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It Has To Be My Way—Reducing Sedentary Time in the Transition to Retirement

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Background: Sedentary behavior is highly prevalent in older adults transitioning to retirement. Sedentary time is all of the time spent in sedentary behavior, and prolonged sedentary time is associated with an increased risk of noncommunicable diseases. The aim of this study was to explore perceptions among older adults transitioning from working life to retirement regarding self-management strategies for reducing sedentary time and adhering to the reduced sedentary time. **Methods:** Twenty-eight older adults, age 60–75 years, participated in one of four focus group interviews. Qualitative content analysis was used to analyze the data. **Results:** The analysis resulted in the theme “It has to be my way,” and the three categories “Activities scattered with joyfulness,” “Support for changes in everyday life,” and “Health affects willingness and ability, and is affected by adherence.” **Conclusions:** Interpreted from the perspective of self-determination theory, self-management strategies for reducing sedentary time should be adaptable as every individual is unique, indicating a need for autonomy. Sedentary time was said to be reduced by activities that evoked joyfulness, and joyfulness was considered to increase adherence. Support for changes to one’s everyday life was considered necessary. The support that was mentioned primarily involved targeting cognitive determinants such as self-efficacy and attitudes. This new knowledge can be included when designing self-management interventions; however, more research is needed in order to evaluate whether self-management strategies targeting autonomous motivation and affective determinants, such as affective judgment and cognitive determinants, can reduce sedentary time in those who are in the transition to retirement.

Keywords: adherence, joyfulness, sedentary behavior, self-management strategies

Key Points

- Self-management strategies for reducing sedentary time in older adults transitioning to retirement must be individually adaptable.
- Strategies should target both affective determinants as enjoyment and cognitive determinants as attitudes.

For most people in Western societies, the transition from working life to retirement usually occurs between the ages of 60 and 75 years. Retirement can lead to a shift in one’s activities and participation in society. Sedentary behavior (SB) is highly prevalent in this target group and increases with age (Hansen et al., 2012; Harvey et al., 2015). SB can be defined as “any waking behavior with an energy expenditure <1.5 metabolic equivalents (METs), while in a sitting, lying or reclining position” (Tremblay et al., 2017). Sedentary time is all of the time spent in SB (Tremblay et al., 2017). Prolonged sedentary time is associated with an increased

risk of several noncommunicable diseases, such as cardiovascular disease, Type 2 diabetes, and cancer, as well as increased mortality (Biswas et al., 2015; Ford & Caspersen, 2012; Rossen et al., 2020). Research has found that 8 hr or more of sedentary time increased the risk of premature death in adults, even if the physical activity recommendations by the World Health Organization were met (Ekelund et al., 2016; Stamatakis et al., 2019).

Transitioning to retirement often leads to changes in one’s health behavior and has been identified in earlier research as a favorable time for health promotion interventions (Barnett et al., 2012; Ding et al., 2016; Vigezzi et al., 2021), making the transition from working life to retirement an advantageous time for introducing interventions to reduce sedentary time.

Only a few intervention studies have focused specifically on reducing sedentary time in older adults in the transition to retirement. Interventions that include self-management strategies tend to be more effective in reducing sedentary time in older adults (Petruzevski et al., 2020). Self-management can be defined as a person’s own day-to-day management of health promotion activities or chronic disease and involves the management of one’s medicines, emotions, meaningful behaviors, and roles (Lorig & Holman, 2003). A recent study aiming to reduce sedentary time among older adults in the transition to retirement found that sedentary time was not reduced through the use of an activity tracker, although the activity tracker included elements


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of goal setting and prompts to break prolonged bouts of sedentary time (Suorsa et al., 2022). This indicates that reducing sedentary time in the transition to retirement is complex and reveals a need for further understanding of the target group's perceptions of self-management strategies for reducing sedentary time.

A recent systematic review regarding older adults' perceptions concerning SB revealed that SB is often habitual and is associated with joyfulness and relaxation (Compermolle et al., 2020). Other authors have found that enjoyment and engaging in activities with others facilitated engagement in non-SBs (McGowan et al., 2019). Niklasson et al. (2023) found that older adults describe SB as an unnatural part of daily life compared with the expected level of physical activity. They also found that increased sedentary time was regarded by participants as part of having an aging body and that the intention to be nonsedentary was defeated by SB if this was expected to increase one's well-being. However, older adults are often unfamiliar with the concept of SB and the disadvantages of extensive sedentary time and have a positive attitude toward reducing their sedentary time through monitoring, getting feedback, information, goal setting, and planning (Compermolle et al., 2020). Even if there is increased knowledge regarding older adults' perceptions of SB, there is a knowledge gap when it comes to perceptions regarding self-management strategies for reducing sedentary time among older adults who are transitioning to retirement.

