General Discussion
This thesis was written with the objective of deepening existing understandings with regard to health and positive ageing for older adults with lower socioeconomic status (SES). First, we developed and executed a community-based health-promotion intervention (Community Wise) designed specifically for older adults with lower SES. The intervention focuses on multiple domains of health, while also targeting the communities in which individuals live. Using both quantitative and qualitative tools, we examined changes in the physical fitness, social vitality, well-being and self-management ability of participants following the intervention. Second, we used both researcher-driven and participant-driven photo-elicitation techniques to gain insight into the perceptions of older adults with low SES concerning health and positive ageing. In addition, we evaluated the usability of photo-elicitation techniques with this target group. We hope that the knowledge generated in these studies will be of value for future research and policy on healthy ageing.

This chapter begins with a brief reflection on the main findings of this thesis, based on the research questions described in Chapter 1. This is followed by a description of the overall methodological considerations of the research, as the strengths and limitations of separate studies are discussed in detail in the chapters. The chapter concludes by describing the implications of the results for policy and practice.

**MAIN FINDINGS**

**Research question 1: What is the effect of the Community Wise intervention on the physical fitness, social health, self-management ability and well-being of participants? (Chapter 2)**

**Research question 2: What are participants’ perceptions of the Community Wise intervention on the physical fitness, social health, self-management ability and well-being of participants? (Chapter 2)**

The Community Wise intervention was designed specifically for older adults with low SES, based on a social-ecological, community-based approach. The intervention focuses on stimulating physical fitness, social vitality, well-being and self-management ability during the course of 12 weekly group meetings. The evaluation of the intervention used both quantitative and qualitative techniques to assess pre-test/post-test differences and to evaluate the perceptions of participants concerning their improvement and experiences with the intervention.

According to the results of quantitative data analysis, participants exhibited only limited physical improvements in terms of aerobic endurance and shoulder flexibility, with no
visible improvements in self-management ability, loneliness, social cohesion or well-being. In contrast, the results of qualitative data analysis indicate that participants experienced improvements in their social health and self-management ability. A reflection on the contrasting results and their methodological challenges are described in the subsection Methodological considerations in this chapter.

As described in Chapter 1, we developed this intervention as a new strategy to improve a combination of health components and self-management ability, while also focusing on the community. This focus is in line with the call to action from national policy to expand the focus beyond individuals to include the living environments in which they reside (Hagenaars et al., 2022; RVS, 2021). We are also convinced that the focus on the community was one of the greatest assets of this intervention. Participants experienced improvements in their social health, both within the intervention group (through social connections in the group) and outside the intervention group (by taking more initiative for social contacts). In eight of the nine intervention groups, members organized new sessions or activities as a group after the intervention finished. This result is in line with those of other studies, in which the effects of interventions were rendered more sustainable through the application of a community-based approach (Levasseur et al., 2015; Wietmarschen et al., 2022). The long-term success of an intervention depends upon the availability of support from local sports or social care organizations after the end of the intervention. This matter is discussed in the subsection Practical implications in this chapter.

Research question 3: What are the positive health perceptions of older adults with a lower socioeconomic status, when older adults are interviewed with the use of photo-elicitation techniques? (Chapter 3)

As discussed in Chapter 1, additional insight into perspectives on health specifically for older adults with low SES is needed (e.g. to customize health policy to the needs of this group). To this end, we executed a researcher-driven photo-elicitation study to investigate the perceptions of older adults with low SES concerning their physical, social and mental health. In all, 19 participants discussed their perceptions, experiences and beliefs about these health components during the interviews. The results shed new light on perspectives on health for older adults with low SES. The findings suggest that perceptions of health depend on the background (e.g. cultural or financial) of the participant. Such perceptions also appear to be predominantly experience-oriented, meaning that they are influenced by the ways in which individuals experience their own health or by the health experiences of others within their informal networks (e.g. a neighbour with dementia was used as an example for mental health). In line with studies by Flinterman and colleagues (2022) and by Huber and colleagues (2016),
the participants in the current study described health largely in terms of bodily or physical aspects of health (whether positive or negative). The results further indicate that participants did not relate social aspects of life (e.g. being with children or grandchildren) to their perceptions of health, even though social aspects of life were the most important contributor to well-being. The importance of social health seemed to become more relevant as physical health declined. This result has also been reported in studies by Douma and colleagues (2017), by Huber and colleagues (2016) and by Jopp and colleagues (2015).

