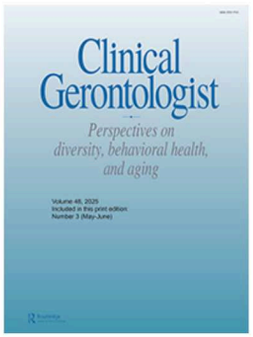

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The PELI-D II Study: Development and Preliminary Validation of the Preferences for Leisure Activities Inventory (P-LAI) for Adult Day Services

Mike Rommerskirch-Manietta MSc[a,b], Christina Manietta MSc[a,b], Anna Louisa Hoffmann-Hoffrichter MSc[a,b], Daniel Purwins PhD[c], Kimberly Van Haitsma PhD[d], Katherine M. Abbott PhD[e,f], and Martina Roes PhD[a,b]

[a]Deutsches Zentrum für Neurodegenerative Erkrankungen (DZNE), Witten, Germany; [b]Faculty of Health, School of Nursing Science, Witten/Herdecke University, Witten, Germany; [c]Diakonie Osnabrück, Stadt und Land gGmbh, Osnabrück, Germany; [d]College of Nursing, Pennsylvania State University, University Park, Pennsylvania, USA; [e]Department of Sociology and Gerontology, Miami University, Oxford, Ohio, USA; [f]Scripps Gerontology Center, Miami University, Oxford, Ohio, USA

ABSTRACT

Objectives: The current study aimed to develop and preliminarily validate an initial version of an instrument to assess the leisure activity preferences of people receiving adult day services (ADS).

Methods: Based on previously conducted concept mapping steps, we identified 12 clusters of preferences for leisure activities. We adopted the structure of the Preferences for Everyday Living Inventory and phrased our cluster labels as questions to develop a first draft of the Preferences for Leisure Activities Inventory (P-LAI). We conducted cognitive interviews ($n = 8$) to revise, preliminarily validate, and preliminarily finalize the P-LAI.

Results: The draft of the P-LAI included 25 questions. Based on the results of the cognitive interviews, the number of questions was reduced to 21, three questions were rephrased, and evidence to support the preliminary validity of the P-LAI based on the response processes was provided.

Conclusions: The P-LAI is the first instrument to assess preferences for leisure activities in the ADS environment.

Clinical implications: The preliminary results of the P-LAI allow ADS providers and healthcare professionals to assess the preferences for leisure activities of people who receive ADS in a structured way. Based on these results, preference-based services can be designed and planned, and the person-centered philosophy of care can be further operationalized in the ADS environment.

KEYWORDS
Community; dementia; long-term care; person-centered care

Introduction

Centers that provide adult day services (ADS) are an important part of home- and community-based long-term services. They offer health services and activities to people living with complex medical and social needs with the goal of supporting healthy aging (Orellana et al., 2020). Moreover, ADS empower people to age in place (Sadarangani et al., 2021) and support their preference to do so (Bishop & Degenholtz, 2022) while providing respite to their significant others (Gaugler et al., 2021).

In recent years, the person-centered philosophy of care has received increasing attention in the ADS environment (Boafo et al., 2022; Sadarangani et al., 2021). The culture change movement, which is defined as a change from staff-centric task-based care to person-centered care, appears to be important for ADS centers (National Academies of Sciences, E., and Medicine, 2022). There are various models, concepts, and frameworks of the person-centered philosophy of care, all of which focus on individuals and their needs, wishes and preferences rather than reducing them to their disease (Santana et al., 2018). Furthermore, the person-centered philosophy of care is associated with high-quality care in long-term care environments characterized by a close and trusting relationship between the person receiving care and his, her or their care partners (Fazio et al., 2018). Additionally, it is important for healthcare professionals to be familiar with and honor individuals' preferences throughout the

CONTACT Mike Rommerskirch-Manietta Mike.Rommerskirch-Manietta@dzne.de Deutsches Zentrum für Neurodegenerative Erkrankungen, Stockumer Straße 12, Witten 58453, Germany

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care delivery process, which provides a foundation for individualized care (Van Haitsma et al., 2020). This is further elaborated by the preference-based model of care developed by Van Haitsma et al. (2020). This theoretical model of the role of preferences in person-centered care suggests that preferences are the essence of the person-centered philosophy of care. Additionally, this model explains the mechanism by which fulfillment of preferences can positively influence care and care outcomes (Van Haitsma et al., 2020).