For an intervention to be effective over time, it must lead to adherence to the target behavior. Adherence can be defined as "the extent to which a person's behavior—taking medication, following a diet and/or executing lifestyle changes corresponds with agreed recommendations from a health care provider" (World Health Organization, 2003, p. 3). Adherence to health care interventions is generally low (World Health Organization, 2003). Increased adherence can be achieved by involving the target group in intervention design and decision making (Collado-Mateo et al., 2021). Furthermore, designing interventions based on the perceptions of the target group can increase empowerment and thereby adherence to the intervention (Náfrádi et al., 2017). This further strengthens the need to explore perceptions regarding self-management strategies for reducing sedentary time when transitioning from working life to retirement.

In summary, there are health benefits to reducing SB in older adults. Retirement can be an appropriate time for such interventions, which should preferably include components of self-management. Although there is growing knowledge regarding interventions for reducing sedentary time in older adults as well as older adults' perceptions of SB, there is a knowledge gap when it comes to perceptions regarding self-management strategies for reducing sedentary time in the transition to retirement.

The aim of this study is to explore perceptions among older adults transitioning from working life to retirement regarding self-management strategies for reducing sedentary time and adhering to the reduced sedentary time.

Methods

Design

This study had a qualitative design with an inductive approach. Qualitative design can be described as being suited for the investigation of phenomena, typically in an in-depth and holistic fashion, through the collection of rich narrative materials using a flexible research design (Polit & Beck, 2020) and is suitable when the aim is to gain an in-depth understanding of participants' perceptions of a phenomena (Moser & Korstjens, 2017). In an inductive analysis,

categories and themes are created from the data rather than being based on earlier knowledge as in a deductive approach. An inductive approach is recommended when not enough is known about the phenomenon being studied (Elo & Kyngäs, 2008), which is why this approach was chosen.

Recruitment and Participants

Prior to recruitment, the study was reviewed and approved by the Swedish Ethical Review Authority (Dnr: 2019-03836). To increase the credibility, older adults transitioning to retirement were included in the study. Participants were recruited from meetings and theme days held by retirement organizations and municipalities in two municipalities in central Sweden. This might have led to an overrepresentation of those with an active social life while excluding those who were socially disconnected, affecting the findings' credibility and transferability. To counter this risk, recruitment was also conducted among employees within one of the municipalities. Participants were encouraged to inform other potential participants about the study. The recruitment procedure may have failed to include participants with lower socioeconomic status, who have been referred to as "hard to reach" (Fry et al., 2023), possibly affecting the credibility and transferability of the results. Inclusion criteria for the study were as follows: between 60 and 75 years of age, ability to speak and understand Swedish, and able to read and comprehend the study instructions. Further, inclusion criteria were as follows: working and planning to retire within a maximum of 3 years or having been retired for a maximum of 5 years. Exclusion criteria were as follows: having a serious disease such as dementia with cognitive impairment, musculoskeletal disease or severe depression, and severe loss of vision or communicative ability. A total of 28 participants were included in the study, 15 (54%) of whom lived in a house or townhouse and 13 (46%) in an apartment. Nearly half (43%) had used a self-management strategy involving a technical solution to make changes to their health behavior, the most common tool used was a step counter (67%). Participant demographics can be found in Table 1.

Procedure and Data Collection

Measures have been taken in the planning of this study to achieve the trustworthiness (Lincoln & Guba, 2007) of the findings. The study process was well planned and documented in order to increase its dependability. To enable an in-depth discussion of the participants' perceptions and to give them the opportunity to reflect upon and discuss the research question together, focus group interviews were conducted (Krueger, 2015; Tausch & Menold, 2016). These focus group interviews were conducted by the first author using a semistructured interview guide. The interview guide consisted of questions concerning how to reduce one's sedentary time, how to advise someone else wanting to reduce their sedentary time, how to adhere to the reduced sedentary time, and the acceptability of delivering self-management strategies through a digital solution. The interview guide was designed by the researchers of this study. To achieve credibility, the interview guide was tested in two pilot focus groups consisting of older adults in the transition to retirement who met the criteria for inclusion ($n = 2 + 2$). No changes were made after the pilot testing. Four focus group interviews were conducted during October and November 2019, with seven to nine participants each. At the beginning of each focus group interview, the participants were given written and verbal information about the study and were informed that their participation was voluntary and that they could