As described in the introduction to this thesis (Chapter 1), self-management ability is important to keeping up with the demands of society, given the shift from welfare state to participation society (Kempen, 2009). Most participants in the current study were not aware of the ability to self-manage their own health, and they tended to attribute poor health simply to ‘bad luck’. At the same time, however, all participants exhibited at least some automatic self-management ability with regard to health-related situations. Examples include participating in daily physical activities (cycling or walking) to maintain physical health status. This finding suggests that older adults with low SES manage their health in an automatic manner, without explicitly being aware of how and when they are doing so. On the one hand, the automatic self-management ability of older adults with low SES suggests that most people in this target group are at least partly capable of being in control of their own health. On the other hand, a lack of awareness of such self-management ability could also reduce the feeling of control over one’s life and the opportunity to influence aspects of health when needed. Although this result suggests that older adults with low SES do exhibit some automatic self-management, they could benefit from greater awareness of self-management ability and possibilities for change.

Research question 4: What are the perspectives of low SES older adults on positive ageing when using participant-driven photo-elicitation techniques? (Chapter 4)

To answer our fourth research question, we applied participant-driven photo-elicitation techniques. Participants gathered their own photographs, either from magazines or using cameras, to discuss their perspectives on positive ageing. The most important contributor to positive ageing was spending time with loved ones, which was also mentioned as highly valuable for well-being (Chapter 3). Activities that were frequently mentioned as contributing to positive ageing were related to the country of origin. Participants from Indonesia and Suriname explicitly photographed and mentioned eating with family and friends as contributing to positive ageing. Although the perspective of participants varied with regard to the meaning of positive ageing, they
shared several common features, such as accepting becoming older, maintaining a positive mindset and enjoying the little things in life.

The perspectives of participants also displayed similarities and differences with regard to physical, social and mental health, as well as with regard to positive ageing (Chapters 3 and 4). One similarity had to do with the importance of contact with loved ones, usually with children and grandchildren. In addition, country of origin (or the participant’s background) seemed to influence perspectives on both health and positive ageing. In both studies, participants from Indonesia or Suriname described the importance of food and eating together.

The results of the two studies also differed on some points. For instance, during the researcher-driven photo-elicitation study, participants often talked about the health experiences of other people (neighbours or acquaintances) instead of solely their own health experiences. They did refer to their own experiences when discussing positive ageing. These differences in results were likely due to the use of different photo-elicitation techniques (Copes et al., 2018). During the discussion about the perspective on health, participants were asked to reflect on photographs chosen by the researcher (researcher-driven). The participants thus reflected on the situations displayed on the photographs, instead of reflecting and focusing on their own situations. The technique thus placed the participants themselves outside of the situation (Copes et al., 2018; Pain, 2012). During the study on positive ageing, participants gathered photographs themselves (participant-driven). This technique has been shown to encourage participants to bring their own interest and creativity into research. It is probably for this reason that the participants focused primarily on their own experiences during these interviews (Padgett et al., 2013).

**Research question 5: What are the research strategy, lessons learned and recommendations for future research when conducting a researcher-driven photo-elicitation interview with low SES older adults? (Chapter 5)**

Several studies have been conducted using photo-elicitation techniques with vulnerable target groups (Copes et al., 2018; Pain, 2012; Novek et al., 2012). The process of developing researcher-driven photo-elicitation interviews has yet to be discussed. This is an unfortunate gap in the literature, given the time-consuming nature of developing such studies, which remain vulnerable to methodological issues. By sharing information about the development of these interviews and the lessons that were learned along the way, other researchers could use these insights when considering this technique. To explore the health perceptions of older adults with low SES, therefore, we developed a researcher-driven photo-elicitation study according
to a systematic, step-wise research strategy. The research strategy consisted of three phases: development, testing and execution.

