and non-participants, taking p=0.05.*

Frequency graphs of the answers on the first four items are attached in appendix J. An analyses by means of independent sample T-tests, taking p=0.05, show that the participants that filled out the questionnaire do not differ significantly from the non-participants that filled out the questionnaire with respect to how they rate their own health (t(396)=-0.843, p=0.400) and on gender composition of the groups (t(373.093)=-0.999, p=0.319, equal variances not assumed). However, the participants that filled out the questionnaire are significantly less satisfied with their job (t(396)=-2.922, p=0.004), rate the performance of the department they work significantly lower (t(394)=-2.329, p=0.020), rate the overall performance of Wageningen UR significantly lower (t(375.885)=-3.323, p=0.001, equal variances not assumed) and are significantly older (t(364)=2.350, p=0.019) than the non-participants that filled out the questionnaire.

5.6 Results qualitative interviews organizational level AFSG

For a more in-depth evaluation of MyBalance on the organizational level, interviews were conducted with managers from various departments and organizational layers. The results of these interviews will be discussed in this paragraph. The focus will be on how and why MyBalance was introduced, what the managers know and think of it and what its value is. In the end, some issues that the respondents thought that could be improved will be addressed.

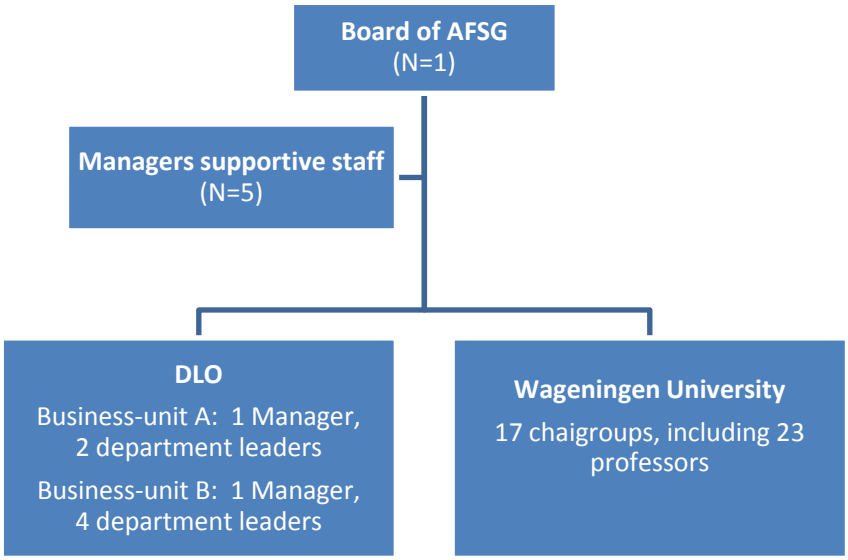

Figure 5: Organizational chart AFSG based on the list from HRM.

5.6.1 Acquisition participants

The total study population consisted of all people who were involved with MyBalance on the organizational level, defined by a list from the head of the Human Resource Management of AFSG. The list included 37 people, that could be categorized as members of the board of AFSG, members of the supportive staff of AFSG, managers of business-units, department leaders of business-units, and professors of chair groups, as is illustrated in Figure 5.

Initially, the aim was to include 10 people from various organizational layers in the sample that could give a good picture of the extent to which MyBalance was embedded in the organization. Two respondents were selectively recruited; they were both co-founders of MyBalance. Next to that, it was planned to randomly select one manager of a business unit, two department leaders of business-units and five professors of chair groups. However, after contacting all people on the list, taking the planned variety of departments into account, only 6 people turned out to be willing to participate in an interview. All participants were Dutch, so all interviews were conducted in Dutch. Most people did not react on their invitation by e-mail at all, but three people (all professors at Wageningen University) answered that they were not willing to participate in an interview because they barely knew anything about MyBalance.

5.6.2 Description participants

A short description of the interviewees is given in Table 22. The sample included four men and two women, employed at five different organizational layers. Because the respondents had different roles and perceptions of their roles in relation to MyBalance, not all topics from the topic list were addressed in every interview.

Table 22: Description respondents interviews organization AFSG

Resp.	Gender	Function	Involvement with and opinion of MyBalance
1	Female	Co-founder of MyBalance	Has a very positive opinion about MyBalance. She feels that MyBalance fits in the policy of Wageningen UR (employees take control over their own health) and that it is important to offer something to people who do not experience any complaints and never ask for any help. She is convinced that MyBalance is a cost-effective workplace health promotion intervention and wants to run it every three or four years.
2	Female	Co-founder of MyBalance	Was responsible for part of the communication about MyBalance towards all employees of AFSG. She speaks positive about MyBalance and encourages participation, but also sets limits to the extent to which Wageningen UR should interfere with the health of the employees; their health is their responsibility too.

3	Male	Manager of a business-unit	Thinks that MyBalance is a very good initiative, but was able to identify a lot of points of (minor) improvements in the implementation of the intervention. He has informed the employees in his department about MyBalance, but did not actively promote participation.
4	Male	Department leader within a business-unit	Has informed the employees of his department about MyBalance, and actively tried not to make them feel forced to participate. He beliefs that MyBalance has a lot to offer with respect to physical health, and that it –ideally- should not offer anything with respect to mental health, because it is the task of the manager of the employee to keep an eye on his or her well-being.
5	Male	Professor of a chair group	Says to be positive about MyBalance, but does not show much enthusiasm. He has told about MyBalance in a group meeting and heard from a few employees that MyBalance is a useful initiative. He feels it is very important that interventions are cost-effective.
6	Male	Professor of a chair group	Does not know much about MyBalance and questions whether or not Wageningen UR should offer MyBalance to its employees; he does not experience a need for the programme among the employees, it costs money and people can go to their general practitioner for a check-up too.

5.6.3 Development and implementation of MyBalance

During the interviews with respondent 1 and 2, a lot of attention was paid to the development and implementation of MyBalance. Both respondent 1 and 2 were involved with the pilot of MyBalance as well and considered themselves 'co-founders' of the intervention. Respondent 1 explained why MyBalance was introduced. After describing some elements of the policy of Wageningen UR with respect to employee health and facilities that are already offered, she said:

> *Respondent 1: 'In that whole story, we said 'Yes, we should do something from good employment practices in which the employee gets something –and that is MyBalance, so a small part of that entire chain-, including both physical, but also –and that is what I personally advocate-, the psychological side. That you can just, strictly confidential, whatever you do with it, get feedback like 'so, these are the things that you have filled out, I see a certain load''.*[26]

So in 2011, the pilot of MyBalance took place and based on positive results of the pilot, it was decided to offer MyBalance to all employees of AFSG this year. Respondent 1 explained why she felt that MyBalance fit so well in the current policy of Wageningen UR:

> *Respondent 1: 'But the aim was just to provide employees strictly confidential with information, and to say 'we as Wageningen UR always stress your own responsibilities' and 'take control over your career' [..] and MyBalance belongs to that as a little part of it.'*[27]

Just as she did in this quote, respondent 1 repeatedly said that MyBalance is a just little part of all the policy of Wageningen UR. Therefore, she did not expect major outcomes either:

> *Respondent 1: '..and I don't have the illusion that MyBalance is going to address that enormous problem, but I do think that if it is that part of the chain that you shrink back from, and it comes at the right moment, that people think like 'yes, now I should do something with it'.'*[28]

[26] In dat hele verhaal hebben wij gezegd van 'ja, we zouden eigenlijk ook wat moeten doen vanuit goed werkgeverschap waarbij de medewerker zelf iets krijgt –en dat is dus MyBalance, dus een klein onderdeeltje in die hele schakeling-, van zowel fysiek, maar ook –en daar ben ik zelf een groot voorstander van- de psychologische kant. Dat je even met iemand, dus strikt vertrouwelijk, wat je er ook mee doet, gewoon kan klankborden van 'goh, je hebt die en die dingen ingevuld, daar zie ik toch wel een bepaalde belasting'.

[27] Maar de doelstelling was om gewoon gegevens in strikte vertrouwelijkheid aan de medewerker te verstrekken en te zeggen 'wij hameren altijd als Wageningen UR op je eigen verantwoordelijkheid' en 'neem je eigen regie over je loopbaan' [..] en daar hoort zoiets als MyBalance als klein onderdeel bij.

Realistically, she also adds that MyBalance should eventually yield something to Wageningen UR and that she is convinced that it does. She states that MyBalance will be cost effective if, for example, among every 100 participants three employees implement an action plan and therewith three weeks of absenteeism are prevented, which she thinks will be easily achieved. Respondent 1 wants to offer MyBalance to the employees of AFSG every three or four years. According to her, participation should not be mandatory, partly because that does not fit to the message to employees about taking control over their own careers and their own lives.

Respondent 2 was also involved with the development of MyBalance and the practical implementation of it. She was mainly involved with the communication about MyBalance. While the directress of AFSG went to several departments of AFSG to promote the pilot in 2011, this year it was chosen to send e-mails about MyBalance and to provide information about the intervention on intranet. Managers of chair groups and business-units did not have 'a specific role in providing information about MyBalance', according to respondent 2. This will be discussed more in depth in paragraph 5.6.8 about the communication about MyBalance.

Based on the evaluation of the pilot, the individual course at the local sports centre that one of the interviewed participants of MyBalance was enrolled in, was offered to the participants of MyBalance. Its additional value compared to the other facilities that were offered, was that the course did not take place at the organizations' sports centre, so employees would not have to exercise in the middle of many students. However, the course was offered at the intranet page of MyBalance for only a few days and soon after the first request for it was done, it was decided not to offer the course anymore. The Corporate Human Resources department of Wageningen UR was proponent of offering the course, but respondent 1 and 2 clearly were opponents:

> *Respondent 1: 'Yes, that was off course insane! Yes, that was insane, because then they could do fitness or whatever over there, and then we would pay for it. Yeah.. whose idea was that.. [..] because I mean listen, we rarely pay minimum wage over here, so it is more of a personal investment.'*[29]

> *Respondent 2: 'We have to look at what we as Wageningen UR offer and what is a commercial offer. Yes, many gyms have a starting tariffs like 'Come and try what it is like to exercise here for three months, free of obligations', and these are often very low tariffs [..] So that is the sticking point for me, like 'what do you have to organize as an employer and what is the next step from the employee?'. I think it is very different if someone is in financial trouble and it is very important in the scope of prevention, then it is different'*.[30]

Both respondent 1 and 2 clearly drew a line between what Wageningen UR should offer for its employees and what not. Both agreed that the facilities that Wageningen UR offers to all employees should also be part of MyBalance, but if employees prefer to use other services, they should pay for this themselves.

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[28] ..en ik heb niet die illusie dat MyBalance nu net dat enorme probleem in gang zet, maar ik denk wel dat het het schakelingetje is waar je al bijna tegenaan zit te hikken, en als dat net op het goede moment komt, dat mensen dan denken van 'ja nu moet ik er toch wat mee gaan doen'.

[29] Ja, dat was natuurlijk zot! Ja, maar dat was ook zot, want dan konden ze daar fitness of weet ik het wat doen, en dan gingen wij dat betalen.. Ja, wie dit nou weer bedacht had.. [..] want ik bedoel luister, we betalen hier maar weinig minimumloon, dus dat is dan meer een investering ook voor iemand zelf.

[30] 'We moeten wel kijken wat wij als WUR aanbieden en wat op een gegeven moment dan gewoon een commercieel aanbod is. Ja, heel veel sportscholen hebben een starttarief van 'kom drie maanden bij ons vrijblijvend proberen hoe het is om te sporten', nou ja he en dat zijn vaak juist hele lage tarieven [..] Dus ik zit daar zelf wel mee van 'wat moet je als werkgever organiseren en wat is echt de volgende stap van de medewerker?'. Ik vind het heel wat anders als iemand echt in de financiële problemen zit en het is echt heel belangrijk in het kader van preventie enzo, kijk dan is het wat anders.