Table 1 Participant Demographics

Characteristics	Value
Age, mean (<i>SD</i>); min–max	66.9 (2.9); 62–74
Sex, <i>n</i> (%)	
Female	21 (75)
Male	7 (25)
Living conditions, <i>n</i> (%)	
Cohabiting	21 (75)
Living alone	7 (25)
Employment, <i>n</i> (%)	
Retired	23 (82)
Working	5 (18)
Time as retired in years, mean (<i>SD</i>); min–max (<i>n</i> = 23)	4.4 (5.2); 0.1–19
Time to retirement in years, mean (<i>SD</i>); min–max (<i>n</i> = 5)	0.8 (1.2); 0.1–2.6
Most sedentary or nonsedentary during the workday at current or last employment, ^a <i>n</i> (%)	
Sedentary	11 (39)
Nonsedentary	17 (61)
Sedentary time during weekdays, ^b mean (<i>SD</i>); min–max	9.4 (4.9); 3.8–20.5
Sedentary time during weekends, ^b mean (<i>SD</i>); min–max	9.5 (3.4); 4–19

^aSelf-report of current or last employment regarding most time spent sedentary or nonsedentary during the workday. ^bSelf-reported number of hours a day spent sedentary using the Longitudinal Aging Study Amsterdam (LASA) Sedentary Behavior Questionnaire (Visser & Koster, 2013).

choose to end their participation at any time. Informed consent was signed. Background data regarding the participants were collected using a questionnaire. Sedentary time was measured using the self-report questionnaire LASA (Longitudinal Aging Study Amsterdam) Sedentary Behavior Questionnaire (Visser & Koster, 2013). The participants reported a great variation in their amount of sedentary time, strengthening the study's credibility and transferability.

The participants were given information including the definitions of SB and sedentary time. The focus group interviews took place in two of the university's group rooms and lasted 87–106 min (mean = 97, *SD* = 8). All interviews were audio-recorded, and an assistant took notes during the interviews as a complement to the audio recordings.

Data Analysis

Latent qualitative content analysis (Graneheim & Lundman, 2004) was used to analyze the data. This analysis method was chosen as it is suitable when one is analyzing participants' perceptions of a common phenomenon, and the data are close to the lived experience (Lindgren et al., 2020). In line with the underlying assumptions of qualitative content analysis, this study aligns with the communication theory that all text is a matter of communication that includes a meaning to be interpreted and described (Graneheim & Lundman, 2004). The audio recordings were listened to by the first author and transcribed verbatim using NVivo (QSR International Pty Ltd. Released 2018. NVivo, version 12 plus): the recordings were added to NVivo, and the first author then transcribed the focus group interviews. The transcribed interviews, as well as the notes taken by the assistant, were read through several times by the first author to obtain an overview of the content. Text within the transcribed interviews that related to the study aim were marked as meaning units, condensed, and abstracted into codes. Codes that shared commonalities were then grouped together in subcategories using Nodes in NVivo. Categories

were then created by grouping together subcategories based on their commonalities. The use of special software for analysis strengthened the credibility of the findings as the audio recordings were linked to the meaning units. The authors could then easily go back and forth between audio recordings, meaning units, subcategories, categories, and the theme throughout the analysis process. The first author discussed and revised the analysis with the fourth and fifth authors. After this step, all authors discussed the subcategories and categories, followed by further revision by the first, fourth, and fifth authors. This was carried out in an iterative process until all authors were satisfied with the categories and subcategories. The authors then agreed upon a theme that can be found in all categories and subcategories. One of the authors who participated in the analysis also performed the focus group interviews. This increases the study's credibility as some of the comprehension of the transcription is only possible through having attended the focus groups (Krueger, 2006). The study's credibility was further strengthened by the analysis procedure, with all authors contributing in an iterative process to ensure the quality of the analysis (Elo et al., 2014). An overview of the process of the qualitative content analysis can be found in Table 2.

Results

The analysis led to the theme "It has to be my way." The theme consists of three categories and eight subcategories, as illustrated in Table 3. Quotes from the focus groups are provided in the findings to illustrate examples to support the common meaning of the subcategories.