To make further progress in changing the culture and operationalizing a person-centered philosophy of care in the ADS environment, it is important to assess leisure activity preferences and offer preference-based leisure activities (Rommerskirch-Manietta, Bergmann, et al., 2023).

Engagement in preferred leisure activities is an important way for older people to maintain and/or improve their physical, cognitive, and mental health (Sala et al., 2019). Furthermore, engagement in preferred leisure activities can satisfy individuals' psychological needs for competence, relatedness, and autonomy, which can promote their well-being (Deci & Ryan, 2000; Rommerskirch-Manietta, Purwins, et al., 2023; Van Haitsma et al., 2020). Consequently, the provision of preference-based leisure activity services in the ADS environment has the potential to stabilize and/or improve the health outcomes of people receiving ADS, which in turn can stabilize or improve their care needs (Doroszkiewicz & Sierakowska, 2021). ADS centers can support engagement and socialization by establishing an environment that honors their clients' preferences for leisure activities. This approach leads to perceptions of ADS centers as places for engagement in preferred leisure activities (Rommerskirch-Manietta, Purwins, et al., 2023). Currently, however, it appears that preferences are rarely considered when planning activities in ADS centers (Orellana et al., 2020; Rommerskirch-Manietta, Purwins, et al., 2023). Instead, services are based on the needs and competencies of the people receiving ADS (NADSA, 2023).

As an important aspect of implementing the person-centered philosophy of care in long-term care, providers mentioned the need for a feasible instrument to assess preferences (Abbott et al., 2021). A structured instrument to assess preferences can increase awareness of this topic among healthcare professionals, which can allow preferences to be identified in a structured way and honored in the provision of care (Rommerskirch-Manietta, Roes, et al., 2021). Currently, no available instrument comprehensively assesses the leisure activity preferences of people receiving ADS (Rommerskirch-Manietta et al., 2022). Therefore, a first step in operationalizing the person-centered philosophy of care is to offer ADS providers and healthcare professionals a feasible instrument to assess the preferences of people receiving ADS.

Conceptualization of preferences for leisure activities of people receiving ADS

As a starting point for the development of an instrument to assess the leisure preferences of people with ADS, we performed a concept mapping process (between 2020 and 2023) that actively involved people receiving ADS in Germany (Rommerskirch-Manietta, Bergmann, et al., 2023; Rommerskirch-Manietta, Purwins, et al., 2021).

Concept mapping is defined by W. Trochim (1989); W. M. Trochim and McLinden (2017) as a structured process that includes six steps (preparation, generation, structuring, representation, interpretation, and utilization). This process focuses on a topic or construct of interest and produces an interpretable pictorial representation of the ideas and concepts of the participants and how these ideas and concepts are interrelated. Concept mapping is considered an effective mixed method approach for instrument development. One of the reasons for this is that the target population for the instrument can be actively involved in generating and interpreting the data (i.e., lived experience is considered). This leads to a valid conceptualization of a construct of interest, which is necessary for the development of valid, reliable, and feasible instruments (Rosas & Ridings, 2017).

In the *preparation* step of our concept mapping, on-site nurses at three ADS centers helped to recruit participants with the focus on heterogeneous characteristics. Based on their clinical assessment, the nurses contacted potential participants who had the competency to participate in the concept mapping process and obtained the ongoing

informed consent from them and/or their legal guardian (Rommerskirch-Manietta, Purwins, et al., 2021). We decided against using a cognitive screening test as an inclusion criterion because we argue that this can have a negative impact on relationship building, which is an important aspect of conducting active, involved research. Moreover, a cognitive screening test requires additional cognitive load, which would have increased the burden on the participants and resulted in an additional day of data collection per person (Haberstroh et al., 2014). The potential participants were informed about the concept mapping process. Additionally, we discussed the procedure and aim of the different concept mapping steps. To establish a good working framework and a diversity of opinions on a topic, it is recommend to include a minimum of 10 people for concept mapping (Kane & Trochim, 2007). Our purposive sample (Patton, 2014) included sixteen people receiving ADS from three ADS centers in Germany. These people participated in the five steps of the concept mapping process. Most of the participants reported that they were female ($n = 12$), and their ages ranged from 62 to 92 years. Eleven were diagnosed with dementia.