A very practical issue was also addressed by respondent 1 in this discussion: not all employees of Wageningen UR have their work place in Wageningen. For these employees, it takes more time to go to Wageningen and to participate in MyBalance, or they may not go at all due to the distance they have to travel. This may also applies to the use of the other facilities that Wageningen UR offers, including the use of the organizations' sports centre. If Wageningen UR decides to offer employees an individual course at a local sports centre, this may offer solutions to those employees who do not work nor live in Wageningen if they can take a similar course in another city than Wageningen. However, it also takes away the clear line between what facilities Wageningen UR pays for, and the ones it does not pay for.

5.6.4 Factors that influence the utility of MyBalance in relation to the HERO-model

According to the HERO-model (page 5), the extent to which an organization can be considered 'healthy and resilient' depends on three factors; healthy practices and resources, healthy employees, and healthy organizational outcomes. MyBalance mainly focusses on healthy employees. In order to gain insight in the extent to which Wageningen UR can be considered healthy and resilient and therewith the additional value that MyBalance could possibly have, some of the respondents were asked for practices and resources and organizational outcomes that could influence the health of the employees as well.

Respondent 2 mentioned that the employees in the DLO-part of AFSG sometimes face some pressure because they are responsible for filling all their declarable hours. This means they are often involved in various projects and have to enroll in a new project when they finish one. On one hand, they may enjoy the variety of tasks, but on the other hand, it requires flexibility. According to respondent 2, there is usually good consultation between the employees and their manager when it is decided who is going to work on which project. Next to that, respondent 2 mentioned that she thought that many people enjoy their work, which she based on the fact that it is often easy to occupy vacancies within AFSG, even though people may can make more money in other jobs in their expertise, for example in the food industry.

Respondent 3 also mentioned that the acquisition of projects could be very stressful. Personally, he actively tries to give people tasks that suit them. Furthermore, respondent 3 decided several years ago that the 'profits' and 'losses' of the business-unit would all be taken together in order to determine the success of the business-unit. This decreased the amount of time that had to be spent on meetings and administration and the amount of stress that people experienced in relation to the performance of 'their department'. Respondent 3 explained that he feels it is important that employees do the best they can, but they will not directly be punished if they do not meet their individual goals; some departments are successful in some years, and other departments in other years, and together they have a profit each year. He found it hard to assess whether or not the current economic crisis puts an extra load on his employees; he knows that his business-unit has gone through some years of economic losses, but has made profits for the past years. He thinks that the accomplishments of the employees nowadays make them stronger:

> *Respondent 3: 'Yes, I think 'I don't have the impression that they suffer'. I do have the impression that it is more tough, but that we can be incredibly proud that we just, despite of all the cuts in financing and the economic crisis, manage to reach our targets. And 'just' is 'by working very hard, by being very smart, by doing many things three times because the first two times failed'.*[31]

Respondent 4 agreed with respondent 3. He also noted that the positive economic result that he has experience with the people in his department has made them feel better:

[31] Ja, dan denk ik 'ik heb de indruk dat ze daar niet onder lijden'. Ik heb de indruk dat het zwaarder is, maar dat we ontzettend trots zijn dat we ondanks de bezuinigingen en de economische crisis toch gewoon onze targets halen. En gewoon is 'door heel hard te werken, door heel slim te zijn, veel dingen drie keer opnieuw te doen omdat de eerste twee keer zijn mislukt'.

Respondent 4: 'And that does indeed affect people, that they feel better and that it becomes easier to perform well, you'll get into a positive spiral'.[32]

Nevertheless, he also noted that individual performances should not be overlooked after a collective success; if employees do not meet their targets, this will definitely affect them. So the fact that Wageningen UR as an organization gives its employees a lot of freedom and responsibilities could cause individual health problems as well, he acknowledges. Overall, he thinks that his business-unit has a good reputation when it comes to human resource management.

Respondent 5 noted that the variety of tasks the employees on his department have will probably do good to their job satisfaction. Just as respondent 3, he pointed at the job satisfaction monitor that employees can participate in, which enables them to speak up if they have any problems with the way practices are arranged. Respondent 3 reported that it often appears that employees experience a high work pressure, but that the freedom employees have in arranging their schedule eases the burden. However, the burden should not be much higher than it is now. When he spoke about a recent period in which two employees were temporarily not able to carry out their tasks, he said:

Respondent 5: 'And if that happens twice in a row, then there are all these people that are almost overwrought themselves, if they have to do the extra tasks, then they really hang on by a thread. But ok, we survived on the edge.'[33]

5.6.5 Participation in MyBalance

In order to get an impression of how much the respondents knew about MyBalance, they were asked if they had participated in MyBalance themselves. Respondent 1 did not participate this year, but she did participate at the time she was involved with the introduction of MyBalance and therefore did not feel the need to participate this year again. Respondent 2 and 3 did participate in MyBalance this year. Respondent 3 explained that he choose to participate for two reasons; he wanted to know what exactly was offered to the employees and he wanted to know how he personally would score on the test. Respondent 4 did not participate in MyBalance and clarified that he had been ill recently and went through a lot of tests, which is why he knew how he would score on most of the tests and did not feel like taking any more tests. He did not let his function, as either manager or employee influence his decision:

Respondent 4: 'Nobody ever asked me if I went there, not did my manager, for example. So eh.. it is an individual choice.'[34]

Respondent 5 and 6 did not participate in MyBalance. Respondent 5 did feel it was important to know how people felt about MyBalance, but he consulted other employees for this instead of participating himself. Respondent 6 repeatedly said that he did not know much about MyBalance, which was both a reason for him not to participate as a consequence of the fact that he did not participate.

5.6.6 Knowledge and perceptions of MyBalance

During the interviews, all respondents gave information about what they knew about MyBalance and what they thought of that. The findings will be described in this paragraph.

As described before, respondent 1 knew a lot about MyBalance. She was very positive about the intervention and convinced that it is cost effective. She considered it a very strong point that participants

[32] En dat heeft inderdaad volgens mij wel weerslag op mensen, dat ze dan ook gewoon lekkerder in hun vel zitten, dat het dan ook makkelijker is om goed te presteren, een soort positieve spiraal kom je dan in.

[33] En als dat dan 2x vlak achter elkaar gebeurt, dan zijn die mensen die zelf ook al allemaal bijna overwerkt zijn, als die dan nog die taken erbij moeten doen, die lopen dan echt op hun tandvlees. Maar goed, dat hebben we ook nog net overleefd.

[34] Niemand heeft mij ooit gevraagd of ik geweest ben, ook mijn leidinggevende niet, bijvoorbeeld. Dus eh.. dat is toch individueel.

are given control of what they will do with the results of the tests they take and that the results will only be communicated to the participants and not to their employers. She thought that both the people working at Wageningen UR and Wageningen UR as an organization gain from MyBalance.

The statements and opinions of respondent 3 were very similar to those of respondent 1. He thought that it is a very good thing that MyBalance is offered to the employees. More specifically, he appreciated the fact that MyBalance can be categorized as preventive care, not related to specific health issues. In contrast to respondent 1, he seemed to give more value to the physical part of MyBalance than to the psychological health. When he clarified why he felt that MyBalance is valuable, he told that one of the employees on his department turned out to have a much too high blood pressure, which is taken care of now. He is very happy that this high blood pressure was traced before it really became a problem.

Respondent 4, 5 and 6 had never participated in MyBalance, but responded 4 and 6 knew how to describe the intervention. Both of them knew that the employees were given the opportunity to go to a screening for their health and that an advice would be given in case there were some issues that would deserve some attention. Respondent 6 did not know that MyBalance was only specifically offered to employees of AFSG. Respondent 5 seemed to have more trouble to describe MyBalance, but eventually he told that he knew something about the test days, and distinguished the physical part from the 'interview about work pressure and issues like that'. He did not mention anything about action plans or follow up.

Respondent 4 said to spend a lot of attention to the health of its employees, but he also feels that on certain topics, it is not his task to interfere with the health of the employees. For example, when one of his employees smokes, he will not tell this person to quit smoking, unless the smoking influences the employees abilities, for instance in case of physical tasks. He considered it a strength of MyBalance that health related advice is given by people whose job it is to give these types of advice. By participating in MyBalance, employees actively seek for health related advice, which is different compared to when their manager gives them unsolicited advice. Furthermore, he stated that some health problems do not necessarily have to be related to the work environment of the employee:

> *Respondent 4: 'Yeah high blood pressure, that can be caused by 10 different things, so maybe [MyBalance] adds something there.'*[35]

When respondent 5 was asked for his opinion about MyBalance, he answered that he found it hard to say, because he did not participate himself. He did ask some employees from which he knew they participated, and they found participation in MyBalance a useful initiative. He was glad that people who work at a university, critical people, talked positively about the intervention. Furthermore, he repeatedly said that he thinks it is very important that the intervention is cost-effective:

> *Respondent 5: 'You lose half a day of work, and it costs money, so it has to be a useful investment, but health and wellbeing at work etcetera, that is worth a lot. But you do have to think about that as an organization, with things like this, whether or not you will do it, because it costs time and money.'*[36]

Finally, respondent 6 expressed a more negative view on MyBalance. He think that it is very noble that MyBalance is offered, partly in order to give something to the employees that never ask for any facilities for their health, but he did not experience a need for MyBalance on his department. He also showed scepticism with respect to the effectiveness of the programme and whether or not it should be offered:

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[35] Ja hoge bloeddruk, dat kan door 10 verschillende dingen komen, dus [MyBalance] kan daar misschien wat toevoegen

[36] Je bent een halve dag werk kwijt en het kost geld en dan moet dat natuurlijk een nuttige investering zijn, maar gezondheid en arbeidsvreugde en dergelijke, dat is veel waard, maar je moet dat dus wel goed bedenken als organisatie, bij dit soort dingen, van of je dat dus doet, omdat het dus tijd en geld kost.

Respondent 6: 'Yeah, I question whether this should be offered on a university level. Everybody has a personal responsibility, so it seems to me. A high blood pressure... well every now and then – I think- people go to a general practitioner for their.. to check if everything is still all right, and I don't think that.. It should not be the task of an employer. So if you honestly ask me 'should we do this as a university?' then I think 'maybe not'.'[37]

Next to this, he also thinks it is a bit strange that the costs for most facilities that Wageningen UR offers should be paid by the department itself, while the costs for MyBalance are paid by AFSG as a whole, independent of the participation per department. He therefore suggested to give each department separately the option to participate in MyBalance, and to compute the costs for each department separately. Nevertheless, he also acknowledges that, even though he did not know much about MyBalance and that as far as he knows, nobody from his department has participated in MyBalance, they could have benefited from MyBalance if they had participated, because he has heard some positive stories about MyBalance.

5.6.7 Other health related facilities and the additional value of MyBalance

In many interviews, facilities that Wageningen UR offers to employees were discussed for additional insight in the extent to which Wageningen UR pays attention to health of the employees. Among others, the following facilities were mentioned.

To start with, Wageningen UR has to comply to legal norms that are set with respect to the arrangement of work places and safety. Next to that, every year a risk inventarisation and evaluation is done in order to identify issues that need extra attention. All employees have a meeting with their manager once every year to discuss how they are doing and if they are still satisfied with their jobs. An assessment by the employee of his manager is included in the results and development meetings, so employees have also the opportunity to reflect on the skills of the manager.

If employees experience any problems, they can directly go to their manager to discuss the issue and look for a solution. However, if the employee does not want to go to his manager, he also has the opportunity to contact occupational social work without informing his manager. To address specific health related issues, several courses are offered to the employees. Examples of this are courses on dealing with work stress and to remedy RSI-complaints. These courses are largely paid for by the department, and the employee needs permission from his manager to participate. Additionally, a manager can refer his employees to a social medical team, which will develop an action plan for the employee.