It Has To Be My Way

This theme highlights that self-management strategies for reducing sedentary time must be individually adapted as every individual is

Table 2 Examples From the Process of the Qualitative Content Analysis

Meaning unit	Condensation/ code	Subcategory	Category	Theme
But I think that a lot of the things one has to do—it has to be fun, you know. That's when it becomes permanent; that it gives you something.	Becomes permanent if it is fun	Activities that are considered fun and rewarding	Activities scattered with joyfulness	It has to be my way
And we've been walking a lot because we rarely use the car here.	Rarely take the car	Using the opportunities in everyday life	Support for changes in everyday life	

Table 3 Theme, Categories, and Subcategories

Theme	Category	Subcategory
It has to be my way	Activities scattered with joyfulness	Activities that are considered fun and rewarding
		Social context and relationships are important
	Support for changes in everyday life	Prepare for retirement by finding new interests
Health affects willingness and ability and is affected by adherence	Support for changes in everyday life	Need for structure and self-discipline
		Using the opportunities in everyday life
		Becoming informed regarding sedentary behavior
		Physical impact matters
		The importance of and impact on emotional state

unique regarding their interests, emotions, preferences, and preconditions. The theme consists of the three categories “Activities scattered with joyfulness,” “Support for changes in everyday life,” and “Health affects willingness and ability, and is affected by adherence.” “Activities scattered with joyfulness” describes that, if a strategy involves engagement in activities that evoke joyfulness, adherence to the activity and therefore reduced sedentary time can be achieved. Which activity leads to joyfulness is highly individual. In addition, although one might wish to participate in an activity, there are also differences in people's possibility to participate, and strategies must be adapted accordingly. The category “Support for changes in everyday life” highlights that, to reduce one's sedentary time, changes must be made to one's everyday life, and to adhere to these changes, there is a need for support. This category is linked to the theme as changes and support must be individualized and enable a feeling of independence and freedom in order to achieve adherence. Finally, the ability and willingness to try strategies for reducing one's sedentary time and to adhere to the reduced sedentary time are dependent on physical function and emotions, which are also affected by prolonged sedentary time. This is captured in the category “Health affects willingness and ability, and is affected by adherence.”

Activities Scattered With Joyfulness

This category, which describes self-management strategies involving finding activities that evoke a sense of joyfulness, consists of the subcategories “Activities that are considered fun and rewarding,” “Social context and relationships are important,” and “Prepare for retirement by finding new interests.” Finding joyful activities was considered crucial for long-term adherence and was discussed as the most important strategy that one would also advise others to use. Joyfulness could arise from performing an activity that one perceived as fun or that one performed with others. When using joyful activities as a means for reducing one's sedentary time, there is a need for individual adaptation. What is considered fun differs between individuals, and financial conditions affect the possibility to participate in activities with others as they often entail a cost.

Activities That Are Considered Fun or Rewarding

Participating in nonsedentary activities that are considered fun or rewarding was described as a strategy for reducing sedentary time. Which activities were considered fun differed among the participants. An activity was initiated and adhered to over time if it was fun, and an activity that was not experienced as enjoyable could be performed with the addition of fun or rewarding elements such as listening to music, playing games, or performing quizzes. The importance of an activity being rewarding was discussed by two participants in one focus group as follows:

And what is it then that makes you get started and get moving at all? It's that it's fun, isn't it?

Yes. Exactly. (Focus Group 3)

However, financial conditions could influence which activities one could participate in when participation involved a cost. In one focus group, three participants discussed how one's financial situation affected the possibility to participate in activities as follows:

It's very good when you have neighbours who are going out and doing things together. Then it's free.

Yes, exactly. I was thinking the same thing.

You might just be able to participate in one thing that costs, you might not be able to participate in several just because you think it's fun. (Focus Group 1)

Social Context and Relationships Are Important

Concerning enrolling in activities to reduce one's sedentary time, being social and spending time with others was described as rewarding and as a stronger reason to participate in various activities rather than the activity itself. At the same time, being lonely was discussed as a possible reason for becoming sedentary. Living conditions and social context were considered to affect the time spent in SB, as living alone was believed to increase sedentary time. Being part of a retirement

organization was said to decrease sedentary time by the activities held by the organization and the opportunity to meet others with mutual interests and thereby counteract one's loneliness. Family and grandchildren visits were considered a possibility for limiting sedentary time as well. Participants in one focus group described in the following way why participating in activities with others was important:

The social part is very important, 'cause if you think about it . . . It's the coffee afterwards or the chat afterwards, that really attracts you more. (Focus Group 4)

Prepare for Retirement by Finding New Interests

The participants expressed that sedentary time when one is newly retired can be reduced by preparing ahead of retirement by finding fun activities and hobbies while still working. They considered it to be more difficult to change one's behavior and decrease sedentary time after retirement, in contrast to being prepared by having activities and reducing one's sedentary time while still working. At the same time, the need to plan ahead was considered to differ between individuals and was considered the most important for people who had all of their social contacts and interests connected to work. During one focus group, the need for preparation ahead of retirement was described as follows:

I think you might have to prepare well in advance . . . so you don't end up just sitting there . . . but instead come up with more fun things to do. (Focus Group 1)

Support for Changes in Everyday Life

This category includes the subcategories "Need for structure and self-discipline," "Using the opportunities in everyday life," and "Becoming informed regarding sedentary behavior." The category involves strategies linked to taking the opportunity to be nonsedentary when possible, changing the way one conducts everyday activities and chores, and adhering to these changes. Having self-discipline was considered necessary, but a person's ability to be self-disciplined could be facilitated by strategies such as attaining knowledge regarding SB and nonsedentary activities, setting goals, and making schedules. One must be able to modify this support to one's own situation in order to maintain a sense of freedom and to have the feeling that one is in control. A digital solution was described as a possible means for delivering the support as older adults transitioning to retirement are accustomed to digital solutions, but there is still a need to make such a solution easy to use and to keep in mind that a digital solution is not for everyone.

Need for Structure and Self-Discipline

The participants felt that they needed to have structure for the day in order to counteract increased sedentary time after retirement. They expressed a need to have the willpower and self-discipline for adherence when reducing their sedentary time, but also said that self-discipline could be strengthened through strategies such as setting goals or devising a schedule or roles. Another strategy involved being aware of their sedentary time or physical activity during the day. Keeping a diary to note the physical activity one performs or using a step counter were other possible solutions. This was also suggested in combination with setting goals regarding the time one should spend in SB. During one focus group, a participant expressed the following in regard to how a step counter and goal setting increased their motivation to reduce their sedentary time:

I have a look every night at how many steps I've walked. Sometimes I stand up like this (walks in place) to get some more steps in. (Focus Group 4)

Participants also discussed the benefits of getting reminders of their sedentary time when engaging in an activity that involved sitting but also expressed the need to feel that they were entitled to decide over their own time and not be controlled. Being able to decide, whether and when such reminders would come, was a way to achieve this. Getting a reward or praise from others or oneself or in the form of stars in a digital device, for instance, was said to increase adherence. This was discussed in one focus group as follows:

But I praise myself. I do. If I feel like I've done something good. "That was very good" . . . and then (pats herself on the back). (Focus Group 2)

Using the Opportunities in Everyday Life

Everyday activities and chores such as choosing to bike instead of taking the car, cleaning the house, or gardening were used to reduce sedentary time. The possibility to do this was said to differ based on one's living situation as those living in an apartment were expected to have fewer chores associated with the home. By rethinking and changing the way one conducted daily activities and chores, the spent time in SB could be further decreased. Two participants in one focus group discussed the opportunity to reduce sedentary time in everyday life in the following way:

Thank God for the garden

Raking leaves can be done as many times as you want . . . I'm very much for capturing the moment in everyday life. (Focus Group 1)

Although engaging in physical activity and exercise was considered to be a good way to reduce one's sedentary time, some participants expressed that even daily exercise had only a limited effect on this. Reducing your sedentary time was a question of what you do throughout the day. This was described during one of the focus groups as follows:

But it's in the everyday life And you said exercise, I can do that a couple of times a week. But then you go away. But the other [time at home], I think it could easily happen [that one stays seated for a long time]. (Focus Group 4)

Participants expressed that retirement could facilitate strategies for reduced sedentary time as it offered the opportunity to be outdoors or to exercise during the day, leaving one with more energy to spend on leisure time activities. At the same time, they expressed that there was more time for having long breakfasts, reading, or watching a series on TV. Participants who were not yet retired expressed uncertainty and worry that their new everyday life with extended leisure time would result in extended sedentary time. A participant expressed how retirement had affected their opportunity to be nonsedentary as follows:

I enjoy every moment. And there's time for so many things that I didn't have the time or energy for before. (Focus Group 2)