Despite the strengths of researcher-driven photo-elicitation techniques (e.g. it can be a powerful tool for facilitating conversations between researchers and participants, several challenges must be overcome when considering this technique. First, researchers should thoroughly test all photographs, assignments, procedures and briefings with members of the target group, in order to increase the reliability of the study and avoid possible misunderstandings. For example, in the present study, we noticed that the purpose of the research was not clear to all participants, and this sometimes led to agitation. Second, it is difficult to use abstract tasks to investigate the perceptions of older adults with low SES. For the study on the perspectives of older adults with low SES concerning positive health, we used a photograph of a ship’s helm as a metaphor and asked participants whether they experienced control over various aspects of their health (Chapter 3). Although the exercise had been thoroughly tested in advance, it remained too difficult for most participants during the execution of the study. Our results are in line with those reported in a study by Flinterman and colleagues (2019), who encountered difficulties when using abstract tasks (e.g. prioritizing and clustering) in research on positive health with individuals with low SES.

**METHODOLOGICAL IMPLICATIONS**

Details on the specific limitations and strengths of each study are described in the individual chapters. This section provides a discussion of the overall methodological challenges we encountered during the execution and evaluation of these studies. The most prominent challenges were as follows: reaching older adults with low SES, the execution of the intervention programme, the evaluation of the intervention and the use of photo-elicitation techniques with older adults with low SES.

**Reaching older adults with low SES**

Recruitment challenges are common when conducting research involving older adults with low SES, as this target group is known to be difficult to reach (Liljas, 2017). The recruitment of older adults with low SES also proved to be one of the largest and most intensive challenges in our studies. We discovered several factors underlying these difficulties. First, older adults with low SES are difficult to reach, because they are often not ‘visible’ in the community. The tendency of this target group to be under-represented in neighbourhood social activities makes it more difficult to reach them through such activities. Second, most of the older adults who were approached were
reluctant to participate in any health intervention. Reasons mentioned included mobility problems (e.g. fear of going somewhere), chronic health problems and no motivation/no desire to participate in health projects. The residents of the selected low-SES communities also reported that they did not feel the need or urge to participate in health interventions, as they were facing bigger problems (e.g. poverty). Third, the feeling of safety (or lack thereof) in the community affected the success of recruitment for the study. In our experience, communities in which participants perceive a lack of social safety were not suitable for inclusion in the intervention. Although investing in relationships with local stakeholders and choosing face-to-face recruitment strategies are time-consuming, they were ultimately the most successful, as compared to other strategies, such as distribution of leaflets and advertisements in local newspapers because most older adults did not read the leaflets.

We identified three components that were particularly important to the success of our recruitment efforts: attention, time and patience in building relationships of trust with the target group and becoming familiar with the community in which the intervention was going to be executed. To this end, visibility in the community as a research team (e.g. during coffee hours in a local community centre was important in order to become familiar with the community. Working together with local stakeholders (e.g. the board of a local community centre, community volunteers, church members) was very helpful for reaching more vulnerable community residents, as these stakeholders were able to serve as a ‘bridge’ between the researchers and the residents.

The lessons learned during the research and the recommendations derived from them are illustrated in an infographic that can be useful for reaching older adults with low SES for community-based health-promotion interventions (see Appendix Infographic in Dutch: Bereiken van ouderen met een lage SES met een community-gerichte aanpak voor het bevorderen van positieve gezondheid).

**Designing and evaluating the Community Wise intervention**

The challenges encountered during the design and evaluation of the Community Wise intervention highlight the complexity of community-based interventions. The heterogeneity of the target group posed one of the greatest design challenges. Given that Community Wise is a community-based intervention, participants in the groups differed according to multiple characteristics, as they were not included based on health status, but according to the communities in which they were living. To improve components of physical vitality, social health, wellbeing and self-management ability, it was necessary for the intervention to be suited to the individual physical fitness and cognitive possibilities of all participants. At the end of the intervention, we interviewed
all trainers about their experiences. Some had adjusted the programme as needed to suit the needs and wishes the group (e.g. because some exercises did not suit the physical or cognitive possibilities of frail participants). These adjustments, however, endangered the fidelity of the programme, as discussed in the limitations reported in Chapter 2.