Respondent 1 clarified that, according to her, the additional value of MyBalance compared to most of the other facilities, is that MyBalance gives employees the opportunity to discuss their issues with someone with whom they do not have a relationship at work, and strictly confidential. Even if the participants do not experience a strong need to solve the issues, it may help them to talk about it for once, with an third party. Just as respondent 1 did earlier in the interview, respondent 3 and 5 advocated that MyBalance is of value because it is a preventive facility, not related to any specific health issues, and accessible for everybody. Respondent 4 also thinks that MyBalance has additional value to all the other facilities, but appreciates a different aspect. He felt that MyBalance –ideally- should not offer anything with respect to mental health, because it is the task of the manager of the employee to keep an eye on his or her well-being. However, he acknowledged that if the relation between the manager and employee is weak, MyBalance may be very valuable. He thought that the additional value of MyBalance could mainly be

[37] Ja, ik vraag me af of dit op het niveau van een universiteit aangeboden moet worden. Iedereen heeft ook een zekere persoonlijke verantwoordelijkheid, lijkt mij. En een hoge bloeddruk.. ja af en toe –denk ik- gaan mensen naar een dokter om zich.. om te kijken of alles nog goed is, en ik denk niet dat het.. het hoeft niet per se een taak van de werkgever te zijn. Dus als je me eerlijk vraagt 'moeten wij dit doen als universiteit?', dan denk ik 'misschien niet'.

found in the physical part, because improving physical health is often beyond the tasks and/or capabilities of the manager. Respondent 6 did not describe any additional value of MyBalance. While other respondents thought that it is a strength that MyBalance it gives employees insight in their physical health, respondent 6 thought that they would consult their general practitioner for issues like this.

5.6.8 Communication about MyBalance

In relation to the communication about MyBalance, a different approach was implemented this year compared to the pilot. Respondent 1 explained that she went to various departments of AFSG last year to tell about the pilot of MyBalance. This year, it was chosen not to do so, but to put a movie with a lot of information about MyBalance on intranet instead. Respondent 2 clarified this:

> *Respondent 2: 'At a certain moment we choose to, we wanted to ensure good communication from [our side], so that is optimal. Because otherwise I'll be dependent on 25 managers and a group that they are in charge of, to spread the information, so yeah, in that case it is not sure it will happen.'*[38]

Next to this, all employees of AFSG were informed about MyBalance by e-mail signed by the directress of AFSG, and they all got an invitation from Active Living to sign up. Several reminders were sent by e-mail as well. Additional information could be found on intranet, including a brochure with a detailed description of the three phases of MyBalance. According to respondent 1 and 2, the managers of the various department were not explicitly requested to inform their employees about MyBalance.

Nevertheless, both respondent 1 and 2 acknowledged that face to face communication from employer to employee might has more influence in motivating people to participate in MyBalance than indirect communication. Respondent 1 said that got a lot of questions when she promoted MyBalance during the pilot, and that she personally tried to include as many participants in the pilot. When she met people who were sceptical about MyBalance, she said:

> *Respondent 1: 'Okay guys, please do me a favour, and go there for me, to be able to critically fill out the evaluation, like 'well [respondent 1'], this is a waste of money and we should not do this'.'*[39]

She thought that the participation was high in the pilot, because a personal way of spreading information was taken in the pilot. Nevertheless, she decided not to promote MyBalance among the employees on her department. Respondent 2 on the contrary did tell the employees on her department about MyBalance. More specifically, she mentioned that she actively encouraged two people from her department to participate in MyBalance. Both of them experienced some health problems but they felt 'too busy' to participate in MyBalance. Respondent 2:

> *Respondent 2: 'So as a manager, I actively said 'yes, I don't think that is a valid reason, for my part you can just.. but then you have to do it now, you can participate next Thursday, but otherwise..'. And both of them participated, but in that case the manager plays an important role'.*[40]

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[38] Op een gegeven moment hebben we ervoor gekozen om, we gaan in ieder geval zorgen dat de communicatie vanuit [ons], dat we dat optimaal laten zijn. Want anders ben ik afhankelijk van 25 leidinggevenden en dan weer een groep daar onder die dat allemaal vertelt, dus ja, het is niet zeker dat het dan gebeurt.

[39] Nou jongens, doe dan mij een lol, ga er dan desnoods voor mij heen, om vervolgens heel kritisch die evaluatie in te kunnen vullen van 'joh Inge, dit is echt weggegooid geld, moeten we niet doen.

[40] Dus ik heb als leidinggevende actief gezegd van 'ja, dat vind ik geen reden, je mag van mij gewoon.. maar dan moet je het wel nu doen, komende donderdag kun je dan nog meedoen, maar anders dan..'. En die hebben het ook beiden gedaan, maar dan is de rol van de leidinggevende wel belangrijk.

Respondent 3, 4, 5 and 6 are all part of the management team from AFSG and were thus provided with additional information about MyBalance. Respondent 3 and 4 both confirmed that they got the information and knew more about MyBalance than most employees at AFSG. Yet, respondent 5 did not mention the additional information for the management team and referred only to the information on intranet and invitations by e-mail. Respondent 6 remembered that he had received some e-mails with information about MyBalance, but did not remember the content:

> *Respondent 6: 'The only thing.. if it would be a more compact explanation.. I remember that it was quite blurred, not very clearly to the point. With many e-mails that I receive, that are this long, I think 'well.. whatever'.'*[41]

Respondent 3 said that he has had discussed MyBalance in a meeting with the department leaders from the three departments in his business unit. During this meeting, they decided how they would deal with MyBalance, and it was decided that the department leaders would tell their employees about MyBalance. Respondent 4 and 5 reported that they had told the employees on their department about MyBalance during a group meeting, but respondent 6 did not do so, as will be elaborated on in the next paragraph.

5.6.9 Perception of the role of the manager

All respondents showed during the interviews what they thought they could and should do in relation to MyBalance. Respondent 1 clarified why it was chosen not to give the managers a specific role in communicating MyBalance to the employees:

> *Respondent 1: 'We know that many of our managers are very busy, so they will have work meetings just about the content, so we can ask them to do it, but some will do it and others won't. So that is not very structured, but that, I cannot control that structurally from my position. It sounds so schoolteacher-ish, and 'thou shall', I am not going to do that.'*[42]

During the interview with respondent 2, only limited attention was paid to her role as manager of her department. Respondent 2 herself informed the employees on her department about MyBalance, and actively encouraged some of them to participate.

Respondent 3 reported to have informed the people on his department, but tried not to choose a side in relation to participation:

> *Respondent 3: 'No, I left it to the people themselves. I did not put any pressure on it, which was – at least, that's what I understood-, we offer MyBalance as a, you could call it a secondary condition of employment, which is of interest for the company, but I did not say 'we are going to force everybody to go to MyBalance'. So I did not promote it.'*[43]

He also actively tried not to interfere with the choices the employees made in relation to MyBalance. He did not ask them if they participated and he did not ask for the results either, because he sensed that his role as a manager could influence the employees' choices to share private information:

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[41] Het enige.. als je iets compactere toelichting.. wat me bijstaat is dat het nogal wollig, niet heel duidelijk to the point omschreven werd. Bij heel veel van die e-mails die binnenkomen, die zo lang zijn, dan denk ik van 'nou, ja.. het zal wel'.

[42] We weten gewoon een aantal afdelingshoofden, die zijn stikdruk, dus die hebben dan werkoverleg alleen maar over de inhoud, dus we kunnen het leuk vragen en de één zal het doen en de ander niet. Dus dat is niet heel gestructureerd, maar dat, vanuit mijn functie kan ik dat ook niet gestructureerd aansturen. Ja dat klinkt zo schooljufachtig, en 'gij zult', nou dat doe ik niet.

[43] Nee, ik heb het helemaal aan de mensen zelf gelaten. Ik heb er geen druk onder gezet, dat was ook –tenminste, zo heb ik het begrepen-, wij leveren MyBalance als iets, he secundaire arbeidsvoorwaarde zou je het kunnen noemen, die natuurlijk voor het bedrijf ook van belang is, maar ik heb niet gezegd van 'we gaan iedereen met een mattenklopper naar MyBalance sturen'. Dus ik heb het ook niet gepromoot.

Respondent 3: '..because I deliberately did not raise MyBalance in conversations with people, I deliberately do not do that. Because I think 'yeah, I may will', I mean, I am the manager, so they may think '[Respondent 3] asks it, so I shall tell it, but I actually don't want that'. I did not start talking about it'."[44]

Respondent 4 had similar perceptions of his role as a manager. He also informed the employees from his department about MyBalance, emphasizing that participation would be voluntary, but he tried to give the information a positive twist, to stimulate the employees to participate. He did not think that the fact that he himself did not participate has influenced the choices of the employees on his department. Nevertheless, he did consider the fact that he addressed the intervention in one of the group meetings as a valuable addition to the e-mails and information on intranet:

Respondent 4: 'What employees might eh.. some employees always have in these kind of things.. to put it a bit harsh, a sort of suspicion. What's behind it? And I think that a manager can take away the final doubts."[45]

Respondent 5 also decided to inform the employees on his department about MyBalance. He knew from two employees that they participated, and found it his task to ask them what they thought of the intervention, in order to determine whether or not he would support it if employees participate. Respondent 6 did not inform the employees on his department about MyBalance:

Respondent 6: 'Well, I did not know much about it. I have seen an e-mail and well, I did not really got an idea like... I did not get a clear impression of what would be the benefit, so.. maybe I will promote it more next time."[46]

After it had been suggested to give the manager a more prominent role in the communication about MyBalance, for example by discussing MyBalance in a group meeting, he reacted negatively, because he thinks of this as an extra workload:

Respondent 6: 'Then you'll serve like a mailman –you have to tell the message to the next one- while it could have been done directly [..]. No, I would be opposed to being involved in this."[47]

5.6.10 Points of improvement for MyBalance

During the interviews with the people involved on the organizational level of AFSG, several weaknesses and points of improvement were identified by the respondents. They will be listed in this paragraph.

First of all, respondent 1 noticed that MyBalance is not very accessible for employees of Wageningen UR who are located in different places than Wageningen, and this also applies to other facilities that Wageningen UR offers, such as the opportunity to exercise at the organizations' sports centre in Wageningen. In relation to the offer at the local sport centre, respondent 2 mentioned that the agreements between the Corporate Human Resources department and AFSG should have been more clear, and she personally felt it would be best not to involve any private sport centre in MyBalance.

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[44] Omdat heel bewust heb ik het onderwerp MyBalance niet aangekaart met mensen, heel bewust doe ik dat niet. Omdat ik denk van 'ja, dan ga ik mensen misschien toch..' he ik ben leidinggevende, misschien dat ze dan toch denken '[Respondent 3] vraagt het, nou, dan zal ik het maar vertellen, maar dat wil ik eigenlijk niet'. Ik ben er niet over begonnen.

[45] Wat medewerkers misschien wel eh.. sommige medewerkers die hebben altijd bij dit soort dingen .. als ik het even zo hard mogelijk zeg, een soort achterdocht. Zit er iets achter? En daar kan denk ik een leidinggevende denk ik wel eens de laatste twijfel weghalen.

[46] Nou ja, ik wist er eigenlijk niet zoveel van af. Ik heb de e-mail voorbij zien komen en ja, ik had er niet echt een idee van… ik had niet meteen een heel goed beeld van wat nou het voordeel zou zijn, dus.. misschien dat ik een volgende keer het meer promoot.

[47] Dan fungeer je bij wijze als een soort van postbode –je moet de boodschap doorvertellen aan de volgende- terwijl het ook rechtstreeks gedaan zou kunnen worden [..]. Nee, maar ik zou er erg op tegen zijn om hier bij betrokken te worden.

Second, both respondent 1 and 2 mentioned that they questioned the expertise of the councillors. Respondent 1 knew some positive and some negative stories about the councillors, and was therefore not sure whether they all met the qualitative standards. Respondent 2 had heard some stories from participants that they found the councillors too young, and thought that it would be better to hire older councillors.

Respondent 3 addressed some practical issues that according to him should be improved. As a participant in MyBalance, he experienced some trouble when he wanted to set up an appointment for the tests:

> *Respondent 3: 'That website is a bit weird, because you could reserve things and when you wanted to reserve on a certain time, you clicked on it and then all of a sudden it was not available anymore.'*[48]

Next to that, he had experienced some confusion in relation of the location of the tests. His invitation said that he had to go to a certain room in the sports centre. When he went there, he found an empty room. After waiting for a while, he decided to ask the staff of the sports centre for MyBalance, and then it turned out that the employees of Active Living were waiting for him in the canteen. Respondent 3 said that his invitation should say 'canteen' if he was expected in the canteen of the sports centre. Moreover, he did not think of the canteen as a suitable location to welcome the participants and answer their possible questions, because it is an open space and he felt it would be more appropriate if these kind of activities would take place in a more private place. A final matter that was different than his expectations, was the meeting with the councillor. He said that this part of the test day was announced as bigger than it actually was to him. He thought that if the invitation would have said something like 'the results of the test could be discussed with a councillor', his expectations would probably have matched the actual meeting better.