Becoming Informed Regarding SB

To be able to reduce one's sedentary time, it was important to get information regarding why this was necessary, as well as how to do it. When the information was considered reliable and was delivered

by a trustworthy source, this gave it credibility and created a feeling of safety. It offered assurance that the information was applicable to the individual in question, which was considered an enticement to listen to the information and act accordingly. The source could be a physiotherapist, an informant at a health care center, or a physician on a TV health program. The information was believed to have a greater effect if provided on several occasions. During one focus group, the participants described a need to know that the information was true and trustworthy as follows:

It would also be an incentive for me to do it if I knew it was done by somebody who knew their stuff. (Focus Group 3)

The participants discussed the fact that information regarding reduced sedentary time and various self-management strategies is available online but expressed uncertainty as to how to find it. In addition, one must obtain information regarding suitable activities that are available in one's surroundings to be able to participate. They expressed a need to have the information gathered in one place and make it available to those in the process of retiring. This was mentioned by one of the participants, who suggested receiving information upon retirement:

Is there some kind of senior kit that could be sent out? Kind of like when you have your first child. (Focus Group 4)

Participants expressed a wish that information on SB be delivered to all older adults transitioning to retirement. They pointed out that those who are retiring today as well as those who will retire in the future are typically accustomed to digital tools and applications, making a digital solution a possible way to spread information. At the same time, it was discussed that a digital solution must be easy to use and that such solutions are still not accepted by everyone.

Health Affects Willingness and Ability and Is Affected By Adherence

This category includes the subcategories "Physical impact matters" and "The importance of and impact on emotional state." This category illustrates that the level of a person's willingness and ability to adapt to new strategies was considered to be affected by their physical function, health, and emotions. At the same time, however, adherence to reduced sedentary time was considered to affect physical function, health, and emotions. Having or otherwise gaining knowledge of the beneficial consequences of reducing one's sedentary time could be used as a strategy for doing this.

Physical Impact Matters

Participants stated that the willingness to try new strategies to reduce one's sedentary time was affected by the physical impact a high amount of sedentary time has on the body in the short term and by the impact of reduced sedentary time in the long term. They described situations in which a sedentary activity was ended due to increased acute pain, perceived to have been caused by having spent a prolonged time in sedentary. A will to reduce pain and increase physical function in the long term was considered to increase adherence to reduced sedentary time. Maintaining one's physical functioning over time was considered to be a way to stay independent, have a fulfilling life, and be able to participate in activities without physical limitations:

I want a long, rich life, and to be mobile. That's my goal. That's what I think about. If I just sit, well, then I won't be able

to have a pentathlon with my grandchildren or go bowling with them. That's my guiding star. (Focus Group 3)

The Importance of and Impact on Emotional State

Whether or not a person is willing to try self-management strategies was considered to be affected by their emotional state. Emotions related to being miserable or unhappy were said to both increase and decrease the probability of trying self-management strategies for reducing sedentary time. This was described by two participants who had opposite perceptions in this regard:

And sometimes it can be that if you've gotten low enough, then you're open to a life change, I'd say. (Focus Group 3)

If I don't feel satisfied with my overall life situation, it won't matter how many apps and technology and other things I surround myself with, 'cause it won't have that significance. I won't be ready for it then. (Focus Group 1)

Emotions related to sedentary time—such as feelings of guilt when sitting too much, a feeling of missing out on an activity when not performing it, and curiosity about what's going on in the neighborhood—were considered to facilitate self-management strategies for reducing sedentary time. Two participants described their emotions after being mostly sedentary during the day as follows:

I think it has a lot to do with your own conscience. You want to have a clean conscience.

I agree.

You don't want to look in the mirror and think "Damn, you've been lazy today." But I think you punish yourself mentally in some way. Like ... "This, this doesn't feel good." (Focus Group 4)

Feelings of dejection in times of adversity can reduce the possibility of maintaining one's adherence to reduced sedentary time. It was considered important that the strategies including information regarding sedentary time not lead to feelings of guilt or pressure in regard to decreasing one's sedentary time. During one focus group interview, a participant described how a strategy could result in feelings of pressure:

It has to be something that won't give you a bad conscience, 'cause I think you can feel a bit pressured in general by, like, "Think about what you're eating, think about how much you're moving, think about this, think about that." (Focus Group 1)

