Summary

Lack of sufficient physical activity is a health threat and especially affects older adults. The question I set out to answer in this thesis is: ‘How can intervention programs help adults aged 50 and over to be more physically active?’ Answers to this question come from two intervention studies with older adults. The first intervention is a healthy aging, group-based, intervention program. I used the data to test assumptions of the Theory of Planned Behavior (TPB; Chapter 2), which is an important theory in the field of health psychology. The second is an online intervention that builds, among other theories, on assumptions of the TPB (Chapters 3 to 6).

The research question of Chapter 2 is about the extent to which the TPB predicts intention and physical activity behavior over time in the context of the existing Aging Well and Healthily intervention. I test the associations between concepts of the TPB over time in a structural equation model. The results show that intention can be explained by the measured concepts of the TPB, and that the TPB predicts some of the overall physical activity behavior change. However, the positive change in specific exercises that are practiced during the intervention cannot be explained by TPB concepts. Diversity in participants’ starting level on intention to change their physical activity might be an issue when evaluating the TPB model over time. Future studies with larger samples may consider stratified analysis for groups with different levels of intention to change. The findings show that the TPB is useful as an explanatory model for the intention to change. This is important because intentions to change are a prerequisite for actual change. The TPB, however, seems to fall short when using it as a behavior change model in the setting of a healthy aging program. The question remains how TPB concepts can be effectively used to change physical activity levels over time in an intervention setting.

In the remaining part of my thesis, I use a theoretical two-phase behavior change approach in the design of an online program that aims to motivate people aged 50 and over to be more active. In Chapters 3 to 6, I apply this theoretical approach and report on the construction and evaluation of an Internet-based program to motivate people aged 50 years and older to engage in PA. I apply intervention techniques aiming at the intentional phase (including TPB based concepts) and the volitional phase of behavior change. These techniques are combined with email prompts to increase engagement. Targeting the intended group of people is challenging. Some participants enrolled in our program even though they were sufficiently active. Therefore, I advise to screen participants before the start of the intervention. The program is not successful in changing intention or behavior. The email prompts
that are used in the Internet-based program do not increase the engagement of participants or the effectiveness of the program. In other words, prompting in the form of static emails is not effective in my study. Prompting can be useful, however, but care should be taken to cater to participants’ needs, possibly by using tailored prompting. Although these results are somewhat disappointing with respect to the desired outcomes, it does not mean that Internet-based PA interventions cannot be effective. Three other studies comparing different age categories in Internet-based PA interventions showed that they are effective for older adults. My intervention program is appreciated by the participants (Chapter 5) and there is a demand for such a program, as concluded from the evaluation (Chapter 5) and other research (Chapter 1).

A growing body of research in the wider field of health interventions provides clues about what works in these interventions. When comparing the results of two reviews of Internet-based health programs with the intervention components in my Internet-based program (Chapter 1), I conclude that the lack of personalized content in the form of personalized advice and counselor support and the lack of persuasive eCoaching might have compromised the effectiveness of my intervention. Moreover, various intervention components which are effective in the general field of Internet-based health interventions might not be effective in PA interventions for older adults. Findings from a recent study on intervention techniques in PA programs for older adults suggest that the intervention techniques that I use may not be optimal for older adults.

The question remains which strategies lead to an effective Internet-based intervention for 50+ adults. More research is needed on the use of interactive features of Internet-based programs and on which type of tailoring and prompting are effective. Moreover, there is no consensus on the best theoretical approach for designing Internet-based PA intervention programs. Many theories and approaches coexist and need to be applied in accordance with the specific behavior and setting. To increase consensus regarding an effective theory in the domain of health behavior promotion, it is important to conduct intervention studies. These studies should compare theoretical concepts and their power to predict behavior change. To stimulate the progress in the field, these studies need a detailed description of the applied intervention and of the operationalization of theoretical concepts.

I advise policy makers to either use the best available program in the Netherlands - the Active Plus program has been evaluated as effective -, or to design a new program based on the latest findings while closely monitoring its effectiveness.