As a manager of a business-unit, respondent 3 raised an ethical issues as well. In case a problem within his business-unit could be identified due to MyBalance, which he could easily solve, he would like to be informed about this:

> *Respondent 3: 'I am interested –without knowing the names of the people-, imagine that you trace a pattern of which you say 'yes, that is potentially harmful for health, well-being or whatever' [..] with two, three simple measures, or maybe even more complicated measures, you could improve the situation a lot. Well, I would not want to let that opportunity pass.'*[49]

In order to achieve this, a more detailed report of the results should be published, because the chair groups and business units can hardly be compared. Respondent 3 emphasized that he would only want to receive such a report in case the privacy of the participants could be guaranteed. So if it would be possible in relation to privacy of the participants, he would like to receive an evaluation of the results of the people from his business-unit, or the two business-units together.

Respondent 4 and 6 also mentioned that it would be a good idea to provide the employees with an overview of the most important results that were found. Both of them thought it would be good to communicate what is gained from MyBalance. Additionally, respondent 4 thought it would raise awareness for the intervention again, which may also trigger the non-participants to participate next

[48] Die site is een beetje raar, want daar kon je wel dingen reserveren en dan wilde je dingen reserveren op dat tijdstip en klikte je erop en dan was ie weer opeens niet beschikbaar, dat is een paar keer bij mij dan gebeurd.

[49] Ik ben wel geïnteresseerd -zonder de namen te kennen van de mensen-, dat stel dat jullie een patroon zien waarvan je zegt van 'ja, dat is toch schadelijk in potentie voor gezondheid, welbevinden of weet ik veel' [..] met twee drie simpele maatregelen, of misschien wel ingewikkeldere maatregelen, kun je de hele boel sterk verbeteren. Ja die kans zou ik niet willen laten liggen.

time. For respondent 6, it was also important to gain insight in the cost-effectiveness of the intervention, and publishing the main results could contribute to this. However, his main point of improvement was the communication about the intervention as a whole. If this information would be more 'to the point', so he claimed, he would have read it more carefully. This also applied to the feedback about the results; he suggested to summarize it in half a page, otherwise he would probably not read it either.

5.6.11 Conclusion interviews organization MyBalance AFSG

From the interviews with the people involved with MyBalance on the organizational level, it appeared that Wageningen UR offers many facilities to promote the health and job satisfaction of the employees of Wageningen UR. The unique addition of MyBalance is that it does not address a specific health issue and that it is offered to all employees, and this is valued by several managers as well. One of the co-founders of MyBalance repeatedly emphasized that she did not expect major outcomes, but she was still convinced that MyBalance would be cost-effective. Even though it was not specifically requested, most of the respondents informed the people on their department about MyBalance, and they reported to have done this in a way that fits how MyBalance was planned. However, it turned out that the managers on the higher organizational level knew a lot more about MyBalance and spoke more positively about MyBalance than the managers on lower organizational levels, especially the professors of Wageningen University. Moreover, another discrepancy could be identified: while one of the co-founders of MyBalance emphasized the value of the meeting with the councillor, most other respondents valued the physical test more than the meeting with the councillor. The respondents identified several minor points of improvement of MyBalance, most of them related to communication. Furthermore, it was indicated by several respondents that it would be good to provide the participants, non-participants and/or managers with an overview of the results of MyBalance and what was gained from it, in order to raise awareness and appreciation for the intervention.

6. Discussion

The aim of the present study was to measure the self-reported effectiveness of MyBalance on both the individual and organizational level and to identify opportunities for improvement regarding the implementation of the intervention. In this chapter, the results will be interpreted and the research questions will be answered, followed by a discussion of the study design, recommendations for MyBalance, and ethical concerns.

6.1 Findings in relation to the research questions

The main research question of the study was 'What is the self-reported effectiveness of MyBalance on the individual and organizational level and how can the effectiveness be improved?'. In order to answer this research question, several sub questions were formulated. They will be answered below.

6.1.1 Changes in empowerment, motivation and knowledge due to MyBalance

The first sub question aimed to measure self-reported outcomes of MyBalance on the individual level. The question was 'what changes in knowledge, motivation and empowerment regarding health behaviour are reported as a result of MyBalance?'. The answer to this research question clarifies whether nor not MyBalance on the individual level contributes to *developing personal skills*, which is defined as an action area for health promotion in the Ottawa Charter (1986a).

Changes in knowledge

In this study, attention was paid to changes in knowledge on health behaviour, health (both physical and mental) and the facilities that Wageningen UR offers.

Almost no changes in knowledge in health behaviour were reported. This can be explained by the fact that most respondents are highly educated and/or know a lot about health. Furthermore, many respondents scored healthy according to the criteria used by Active Living; according to the reports in appendix K and L, most respondents had a healthy nutrition pattern and only 7 participants of AFSG and 6 participants of CS+ were referred to their general practitioner for an additional consult.

On the contrary, many respondents reported increases in knowledge about their personal health, which is supported by the evaluation conducted by Active Living, showing that 79% of the participants of AFSG and 94% of the participants of CS+ reported to have gotten more insight in their own health (appendix K and L). Many respondents mainly referred to their physical health rather than their mental health. The latter could be explained by the fact that the tests for cholesterol level, blood pressure and blood sugar level were positively valued.

With respect to increases in knowledge about the facilities that Wageningen UR offers, only minor changes were reported. However, this can be due to the fact that only limited need to provide information about these facilities was present. Moreover, it remains unclear what level of knowledge about these facilities the participants already possessed. According to the reports of Active Living (appendix K and L), 28 participants from AFSG and 2 participants from CS+ are referred to one of the facilities of Wageningen UR (excluding the organizations sports centre), which indicates that the facilities were at least promoted among (some) participants.

Changes in motivation

In this study, Nutbeams (1998a) definition of motivation as the 'willingness to take action to improve the individuals health status' was adopted. The employees who had developed an action plan before or during the test day, reported to have experienced an increase in motivation to live healthy due to the test day, caused by a various elements of MyBalance. Some employees were unwilling to take action based on

their rest results, even if they were unhealthy according to the criteria of Active Living. Just as in the evaluatory study of the pilot of MyBalance by Van den Hoek (2011), all respondents only talked about their intentions to improve their physical health, while MyBalance focusses on both physical and mental health. Another interesting finding is that none of the respondents was aware of the follow-up after six months, while this was supposed to motivate the participants to take action to improve their health.

Based on the results of this study, is not possible to distinguish between increases in intrinsic and extrinsic motivation, as distinguished by Deci and Ryan (1985). The employees that were unwilling to take action to improve their health even though the test results suggested otherwise may have been unwilling to change *because* they were extrinsically motivated to change their behaviour; it was the councillor who told them to change, but this information may was inconsistent with what they mentally confirmed to. Nevertheless, this cannot be proven based on the data of the present study.

Even though two thirds of the employees reported to have experienced an increase in motivation due to MyBalance, overall minor effects of MyBalance on motivation were reported. Respondents reported on average a slight decrease in motivation to live healthy at the moment of filling out the questionnaire compared to right after the test day. This could result in only limited behavioural change in the future, because motivation is an important requirement for behavioural change (Peerson & Saunders, 2009).

Changes in empowerment

MyBalance can be considered an empowering intervention. However, more than half of the respondents did not experience an increase in control over their own health. Others reported that their feelings of control over their own health increased moderately, very or extremely. As the graphs in appendix E show, the participants with the most unhealthy scores also experienced the highest increases of control over their own health. Nevertheless, they are dependent on the advice of the councillors, so it is debatable if their empowerment really increased.

All four factors that of influence on feelings of empowerment as identified by Koelen and Lindström (2005) appeared to play a role in the decisions on implementing action plans. In relation to outcome expectations and health locus of control, it was acknowledged that physical health could be influenced by adjusting behaviour. Only a few respondents indicated that they could influence their mental health. Several respondents reported to have feelings of learned helplessness; they wanted to exercise but had repeatedly failed to do so, even though some of them had received a concrete action plan. On the long run, this may result in renouncement of the intentions to exercise. With respect to perceived self-efficacy, MyBalance took away some barriers with respect to physical health, but not to mental health.

The findings of the previous study show a paradox in relation to empowerment. On one hand, Wageningen UR wants to stimulate employees to take control over their own life. It was chosen to apply the technique of motivational interviewing during the meetings with the councillors to achieve this. On the other hand, the respondents preferred and expected to receive a concrete action plan which would suit their personal situation, in order to feel able to implement the action plan. In order to avoid discrepancies between expectations and experiences regarding MyBalance, it should be announced clearly that participants have to take an active role in designing and implementing the action plan.

6.1.2 Changes in health behaviour due to MyBalance

The second sub question was formulated as ‘what changes in health behaviour are reported as a result of MyBalance?’.

The findings of this study show that the respondents on average ‘slightly’ to ‘moderately’ agreed with the statement saying that they changed their behaviour due to MyBalance. Again, significantly higher scores

were given by the respondents who had received some advice during the test day compared to those who did not. A majority of the respondents indicated that they had done something with the advice they got.

Regarding implementing action plans or 'doing something with the received advice', differences exist between the effort that is needed for the actions, which may influence the extent to which the action plans are implemented. For example, eating more fruit can be realized more easily than exercising more often, because it requires less time and does not involve a large monetary investment at the start. On the contrary, this may also lead to a low duration of the implementation of the action plan, because quitting implementation of the action plan will not lead to feelings of regret due to the investment at the start, causing a low commitment to the plan. Furthermore, 'participation in the courses that Wageningen UR offers' can be considered an action plan that requires a lot of effort, but may be experienced as relatively easy achievable, because the courses are offered at fixed times each week and, which gives the participant more guidance in implementing the action plan.

According to the theory of planned behaviour by Ajzen (1991), behaviour is predicted by intentions, which are partly predicted by a person's perceived subjective norms. Therefore, the extent to which participants discuss their test results and optional action plans with others may also influence their actions. Some participants indicated to have shared their results with their colleagues, but many participants did not do this, or did so in a shallow way. This is congruent with the results of the study by Van den Hoek (2011), which showed that only a minor effect was measured on social support and no effect was visible for peer support. For MyBalance, it was chosen to take an approach in which employees are pointed at the fact that their test results are strictly confidential (excluding the perceived subjective norms). This could be a strength of the intervention, but could also inhibit the effectiveness of MyBalance on behavioural change.

Only short term effects on behavioural change could be measured in the present study. To achieve sustainable behavioural change, habits should be adjusted and this cannot be done overnight. Follow-up for the participants with an action plan could therefore be very valuable. Regarding MyBalance, much confusion related to the follow-up was present, and none of the respondents of the interviews was aware of the follow-up after six months, which may severely affect the possible effectiveness of MyBalance.

6.1.3 Perceptions of MyBalance

The sub question 'what is the perception of employees of Wageningen UR regarding MyBalance?' applied on both the individual level and the organizational level. Participants, non-participants and managers were given the option to reveal their ideas about MyBalance.

Generally, the respondents were positive about MyBalance and many indicated that they would like to participate in a similar intervention on a regular basis. However, the average ratings of the physical screening (7,11) and the meeting with the councillor (6,34) were considerably lower than the average rating of the entire programme in the pilot study (7,67) (Van den Hoek, 2011) and the ratings of MyBalance according to the evaluation of Active Living (8,1 from the participants of AFSG and 8,0 from the participants of CS+) (see appendix K and L). Aspects that were valued were the accessibility of the intervention and the fact that people could participate without any specific reason. Only a few non-participants indicated that they did not participate in MyBalance because they had negative thoughts about the intervention itself.