Discussion

This study explored perceptions among older adults in the transition from working life to retirement regarding self-management strategies for reducing sedentary time and adhering to the reduced sedentary time. The findings consist of the theme "It has to be my way" and the three categories "Activities scattered with joyfulness," "Support for changes in everyday life," and "Health affects willingness and ability and is affected by adherence." The theme "It has to be my way" highlights that self-management strategies for reducing sedentary time and adhering to the reduced sedentary time must be adapted to each individual's unique interests, emotions, preferences, and preconditions. Reduced sedentary time was

perceived as achievable and possible to adhere to through self-management strategies that involved being engaged in activities that evoked feelings of joyfulness. In addition, it was perceived that there is a need to make changes to everyday life based on a person's preconditions and a need for individualized support in making these changes. Finally, the ability and motivation to engage in a self-management strategy and to adhere to the reduced sedentary time are dependent on the individual's physical function and emotions. It was expected that, if sedentary time was reduced, physical function and emotions were affected in positive ways.

The theme "It has to be my way" can be interpreted from the perspective of self-determination theory (Deci & Ryan, 1985). This theme indicates the importance of adjusting self-management strategies according to the individual, including their preconditions, emotions, interests, and joys and the notion that the support can be chosen and adapted by the individual according to what they need. This instills a feeling of being in control and having the opportunity to choose for oneself rather than being controlled. The theme can be understood as reflecting that participants saw a need for self-management strategies to target autonomous motivation in order to achieve a reduction of sedentary time and adherence to the reduced sedentary time. According to self-determination theory, autonomous motivation to perform a behavior will lead to an intention to perform the behavior, or a behavior change, in the future (Deci & Ryan, 1985), indicating that such an approach could be effective.

The category "Activities scattered with joyfulness" describes that joyful activities can be a strategy for reducing one's sedentary time. In this category, joyfulness can be understood as reflecting that participants perceived that the self-management strategies should target intrinsic motivation (Deci & Ryan, 1985), meaning that they wanted the activity to give them intrinsic rewards as enjoyment. Based on this theory, intrinsic motivation to employ a strategy may imply reduced sedentary time and adherence to the reduced sedentary time. Earlier research states that older adults tend to place a higher value on emotionally meaningful activities and on goals associated with emotional state (Carstensen, 2021) and that expectations regarding affective reactions to a health behavior are an important predictor of the execution of that behavior (Conner et al., 2015). Emotional reactions to a health behavior influence affective determinants such as anticipated affect and affective judgment (Stevens et al., 2020). The findings in the present study reveal that older adults transitioning to retirement use and prefer self-management strategies for reducing sedentary time, which influence these affective determinants. In recent decades, there has been increasing evidence of affective determinants for health behavior (Stevens et al., 2020). Affective determinants can be targeted through reminders of the previous positive affect related to health behavior (Forster et al., 2018) and affective mental contrasting (Ruissen et al., 2018).

Compernelle et al. (2020) found that one main reason for older adults being sedentary was enjoyment. The fact that enjoyment can both increase and decrease one's sedentary time could be explained by the individuality in what evokes joyfulness and thereby which behaviors that are intrinsically motivated. Furthermore, a recent study (Eklund et al., 2021) with a phenomenological approach found that persons in retirement described SB as both something unhealthy that happens in loneliness and boredom, contributing to negative physical and psychological consequences and something healthy, giving one time to rest one's aging body after a long working life and for reflection and activities that there had been no time for earlier in life. As sedentary time can have implications on

one's health and enjoyment, it is important to carefully think through strategies for reducing sedentary time so that they will not lead to a deterioration in health. According to the self-determination theory, autonomy and intrinsic motivation facilitate well-being (Ryan & Deci, 2000); this suggests that these must be maintained when using strategies for reducing sedentary time in order to maintain health. This can be achieved by offering the possibility to use reminders, self-monitoring, and information and making it possible to choose when and how these strategies are used. In addition, if intrinsically motivated SBs such as reflection, reading, or playing cards are interrupted and reduced, it is important that they be replaced with intrinsically motivated non-SBs such as standing and listening to an audiobook, cooking, or doing something else that is joyful in order to maintain perceived well-being.