Based on the suggestions from both trainers and participants, a tailor-made approach seems more appropriate for future CW interventions. Such an approach would allow trainers to choose from amongst a variety of exercises aimed at the same elements, depending on the physical fitness and cognitive abilities of the group. For instance, trainers with some physically vulnerable participants in their group could choose from a series of less intensive physical exercises aimed at improving physical health. To test the usefulness of this approach, we recommend a process evaluation, starting with a pilot study, in which each exercise of the programme is evaluated with both trainers and participants. This could be done by conducting a focus-group discussion with the trainers and participants after each session.

Another complexity associated with community-based interventions involves evaluating the effects of the intervention. Although the randomized control trial (RCT) is regarded as one of the most reliable methods for this purpose (Robinson et al., 2020), it is practically impossible to conduct this type of trial for a community-based intervention, for multiple reasons. First, distinguishing a community is complex, as it could refer to a street, a neighbourhood or a social group (Brand et al., 2014). Second, it is virtually impossible to find two similar communities with the same participant characteristics (e.g. in terms of physical vitality and cognitive possibilities). Third, the number of participants available in the communities selected for a study does not always allow randomization. For example, in the current study, one community had only 20 participants for two groups. Fourth, when conducting an RCT in a single community, participants in the control group could inadvertently be exposed to the intervention, as they live in the same community (Robinson et al., 2020). It is therefore important to monitor the control group carefully, and the analysis should control for possible contamination.

Another complexity occurring during the evaluation of the intervention was that participants had difficulty completing the questionnaires. The combination of the large number of questions and the low literacy level of some participants might explain the difference between the quantitative and qualitative outcomes with regard to the results of the CW intervention, as discussed in detail in Chapter 2. This raises questions concerning the proper way to study the effects of community-based interventions with
this target group in order to ensure reliable results. In future studies, priority should be assigned to exploring which options are suited to the language skills, cognitive capabilities and physical limitations (e.g. visual and hearing impairments) of older adults with low SES.

**The use of photographs**

As described in the introduction to this thesis (Chapter 1), photo-elicitation techniques are a qualitative research tool used in social research, but not often in studies involving older adults with low SES. Although we are convinced that photo-elicitation can serve as a successful research tool with this target group, it is important to take several methodological aspects into account. First, researcher-driven photo-elicitation is useful for inviting participants to reflect on topics chosen by the researcher (Chapter 3). Especially for researcher-driven photo-elicitation, researchers should always be aware of the ‘framing’ effect that their chosen photographs have on the direction of the interview, and they should take this into account when analysing the results (Leonard & McKnight, 2015). For instance, when testing the photographs, we showed a photograph displaying a large amount of cash to facilitate the conversation about the participant’s financial situation. We noticed that some participants had trouble reflecting on the photograph because they could not relate to the amount of money displayed in the photograph (Chapter 5). These participants therefore did not reflect on their personal financial situations during the interview. To increase the reliability of the study, researchers should discuss the risk of a possible framing effect of the chosen photograph within the team (Bates et al., 2017). Second, when using participant-driven photo-elicitation, we noticed that some older adults had difficulties with digital means for taking the photographs (chapter 4). Some older adults asked for help in their informal network, this might influence the chosen photographs as these participants discussed their ideas in their informal network and as a result possibly made social desirable photographs. Some older adults choose photographs from magazines as they could not use any digital means. As this provided a solution during our study, we are also aware that participants might be restricted in their ideas because they needed to find a photograph in the magazine which captured their reflections. For future research, one might consider using disposable cameras because these are often easier to photograph participants’ own ideas without the assistance of their informal networks.
PRACTICAL IMPLICATIONS