An interesting finding is that many participants were less enthusiastic about the meeting with the councilor compared to the actual physical screening. Not only were they not as interested in the results of this meeting as they were in the results of the physical screening, they also showed to have more ambiguities about what to expect from the meeting with the councilor. Furthermore, many doubts about the expertise of the councilors were expressed. Changing the way in which the meeting with the councilor is described and promoted may reduce the discrepancy between expectations and experiences about it.

Another notable finding of this study is that some participants think that mainly the healthy employees of Wageningen UR participate in MyBalance, because they like to receive a confirmation of their good health. However, this study showed no significant differences in self-reported health between participants and non-participants. Furthermore, the findings of this study show that the participants are significantly older, less satisfied with their jobs and rate the performance of their department and the performance of Wageningen UR as a whole worse compared to the non-participants. This indicates that MyBalance reaches the people that can improve most with respect to well-being at work.

A final important finding is that not all respondents showed to be convinced that MyBalance is cost effective. Clear communication about cost-effectiveness and what was gained from MyBalance in terms of health may prevent these misperceptions.

6.1.4 Incorporation of MyBalance in the operational management of Wageningen UR

In this research, department managers of several organizational layers were interviewed, because their input is part of the intervention too (Hawe et al., 2009). The aim was to gain insight in the extent to which MyBalance fits in the operational management of Wageningen UR, the perceptions about MyBalance from managers and the way the managers may have contributed to the effectiveness of the programme.

As discussed before, five action areas are identified in the Ottawa Charter for health promotion (1986a), of which four were addressed in this research. In terms of *building healthy policy*, Wageningen UR does a good job. MyBalance is of additional value, because it also targets people without any complaints, stimulating them to achieve maximum employability.

The majority of managers was positive about MyBalance, but conviction of the value and effectiveness of the programme was larger among the managers at the higher organizational levels compared to the managers on the lower organizational levels. Furthermore, even though all interviewees had a managerial role on their department, not all of them knew enough about MyBalance in order to be able to answer possible questions from the employees on their department.

Especially the interviewed professors of WU turned out to know only a little about MyBalance and to have limited support for it. Among the participants only sixteen respondents (11%) indicated to have heard about MyBalance from his manager. These findings imply that communication about MyBalance from the managers is limited, although it was acknowledged by multiple respondents that managers could play an important role in stimulating employees to participate in MyBalance. The managers turned out to value insight in the effectiveness of the programme and would like to receive a short evaluation of the outcomes. This suggest that they do somehow feel involved with the programme, and that they may be willing to communicate it to their employees once they are convinced of its effectiveness.

Another important finding related to the extent to which MyBalance is embedded in the operational management of Wageningen UR is a practical one. Wageningen UR has a lot of work places outside Wageningen and therefore many employees live and work in another city than Wageningen. If Wageningen UR wants to encourage these employees to participate in MyBalance too, it should be considered to offer MyBalance at multiple locations. Furthermore, the employees outside Wageningen also have a low access to the facilities that Wageningen UR offers, such as the courses for people with complaints and the opportunity to practice sports at a low price at the organizations' sports centre. This should be taken into account when promoting MyBalance and related facilities.

In relation to the courses, another practical issue appeared while the second wave of test days ran. Many courses for employees start only a few times a year, and this does not always connect well to MyBalance. For example, many courses started in April and September, so if employees would receive the advice to participate in a particular course in May, they would have to wait several months before they could do so.

MyBalance would be better incorporated in the operational management of Wageningen UR if the period of the test days and the onset of the courses had a better fit.

A final important and positive finding of the present study is that the co-founders of MyBalance want to run MyBalance every three or four years and that many managers thought this would be a good idea. Moreover, several employees indicated that they would like to participate in a programme such as MyBalance on a regular basis. This shows that MyBalance is already well embedded in the operational management of AFSG. Moreover, it is planned to run MyBalance for the employees of the Social Science Group next autumn, which indicates that MyBalance is well on its way to become embedded in the entire organization of Wageningen UR.

6.1.5 Process evaluation

The final sub question was included for additional information about the foundation of the results, or as (Nutbeam, 1998b) put it; to build evidence for the outcomes of the intervention. It was formulated as: 'what factors in the process of MyBalance contributed to the measured outcomes of MyBalance?'. Nutbeam (1998b) states that in a process evaluation attention should be paid to three elements: the programme reach, the programme acceptability, and the programme integrity. More specifically to workplace health promotion interventions, Robroek et al. (2007) state that the three factors that could lead to ineffectiveness of a work place health promotion intervention are low/selective participation, little adherence to the intervention and a too short duration of the intervention which does not result in sustainable behavioural change. They are discussed below.

With respect to the *programme reach*, this study shows that 27,4% of the employees of AFSG who were invited to participate in MyBalance participated. For CS+, this number was 30,5%. These numbers both are slightly lower than the observed median of 33% for participation levels in workplace health promotion interventions by Robroek et al. (2009), but could not have been much higher, because only a limited amount of test days was offered and they were almost fully booked.

Of greater concern could be the *selective participation*. Although many respondents indicated to fear for selective participation of 'healthy' employees who want a confirmation of their good health, no significant differences between participants and non-participants with respect to how they rated their own health were identified. This indicates that participation was not selective for the previous reason.

Regarding the *programme acceptability*, much has been discussed before. Briefly, it can be said that the majority of the respondents showed positive perceptions towards MyBalance in general, but the physical part was valued more and better than the meeting with the councilor. Some respondents expressed that they questioned whether their privacy of their data would be assured.

Concerning *adherence to the intervention*, it is hard to say what behavioural changes MyBalance has caused based on the findings of the present study. Two thirds of the respondents with an action plan reported to have started with the implementation of the action plan, but this does not provide enough information about the adherence they show to their action plans. Some interviewees without an action plan reported to approach MyBalance as a single measurement to see how they were doing, which suggest that they show little adherence to the intervention.

The previous finding may be related to the perceived *duration of the intervention*, which influences the outcomes as well (Robroek et al., 2009). Many respondents perceived the intervention as a single measurement and they were often not aware of or confused about the follow-up after six months. If MyBalance is perceived as a single measurement without follow up, and no or limited attention is paid after the test days took place, it is unlikely that MyBalance will cause sustainable behavioural change (Goldgruber & Ahrens, 2010). It is therefore important that the follow-up is clearly announced.

A final issue that is related to the process evaluation according to Nutbeam (1998b) is the *programme integrity*; was the programme implemented as planned? Some important remarks on the implementation of the intervention can be given. First of all, at the time the intervention was announced and promoted, it was known that follow-up would take place 6 months after the test days, but it was not definite in what form this follow-up would take place. Six months later, this was still unclear and it was eventually decided that no follow-up would occur anymore, which is a serious shortcoming of the intervention. Another discrepancy between the planning and implementation of the intervention concerned the individual course at the local sports centre. This course was supposed to be offered to participants of MyBalance, but was removed from the list of possible activities that participants could engage in a few days after the test days started. A third factor that could have affected the programme integrity was that Wageningen UR and Active Living agreed on an all-in price per participant, through what it would be financially the most attractive for Active Living if no future contact moments with the participants were planned. A final, rather practical issue related to the implementation of the programme, is about the organizations' sports centre as location for the test days. Some respondents commented on the lack of privacy that was given to the participants at the sports centre.

The previous findings show that MyBalance certainly caused some changes on both the individual and organizational level. However, they also show some room for improvement of the current intervention. Some recommendations will be discussed later on in paragraph 6.3.

6.2 Discussion of the study design

Below, the strengths and limitations of the present study are discussed. This serves to give additional insights in the foundation of the findings of this study.

6.2.1 Strengths of the study

The main strengths of the present study are the following. First of all, data source triangulation was applied, as was suggested by Koelen et al. (2001) and Nutbeam (1998b). Both participants, non-participants and managers were consulted to gain insight in their perceptions of MyBalance and the effectiveness on them. Next to that, methods triangulation was applied; both qualitative and quantitative data were collected. The questionnaires for participants non-participants were developed after the interviews with the participants had taken place, so the findings could be checked for their relevance among all invited employees in the questionnaire. For the evaluation on the organizational level, several managers were interviewed, and they gave a large variety of answers. Though, these findings were not examined for their importance for the entire target group by any questionnaire. However, some items from the questionnaires for participants were of support for the findings from the interviews. A third strength of this study was the high response rate among both participants and non-participants from AFSG, which has contributed to the representativeness of the findings, especially among the participants.

6.2.2 Limitations of the study design

The study design of the present study had several limitations. The main disadvantage of the cross-sectional design was that outcomes of MyBalance could only be measured in terms of self-reported differences, and that no control group was consulted. Respondents may have overestimated or underestimated what effects MyBalance had on them. A limitation in the execution of the study is that no researcher triangulation was applied, as opposed to what was selected by Koelen et al. (2001) and Nutbeam (1998b). This could have caused a one-sided interpretation of the results. Nevertheless, the results were frequently discussed with supervisors in order to avoid this. Third, the voluntary participation of the respondents in this research may have caused an selection bias, with the employees with very positive perceptions about MyBalance and related studies being overrepresented. On the other hand, this

evaluatory study also gave employees with negative perceptions about MyBalance the opportunity to be heard, which may has motivated them to participate in this study. Fourth, the findings of this study may have been biased by social desirable answers. The interviewed participants may have preferred to tell the positive experiences with MyBalance instead of the negative experiences, and the good parts of their test results instead of the worse parts. It is expected that the results of the questionnaire are to a lesser extent biased due to social desirable answers, because filling out the questionnaire is expected to give respondents more feelings of anonymity compared to when they participate in an interview. A fifth limitation of this study is related to that only a few managers of AFSG were willing to participate in an interview, which was not enough to achieve theoretical saturation. Although the interviewed managers gave a large variety of answers on the questions, it would have been better to include more managers in the sample. A final important limitation of this study is that it only measured short term effects and no long term effects, because the research was conducted shortly after the test days had taken place. This applied to both effects of MyBalance on the individual level as to the extent to which it could be cost effective for Wageningen UR as a whole.

6.3 Recommendations for MyBalance

Based on this study, several major and minor recommendations can be given for the improvement of MyBalance. Some (interrelated) practical recommendations will be discussed in paragraph 6.3.1, 6.3.2 and 6.3.3, followed by recommendations for further research in paragraph 6.3.4.

6.3.1 Recommendations regarding the effectiveness of MyBalance for participants

Even though this study shows that short-term effects of MyBalance could be measured among the participants (especially those who had developed an action plan), several recommendations to improve the effectiveness on the individual level were identified.

Based on the evaluation of the pilot of MyBalance by Van den Hoek (2011), it was recommended to include a second contact moment with all participants as a driving force for implementation of the action plan, if funding is available. In the present study, much confusion about the follow-up was present, and in the end it was even decided that the follow-up would not take place at all. It is therefore strongly recommended to plan the follow-up carefully before a next wave of test days will take place. One of the interviewed participants suggested to offer a second screening to those participants who, according to the employees of Active Living, were expected to benefit from the expected second screening. This screening can be adjusted to the action plan by only measuring the values that were supposed to change.

Another factor that may has affected the effectiveness of MyBalance is the perceived expertise of the councilors. In order to improve the perceived expertise of the councilors, various actions can be taken. A radical action would be to screen the councilors more strictly on their skills and expertise, and to provide them with additional education if they do not meet the required norms. Other minor actions would be to provide the councilors with clothing from Active Living or to let them wear name tags. Furthermore, while announcing MyBalance and the meeting with the councilor, it should very carefully be considered how the meeting with the councilor will be framed in order to avoid too high expectations among participants.

In relation to the previous recommendation, it can be considered to take actions to prevent that participants medicalize their health. Since many participants valued the physical part of the test day more than the meeting with the councilor, it can be recommended to provide the participants with a print-out of their scores on the questionnaire. In this way, they may perceive these scores as more valuable than they do now and they can easily have a second look at the scores if they wish so. The print-out may also remind them of the fact that there was no need to develop an action plan, which enables the participant to put any limited contribution of the councilor into perspective.

6.3.2 Recommendations concerning communication

This study shows that there is still room for improvement concerning communication about MyBalance. It should be noted that all recommendations given below require proper planning of the intervention.