The category "Support for changes in everyday life" reveals the need to make changes in one's everyday life by taking the opportunity to be nonsedentary whenever possible and finding new ways to do primarily sedentary activities. This is an important insight, considering that reducing one's sedentary time does not necessarily mean increasing one's moderate-to-vigorous physical activity and exercise, as there are positive effects involved with replacing prolonged sedentary time with light physical activity (Del Pozo-Cruz et al., 2018). A recent study concerning the meaning of sedentary time in older adults found that older adults associated light physical activity with SB (Niklasson et al., 2023), which is in contrast to the results of the present study in which participants saw a possibility to be nonsedentary in daily activities such as cooking, gardening, or standing while on the phone. Further, this category reveals the need for support, such as notifications and goal setting, in making the changes. It was important that the individual could choose and adapt the support so that they felt in control rather than restricted. Making rules and schedules, setting goals, being aware of and receiving a notification when spending too much time in SB, and using reinforcements are all behavior change techniques that have been used successfully for behavior change in the past (Curran et al., 2021; Michie et al., 2009). These are the techniques that older adults considered acceptable for reducing sedentary time (Compernelle et al., 2020). Curran et al. (2021) found that goal-setting behavior and feedback on behavior were the most effective behavior change techniques for reducing sedentary time in adults. In older adults, the addition of information and action planning have been the most effective in interventions for reducing sedentary time (Petruzevski et al., 2020). Previous intervention studies on reduced sedentary time have often been based on cognitive beliefs about and cognitive determinants of health behavior, such as attitudes and self-efficacy (Ajzen, 1991; Bandura, 1986). Cognitive determinants can be targeted through self-monitoring and information about health consequences (Howlett et al., 2019; Michie et al., 2009). Such interventions could be suitable as sedentary time is often habitual in older adults, who are often unaware of the health consequences (Compernelle et al., 2020). The findings of the present study reveal that older adults in the transition to retirement prefer self-management strategies, which influence both affective and cognitive determinants of reduced sedentary time.

The category "Health affects willingness and ability and is affected by adherence" describes positive feelings associated with pride upon goal achievement, as well as feelings of guilt or regret after prolonged sedentary time. Pride, guilt, and regret are anticipated affects influencing whether a behavior is performed (Brewer

et al., 2016; Kotabe et al., 2019; Stevens et al., 2019). Although anticipated regret and guilt can lead to reduced sedentary time, they are described by participants as negative feelings and should be consequently avoided. All health promotion interventions aimed at enacting behavior change carry a risk of blaming the individual and stigmatization (Tengland, 2016). Feelings of guilt also counteract autonomous motivation and could be avoided through adaptation according to the individual's preconditions and interests, as well as positively formulated information. Formulating information in a positive manner has been shown to be effective when used as an intervention for behavior change in older adults (Notthoff & Carstensen, 2014). Participants in the present study discussed the fact that their emotional state prior to engaging in a self-management strategy, also called incidental affect (Stevens et al., 2020), influences the extent to which the strategy will be carried out, but perceptions differed as to whether depression leads to an adherence to or a rejection of strategies. A systematic review found that leisure engagement increased subjective well-being among retirees (Kuykendall et al., 2015). As the results of the present study indicate that joyful activities can be used as a means for reducing sedentary time and that incidental affect influences one's willingness to use self-management strategies for reducing sedentary time, joyful activities might both reduce sedentary time and increase one's willingness to try self-management strategies to further reduce it when transitioning to retirement.

Further Research

The results of the present study are of importance, in both practice and research, regarding the design of interventions for reducing sedentary time in older adults transitioning to retirement. A deeper understanding of the target group's perceptions of self-management strategies for reducing sedentary time and adherence to the reduced sedentary time can lead to more acceptable and effective interventions. To our knowledge, there are no published studies aiming at reducing sedentary time through interventions targeting autonomous motivation and affective determinants, either on their own or in combination with cognitive determinants in older adults transitioning to retirement. Further research is needed to examine whether such an intervention might reduce sedentary time in older adults transitioning from working life to retirement. The theme of this study highlights the need to include older adults who are transitioning to retirement in the development of such an intervention to ensure that it is developed in line with their preferences and preconditions in order to possibly increase adherence.

Conclusion

Participants in this study stressed that self-management strategies for reducing sedentary time should be individualized based on a person's interests, emotions, preferences, and preconditions, indicating a need for autonomy. The results indicate that the anticipated affect, primarily joyfulness, and emotional state can be determinants of reduced sedentary time and adherence to the reduced sedentary time. Participants also expressed a wish for support in making changes to their daily life based on cognitive determinants. More research is needed in order to evaluate whether interventions, including support for self-management strategies, targeting autonomous motivation, affective determinants, and cognitive determinants, can reduce sedentary time among those in the transition from working life to retirement.

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