Continuation of the intervention group

One problem that often occurs in connection with health interventions concerns securing the effects of the intervention after the formal sessions have ended. The Community Wise intervention focuses on improving components of physical, social and mental health through weekly group sessions. Continuation of the group after the end of the intervention could secure any effects achieved during the intervention. In our case, most groups wanted to continue together with exercises or coffee hours after the end of the intervention programme. It was nevertheless difficult to ensure the continuation of group activities, for several reasons. First, before the start of Community Wise, the intention was for groups wishing to continue to have the option of organizing meetings together after the intervention. To do so, however, participants should feel ownership of the intervention and perceive the possibility of organizing the sessions themselves. As indicated by the results of the interviews and focus-group discussions (Chapter 2), most participants were not willing to volunteer for this organizational task. Although they did wish to continue with group meetings, some participants reported feeling too old to organize the meetings themselves, while others felt too much pressure from the group. During the focus-group discussions, participants mentioned a need for support from a professional to continue with group meetings. There was no financial budget for continuation after the end of the intervention, however, and trainers involved in the intervention often supported the group voluntarily for an extended period (a few months) after the intervention.

Taken together the results of the interviews and focus-group discussions indicate that older adults with low SES often require some form of support to continue with group activities after the end of an intervention. For future interventions, it would be advisable to identify in advance parties who could support the group for a longer period, should the participants wish to continue. These parties could consist of local welfare or sports organizations financed by local governments.

Healthy Ageing policy

As described in the introduction to this thesis, the notion of Health in All Policies draws upon the idea of integrating health into all kinds of policies (Greer et al., 2022; Hagenaars et al., 2022). Although participatory methods are gaining popularity in policymaking, most policies are still developed and determined from the top down, under the influence of political developments at various levels (Bisschops et al., 2022). When policies are developed in this manner, there is a risk that the measures contained within these policies will not be applicable to the situations and experiences of the
target group. By asking older adults with low SES to share their perspectives on health and ageing, policymakers could ensure that policies could be customized to their needs and wishes.

Taken together, the results of this study highlight the need for health-promotion interventions or health-communication strategies with a particular focus on the social components of health. In most cases, health-promotion efforts or health-related communications focus on improving physical fitness or mental health as a means of improving overall health (e.g. healthy diet to improve physical health). As demonstrated by the results of this thesis, it is important to focus on the components of social health that could improve the overall health and ageing experiences of older adults. For example, health-communication strategies could motivate older adults with low SES to participate in local activities to avoid feelings of loneliness. With regard to self-management, the results of our studies indicate that most older adults with low SES do exhibit self-management behaviours to a certain extent, although they are not always aware that they are doing so. Given that the shift from welfare state to participation society expects older adults to self-manage their health and well-being as much as possible, health policy should focus on increasing awareness concerning how to self-manage health (van Hees et al., 2020). A focus on self-management ability could also serve as a preventive strategy that could be executed by local healthcare professionals and social organizations.

**CONCLUSION**

This thesis is intended to be of value for health science and policy, as well as for older adults with low SES. It combines a health-promotion intervention with an innovative research method to enhance understanding of the perspectives of older adults with low SES concerning health and ageing. The results indicate that a community-based health intervention (Community Wise) can improve various components of the physical health, social health and self-management ability of older adults living in low-SES communities. It is nevertheless in need of further development with regard to both the intervention programme and evaluation tools. Both researcher-driven and participant-driven photo-elicitation techniques can be successful tools for investigating the health of this target group, as long as several methodological challenges (e.g. digital skills) are taken into account. In all of the studies in this thesis, none of the older adults with low SES related social health to overall health, but social health did appear to be a very important contributor to well-being and the experience of joy, happiness and life fulfilment. There is no one-size-fits-all perspective on health and positive ageing. These perspectives depend on the experiences, background, culture and motivations...
of individuals. By giving a voice to older adults with low SES, it could be possible to customize interventions and healthy-ageing policies that were determined from the top down to a bottom up approach to suit the diverse needs, wishes and capabilities of this target group.