Most importantly, participants of MyBalance turned out to be unaware of the planned follow-up. Since announced follow-up is expected to work as a driving force to implement action plans, it is highly recommended to provide employees of Wageningen UR with clear information about the follow-up; when it will take place and in what form.

Second, it was acknowledged that the managers could play an important role in convincing employees to participate in MyBalance. Communication about MyBalance via managers is therefore recommended. So far, not all managers were convinced of the importance of their input, which should be addressed before new test days will be planned.

Third, it should be communicated clearly from the start when employees have the opportunity to visit the test days instead of planning additional test days if they turn out to be demanded. This will prevent confusion about possibilities to participate in MyBalance. However, it requires a fair estimate of how many employees want to participate, enabling the Corporate Human Resource department to plan a suitable amount of days in advance.

Other minor issues concerning communication that were identified in this study are the following. It was not clear to all participants how long the tests on the test day would take, if they had to bring sportswear for the physical test and at which room of the sports centre they were expected. Some of this information was included in the brochure about MyBalance, but this brochure was barely read. It is therefore recommended to include the information in the e-mail the participants receive as a confirmation for their appointment, or to give the brochure a more prominent role in the communication about MyBalance.

6.3.3 Recommendations to incorporate MyBalance in the organizational management

From the interviews with the managers of AFSG and additional questions in the questionnaire for participants, several recommendations to incorporate MyBalance better in the organizational management of Wageningen UR appeared.

First of all, the results of this study can be used to convince managers of the value of MyBalance. All interviewed managers indicated that they would like to receive a short evaluation of MyBalance, including what was gained from it. This evaluation with main outcomes of MyBalance could also be used to convince managers in other departments than AFSG or managers of the CS+ to inform the employees on their department about MyBalance, once it is their departments' turn to participate.

Another issue is the location where the test days take place. It is recommended to offer test days outside Wageningen as well, in order to make them accessible for employees outside Wageningen.

Furthermore, it would be recommended to create a better fit between the timing of MyBalance and the onset of the courses that employees could enroll in. In this way, chances that participants postpone the implementation of their action plans reduce, and MyBalance will potentially be more effective.

Finally, running MyBalance on a structural basis would help to incorporate it in Wageningen UR as an organization. Employees will know they can expect an invitation for the programme every few years and this long term implementation of the programme will probably also lead to the inclusion of the laggards in MyBalance. Furthermore, this would enable researchers to measure the effectiveness on the long run.

6.3.4 Recommendations for future research

An important recommendation for future research, is to measure the effectiveness of MyBalance on both the individual and organizational level *on the long run.* By conducting a cohort-study, outcomes on higher

levels than the health promotion outcomes in Nutbeams (1998b) model for health promotion could be measured. It can be determined if MyBalance is really effective and if and how much Wageningen UR gains from it in both financial terms and with respect to health and employability. For this research, it is recommended to include a control group in the study design and to conduct a randomized control trail, so it can be examined whether or not the measured outcomes can be attributed to the intervention. A pretest-posttest control group design meets this requirements, but because the pretest could be accompanied by a pretest-effect, a posttest-only control group design would be recommended.

6.4 Ethical concerns

In relation to workplace health promotion interventions and MyBalance in specific, some ethical issues cannot remain unnoticed. Attention is paid to these issues in this paragraph.

One of the questions that is often asked in relation to workplace health promotion interventions, is the question to what extent an employer may interfere with the health of the employees. For MyBalance, a clear decision is made for voluntary participation, and to provide the results of the test only to the employees themselves. At this stage, participation in MyBalance is also perceived by many employees as voluntarily and non-committal, although some respondents indicated that they had doubts about the privacy in relation to their test results. Overall, it can be concluded that Wageningen UR actively tries to give employees the feeling that the organization does not want to interfere with health issues on a personal level. This is of value for many employees, and a strength of the intervention.

Another issue was addressed by one of the interviewed managers. He knew that the participants were told that the test results would not be communicated to their manager. However, he also wanted the best for his employees, and would like to be informed about it if a pattern of health problems turned out to be present among the employees of his department. Active Living does provide Wageningen UR with the results of the tests on a group level, but this is probably not detailed enough to trace potential problems within a specific department. In the current design of MyBalance, it would be not-done to provide managers with detailed information about the results of the employees on their department. A trade-off is made in favour of assuring the privacy of the employees, although it can be questioned if this is best for them on the long run.

7. Conclusion

The aim of the present study was to measure the self-reported effectiveness of MyBalance on both the individual and organizational level and to identify opportunities for improvement regarding the implementation of the intervention.

On the individual level, the participants of MyBalance reported that MyBalance has given them more motivation to live healthy, more knowledge about health (mainly their personal health) and more feelings of control over their own health. The changes were larger among respondents with an action plan compared to those without an action plan. Even though the changes are self-reported and measured shortly after the test days had taken place, they indicate that MyBalance could be effective on the individual level. It should be noted that the respondents in this study mainly referred to their physical health when they talked about their test results. MyBalance has less self-reported effectiveness on mental health and the development of personal competences, partly because the perceived expertise of the councillors is low. It is recommended to include a follow-up after six months as part of MyBalance as a driving force for participants to implement their action plan, and to provide clear information about this.

On the organizational level, this study showed a variety of findings. MyBalance is perceived as a nice initiative by many employees and perceived as cost-effective by its founders, who are planning to offer MyBalance on a regular basis. Nevertheless, managers on different organizational layer had a wide range of perceptions about MyBalance. A rough conclusion would be that managers on the lower organizational levels knew less about MyBalance and were less in favour of the intervention. However, the managers showed interest in the results and gains of MyBalance, so communicating this information could help them to become more positive about MyBalance. To increase the extent to which MyBalance is embedded in the organization even more, it is recommended to offer test days on different locations than Wageningen as well, and to create a better fit between the timing of the test days and the onset of the courses that Wageningen UR offers to its employees in case problems are identified.

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Appendices

Appendix A: Topic list interviews participants AFSG

Persoonsgegevens:

- Afdeling en functie
- Leeftijd
- Periode werkzaam bij Wageningen UR

Voortraject:

- Score eigen gezondheid
- Aspecten gezondheid
- Hoe in contact gekomen met MyBalance
- Redenen om mee te doen

Testdagen:

- Verwachting van de testdag
- Ervaringen tijdens de testdag

Uitkomsten:

- Kennis over eigen gezondheid n.a.v. de testdag, fysiek en mentaal
- Kennis over manieren om gezond te leven n.a.v. de testdag
- Motivatie om gezond te leven n.a.v. de testdag
- Actieplan en uitvoering actieplan
- Kennis over faciliteiten Wageningen UR
- Verandering van gedrag n.a.v. de testdag
- Vragenlijst na 6 maanden

Organisatie:

- Beoordeling van het werk en functioneren
- Opvattingen aanbod MyBalance
- Aandacht van de leidinggevende voor MyBalance
- Communicatie met collega's over MyBalance

Overige indrukken:

- Wat heeft MyBalance opgeleverd?
- Verbeterpunten

Appendix B: Topic list interviews organizational level AFSG

Persoonsgegevens:

- Afdeling en functie
- Van hoeveel mensen leidinggevende

Gezondheid in de organisatie:

- Aandacht voor het creëren van een gezonde werkomgeving
- Aandacht voor plezier in het werk
    - Variatie van taken, sociale contacten, human resource management
- Aandacht voor het ontwikkelen van competenties
- Geplande bijeenkomsten om dit soort zaken te bespreken
- Gezondheid ↔ uitkomsten op het werk

Rol binnen het project

- Op welke manier betrokken bij MyBalance
- Hoe over MyBalance te weten gekomen
- Kennis van het project
- Zelf meegedaan aan MyBalance

Communicatie met medewerkers:

- Aandacht voor MyBalance; afdelingsoverleg, nieuwsbrief, intranet
- Informeel overleg
- Geïnformeerd of gestimuleerd
- Vragen van medewerkers

Uitkomsten van de testdagen

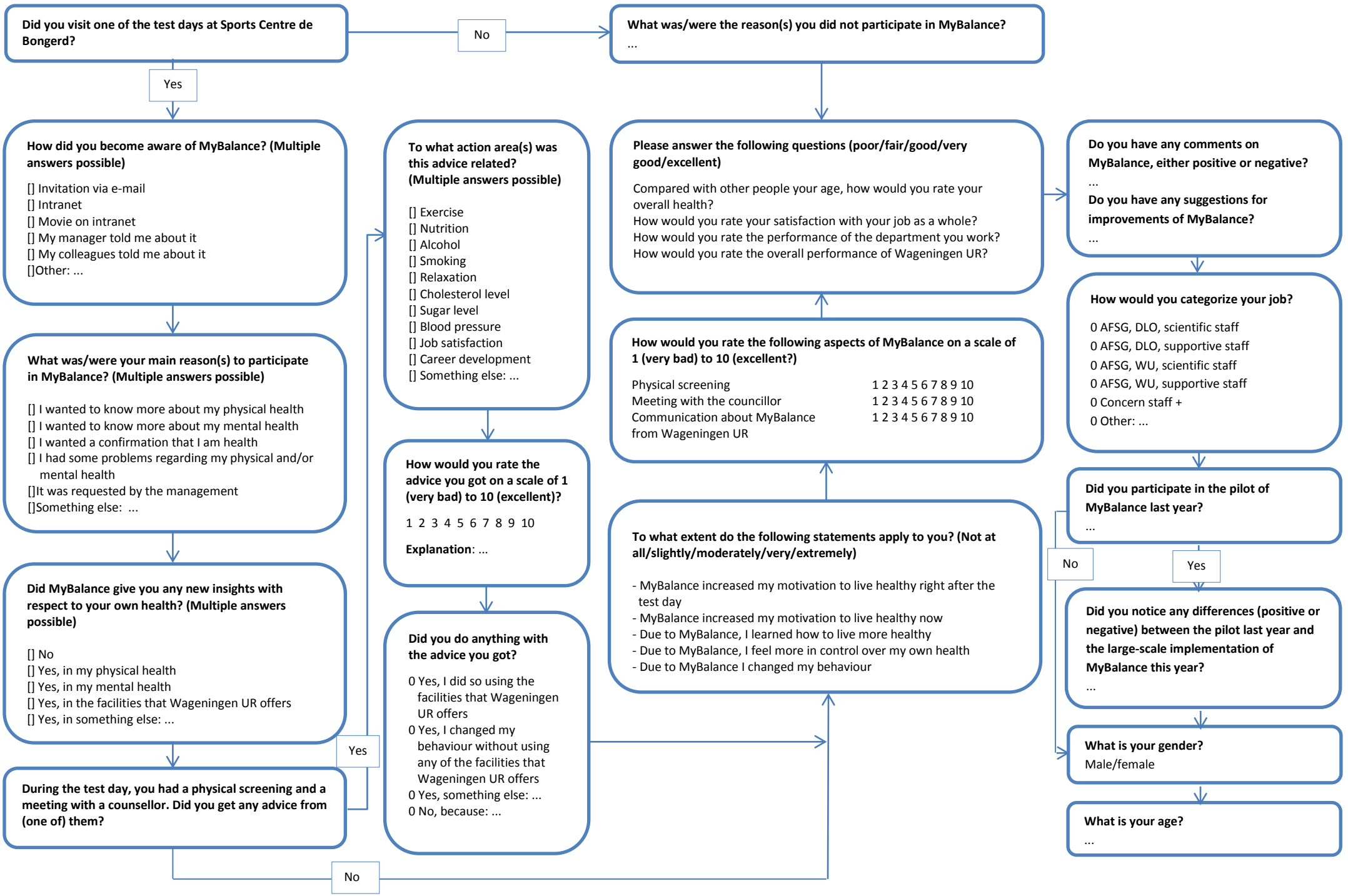
- Reacties van medewerkers
- Uitkomsten besproken met medewerkers
- Verzoeken voor deelname aan cursussen

Beoordeling MyBalance

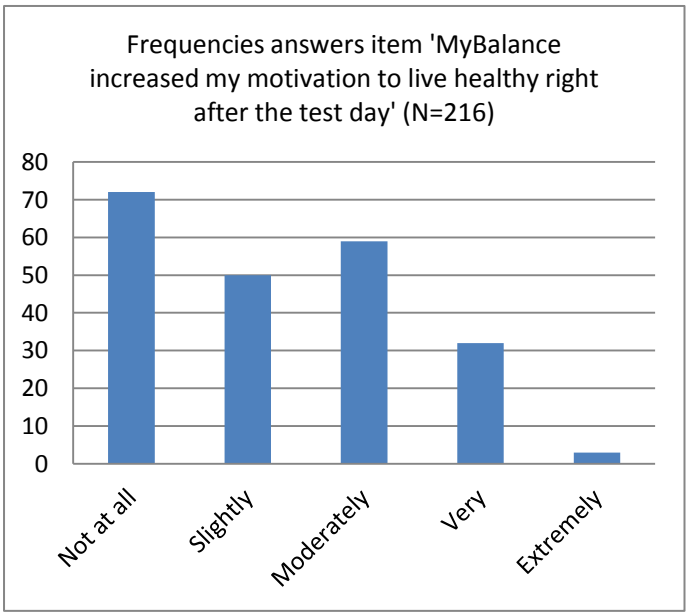
- Opvattingen over het feit dat Wageningen UR MyBalance aanbiedt
- MyBalance in het huidige beleid van Wageningen UR
- Opvattingen implementatie MyBalance
- Verbeterpunten organisatorisch en praktisch

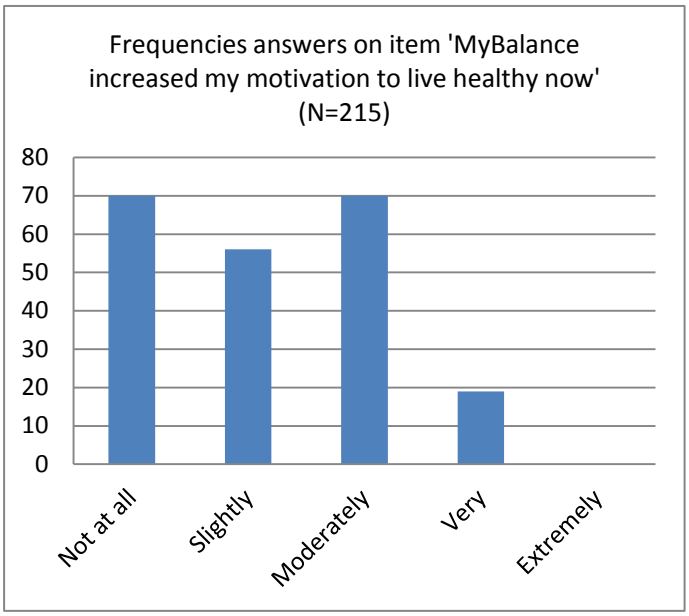
Vergelijking met de pilot

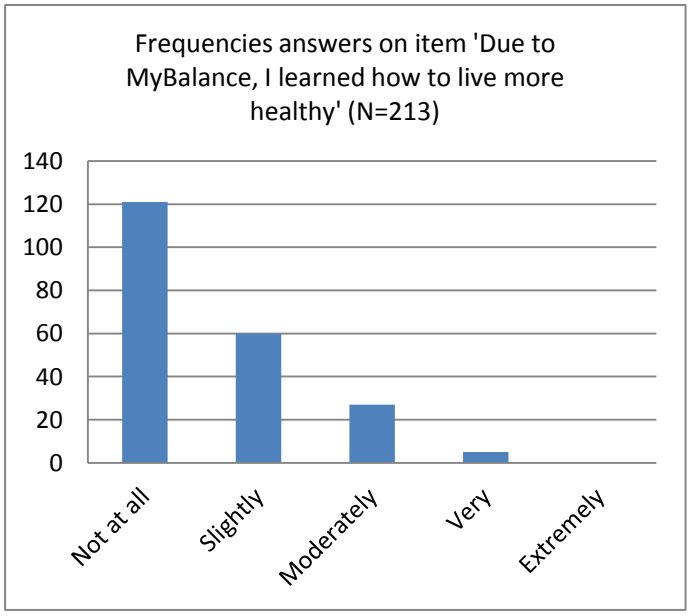
- Betrokkenheid pilot MyBalance
- Verschillen met dit jaar

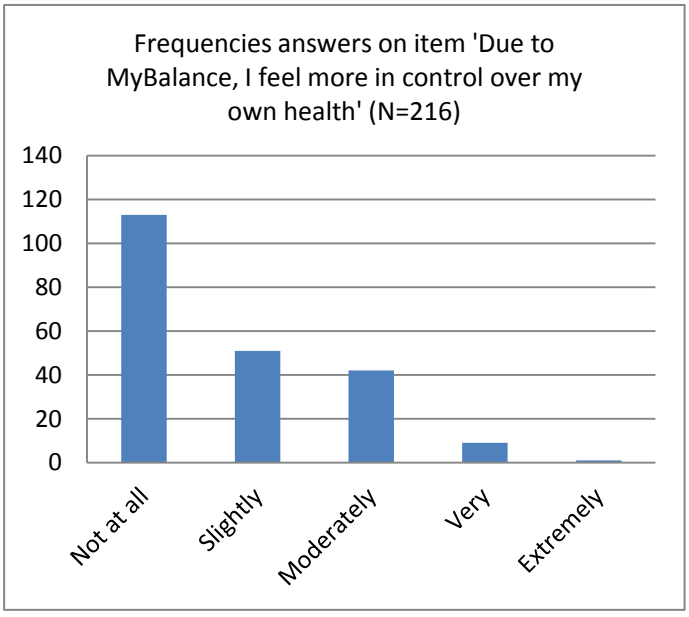

Did you visit one of the test days at Sports Centre de Bongerd?
No
What was/were the reason(s) you did not participate in MyBalance?
...
Yes
How did you become aware of MyBalance? (Multiple answers possible)
[] Invitation via e-mail
[] Intranet
[] Movie on intranet
[] My manager told me about it
[] My colleagues told me about it
[]Other: ...
What was/were your main reason(s) to participate in MyBalance? (Multiple answers possible)
[] I wanted to know more about my physical health
[] I wanted to know more about my mental health
[] I wanted a confirmation that I am health
[] I had some problems regarding my physical and/or mental health
[]It was requested by the management
[]Something else: ...
Did MyBalance give you any new insights with respect to your own health? (Multiple answers possible)
[] No
[] Yes, in my physical health
[] Yes, in my mental health
[] Yes, in the facilities that Wageningen UR offers
[] Yes, in something else: ...
During the test day, you had a physical screening and a meeting with a counsellor. Did you get any advice from (one of) them?
Yes
No
To what action area(s) was this advice related? (Multiple answers possible)
[] Exercise
[] Nutrition
[] Alcohol
[] Smoking
[] Relaxation
[] Cholesterol level
[] Sugar level
[] Blood pressure
[] Job satisfaction
[] Career development
[] Something else: ...
How would you rate the advice you got on a scale of 1 (very bad) to 10 (excellent)?
1 2 3 4 5 6 7 8 9 10
Explanation: ...
Did you do anything with the advice you got?
0 Yes, I did so using the facilities that Wageningen UR offers
0 Yes, I changed my behaviour without using any of the facilities that Wageningen UR offers
0 Yes, something else: ...
0 No, because: ...
Please answer the following questions (poor/fair/good/very good/excellent)
Compared with other people your age, how would you rate your overall health?
How would you rate your satisfaction with your job as a whole?
How would you rate the performance of the department you work?
How would you rate the overall performance of Wageningen UR?
How would you rate the following aspects of MyBalance on a scale of 1 (very bad) to 10 (excellent?)
Physical screening 1 2 3 4 5 6 7 8 9 10
Meeting with the councillor 1 2 3 4 5 6 7 8 9 10
Communication about MyBalance from Wageningen UR 1 2 3 4 5 6 7 8 9 10
To what extent do the following statements apply to you? (Not at all/slightly/moderately/very/extremely)
- MyBalance increased my motivation to live healthy right after the test day
- MyBalance increased my motivation to live healthy now
- Due to MyBalance, I learned how to live more healthy
- Due to MyBalance, I feel more in control over my own health
- Due to MyBalance I changed my behaviour
Do you have any comments on MyBalance, either positive or negative?
...
Do you have any suggestions for improvements of MyBalance?
...
How would you categorize your job?
0 AFSG, DLO, scientific staff
0 AFSG, DLO, supportive staff
0 AFSG, WU, scientific staff
0 AFSG, WU, supportive staff
0 Concern staff +
0 Other: ...
Did you participate in the pilot of MyBalance last year?
...
No
Yes
Did you notice any differences (positive or negative) between the pilot last year and the large-scale implementation of MyBalance this year?
...
What is your gender?
Male/female
What is your age?
...

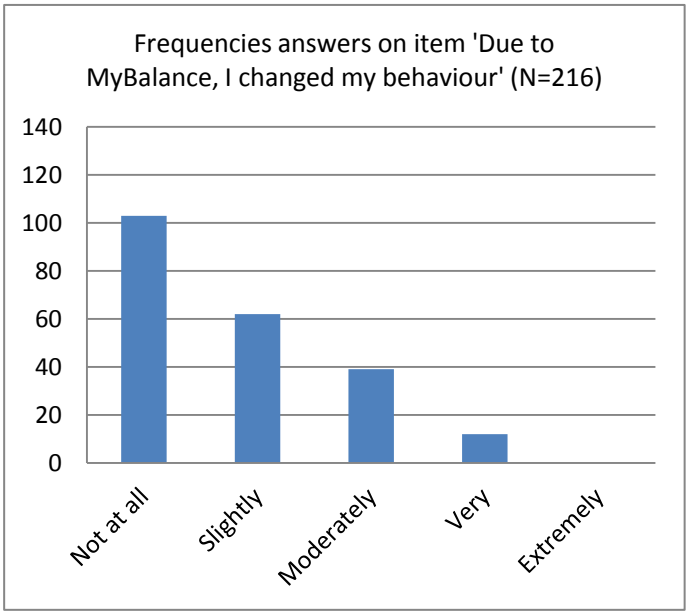
Appendix D: Frequency graphs outcomes MyBalance



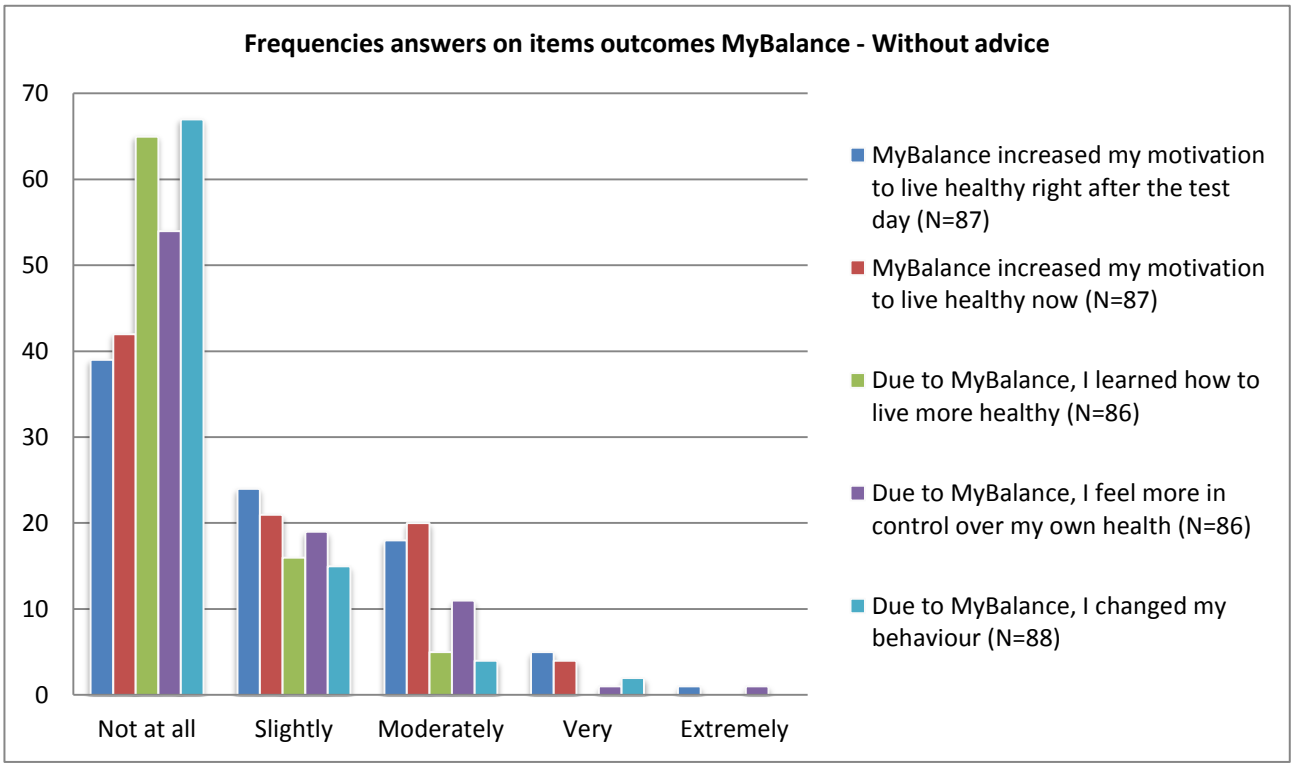


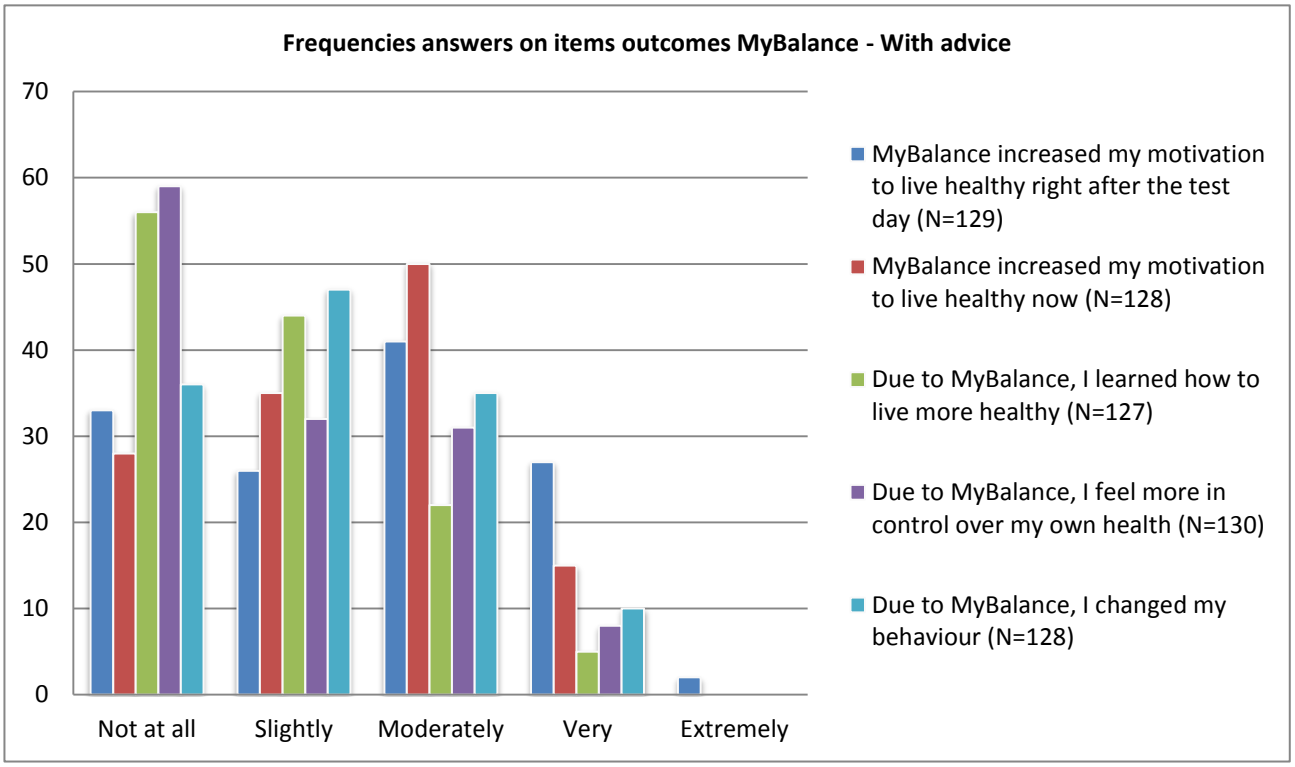






Appendix E: Frequency graphs outcomes MyBalance; with or without advice





Appendix F: Detailed description comments on MyBalance from participants

General appreciation of the programme (N=18): Respondents wrote for example that they liked that they were given the option to participate in MyBalance for their personal health or that they appreciated that the organization pays attention to the health of the employees. Two respondents wrote that they thought of MyBalance as a nice initiative, but that they wondered if people who know that they have to improve their health would be likely to participate.

Tests and accuracy of the test (N=18): Some respondents mentioned specific problems they experienced during the physical test. Four respondents mentioned that they would have liked a specification for HDL and LDL when cholesterol was measured. Eight respondents showed in some way that they felt that the tests were (too) basic or minimal, and some of them added that healthy values do no always mean that there is nothing to work on. One respondent commented that the meeting with the councillor had no additional value to the physical screening and two respondents questioned whether or not MyBalance would provide the employees of Wageningen UR with much new information, because many of them are already strongly concerned with (their) health.

Competences of the employees of Active Living (N=16): It was mentioned by many respondents that the employees were not able to answer all their questions, that they did not give them any useful advice in order to address identified problems, that the meeting with the councillor was too superficial or that the employees did not seem to have a proper education or enough experiences to do their job. Some respondents related this to the low age of the employees they met. One respondent mentioned that the employees did not showed to have taken into account that her results were very confronting to her. Two respondents gave a positive comment and mentioned that the councillors they met was very capable of doing their job well.

Follow-up after the test day (N=16): Nine respondents generally indicated that it would be nice if they would have the opportunity to participate in MyBalance again in the future, or that another type of follow-up would be appreciated. One respondents explicitly mentioned that she was promised to get a telephone call from her councillor, but this never happened. Four respondents indicated that 'nothing was done' with the results of their tests; no action plan was made or concrete advice about how the situation could be improved was given, while they would expect this based on their test results. One respondent commented that conclusions should be drawn from the discussions about wellbeing at work, and that these conclusions should be communicated back to the participants, accomplished by the reactions of managers on this.

MyBalance did not meet the expectations it raised (N=4): Two respondents explicitly described that they expected to be participating in a programme (probably relating this to a longer period of time), but experienced MyBalance more as a screening or setting of a diagnose. In addition to this, one respondent indicated that she did not know what to expect of MyBalance. She wondered what the programme would be for and where the information she gave would be used for.

Practical issues related to communication about MyBalance (N=5): One of the mentioned that the movie in intranet gave a clear impression of what could be expected from the test day. One respondent said to appreciate the fact that the questionnaire could be filled out online. Another respondent reported that more information of the nature of the test should be given beforehand, because this respondent was not prepared for a physical test and one respondent would have liked more information about MyBalance in the e-mail that was sent. Finally, one respondent mentioned that the options for scheduling an appointment were not very flexible.

Appendix G: Suggestions for improvement MyBalance from participants

Tests and accuracy of the test (N=19): Most of the respondents referred to extending the physical test with more or more detailed tests. One respondent suggested to measure the HDL and LDL-level separately while measuring the cholesterol level. Furthermore, six respondents commented on the cycling test that it does not give very accurate results and that the test should be adjusted or extended, for example by accompanying it with a ergometer test. With respect to mental health and the meeting with the councillor, one respondent says that this part should be skipped, while two respondents say it should be extended. Next to that, one respondent indicated that the meeting with the councillor is not very helpful, because the councillor refers participants to other institutions/persons for help, while another respondent on the contrary indicated that it would be better to refer participants to other institutions/persons for help instead of giving the impression that the councillor will directly provide help. Finally, one respondent suggests that for men over the age of 50 a test to check then on prostate cancer should be included.

Competences of the employees of Active Living (N=23): In most cases, the suggestions referred to a higher level of professionalism or more experience from the councillors. According to the respondents, they should be able to have in-depth dialogues with their clients and give them a personal and concrete advice, which was not always the case according to the respondents. Two persons suggested to clearly explain who the employees of Active Living are in terms of their skills and education. This will influence participants' expectations and assessments.

Follow-up after the test days (N=10): Some respondents explicitly referred to a follow-up directly related to the test day they went to, but most respondents referred to the fact that they think it good if MyBalance will be offered on a regular basis.

Practical issues (N=7): Six suggestions referred to 'better communication about what can be expected of MyBalance'. One respondent suggested to publish the results of the tests in order to enable participants to compare their test results with people their age.

Practical issues related to communication about MyBalance (N=5): One respondent suggested to communicate whether or not participants need to bring sportswear. One respondent suggested to find a better location for the welcoming of the participants compared to the back of the canteen which was used now. One respondent appreciated the fact that she got a print of the test results of the physical tests, and suggested to provide participants with a print of how they scored on the mental test as well. Another respondent suggested to enrich the desk of the hostess with brochures about the organizations' sports centre, including information about sports, activities and activating sports rights. A final recommendation was given was to extend the period that MyBalance is running, so more people would get the option to participate.

Appendix H: Detailed description comments on MyBalance from non-participants

General appreciation of the programme (N=23): Twenty respondents indicated that they valued MyBalance as a nice initiative. On top of that, three respondents commented that they would participate in MyBalance if it is offered again.

Communication about MyBalance (N=7): Two respondents stated that MyBalance was well advertised or that it could even be promoted more. On the other hand, three respondents commented that the e-mails they had received were too 'pushy' or 'aggressive', and one of them even added the e-mail address to the spam list, after he had received 7 reminders to participate in MyBalance. Two respondents commented that they heard from colleagues that the test day really did not meet the expectations they had based on the information that was given beforehand.

Privacy (N=4): One respondent said that he had concerns about the assurance of the privacy, one respondent said he doubted the privacy, and one respondent said that he did not like the fact that his employer would have (potential) access to his personal health data. Next to that, one respondent indicated that he hoped participation in MyBalance would not become obliged in the future.

Setting up an appointment for a test day (N=4): With respect to setting up an appointment for one of the test days, two respondents complained that there were not enough options and that it was a lot of hassle to plan an appointment. Two other respondents noted that the questionnaire that they had to fill out was too long.

The effectiveness of MyBalance (N=2): One respondent commented that she questioned if employees would actually live more healthy due to MyBalance. Next to that, one respondent said that employees are capable of influencing their own health, but in order to influence the well-being of the employees, the organization has some work to do. According to this respondent, the organizational culture is the core of 'the problem' and needs to be adjusted first in order to solve it.

Appendix I: Suggestions for improvement MyBalance from non-participants

Communication about MyBalance (N=8): Three respondents (all employed at AFSG) suggested that people should not be forced to participate and should not be bothered with multiple forcing e-mails in order to convince them to sign up for MyBalance. On the other hand, two respondents said that MyBalance could be better promoted in order to convince more people to participate. Furthermore, two respondents gave recommendations for communicating practicalities. One of them said that it was unclear to her if she would have to go to the office of Active Living if she wanted to participate or not. The other respondent said that she experienced that she was not dressed properly to do the cycling test and to measure her abdominal girth when she participated in the pilot of MyBalance last year, and that better communication about clothing would be recommended. Finally, one respondent suggested something about the communication of the results of MyBalance. He said that no feedback in any way should be provided to the company.

Tests and accuracy of the test (N=5): Two respondents said that test should be added and two others said that the participants should be given better feedback on their test results from knowledgeable people. One respondent said that the money should be spent differently or invested in a 'real' programme, with doctors instead of students.

Setting up an appointment for a test day (N=4): Two respondents suggested to offer MyBalance after working ours as well. Furthermore, one respondent said it would be nice if appointments could be set up by phone as well and another respondent noted that it would be good to give participants a phone number, so they could easily change their appointment.

Appendix J: Frequency graphs health, job satisfaction, performance department and organization