Next, 80 preferences for leisure activities were *generated* as a result of a synthesis of the findings from semistructured interviews with the participants (empirical) and a previously conducted evidence map of instruments for assessing preferences (theoretical) (Rommerskirch-Manietta et al., 2022). These 80 preferences included social, learning, productive, resting, play, travel, and physical leisure activities, such as reminiscing, getting to know other people, celebrating cultural festivals, and improving knowledge and skills (Table 1).

Each participant subsequently *structured* the 80 different preferences in different clusters. This was done according to the methodological description

Table 1. 80 preferences for leisure activities (Rommerskirch-Manietta, Bergmann, et al., 2023).

(1) Gardening	(41) Roller skating
(2) Distilling/brewing	(42) Dancing
(3) Cooking	(43) Climbing
(4) Baking	(44) Doing gymnastics
(5) Singing	(45) Walking
(6) Playing instruments	(46) Running
(7) Painting & drawing	(47) Cycling
(8) Doing handcrafts	(48) Hand-picking
(9) Doing mechanics	(49) Dog walking
(10) Reading	(50) Dog sports
(11) Listening to music	(51) Caring for others
(12) Watching TV	(52) Being around other people
(13) Volunteering	(53) Talking with others
(14) Mentoring	(54) Getting to know other people
(15) Initiating interest groups	(55) Building friendships
(16) Improving knowledge and skills	(56) Playing pranks
(17) Learning new things	(57) Writing to pen pals
(18) Reminiscing	(58) Being a club member
(19) Relaxing	(59) Spending time with family and friends
(20) Doing nothing	(60) Spending time with my or other children
(21) Taking time for myself	(61) Spending time with animals
(22) Wellness	(62) Playing board games
(23) Shopping	(63) Doing quizzes
(24) Going to restaurants	(64) Solving riddles
(25) Going to parks	(65) Doing crossword puzzles
(26) Sightseeing	(66) Playing memory games
(27) Going to church	(67) Doing puzzles
(28) Attending sporting events	(68) Playing cards
(29) Visiting fun fairs	(69) Playing lottery games
(30) Going to cabarets	(70) Rolling dice
(31) Attending concerts	(71) Driving car
(32) Going to the opera	(72) Using public transportation
(33) Attending festivals	(73) Trying out new things
(34) Going on vacation	(74) Trying out everything
(35) Playing ball games	(75) Celebrating your cultural festivals
(36) Playing toss	(76) Listening to cultural music
(37) Bowling	(77) Doing or watching cultural sports
(38) Playing mentally stimulating games	(78) Explaining your own cultural practices to others
(39) Swimming	(79) Enjoying your own cultural environment
(40) Sailing	(80) Visiting your native country

of Trochim and McLinden (2017); therefore, each participant sorted the 80 preferences in a "*way that made sense to the individual.*" Additionally, the importance of all 80 preferences was rated by each participant (ranging from *not important at all* to *very important*).

A statistical and interpretative analysis was then conducted. As a result, a three-dimensional cube with 12 clusters was created that *represented* the different structuring of the preferences by the participants. The importance ratings of the 80 different preferences were descriptively analyzed. The three preferences for leisure activities rated as most important were Spending time with family and friends (3.90 M, 0.31 SD), Listening to music (3.90 M, 0.31 SD), and Going to parks (3.80 M, 0.42). The three least importance preferences were Roller skating (1.30 M, 0.94 SD), Sailing (1.30 M, 0.94 SD), and Running (1.50 M, 0.84 SD).

The 12 clusters were then *interpreted* and given labels in a consensus process by the participants based on the included preferences in the various clusters. As a result, our conceptualization divided preferences for leisure activities into the following preference cluster: 1. *Take a trip*, 2. *Revel in memories and catch up on the news* (this cluster includes the most important preferences), 3. *Do something for yourself and come to rest*, 4. *Play intelligence and parlor games*, 5. *Make/produce and try something alone or in a group*, 6. *Keep fit and cheer others on in sports* (this cluster includes the least important preferences), 7. *Learn, educate, and share knowledge*, 8. *Have contact with other people*, 9. *Attend at entertainment, cultural and amusement events*, 10. *Enjoy music, your homeland, or other countries*, 11. *Engage in outdoor activities* and 12. *Get involved, offer support and provide companionship* (Figure 1) (Rommerskirch-Manietta, Bergmann, et al., 2023).

Objectives

To utilize our previously developed conceptualization, the current study (PELI-D II) aimed to develop an initial version of an instrument to assess the leisure activity preferences of people receiving ADS and to preliminarily validate this version.

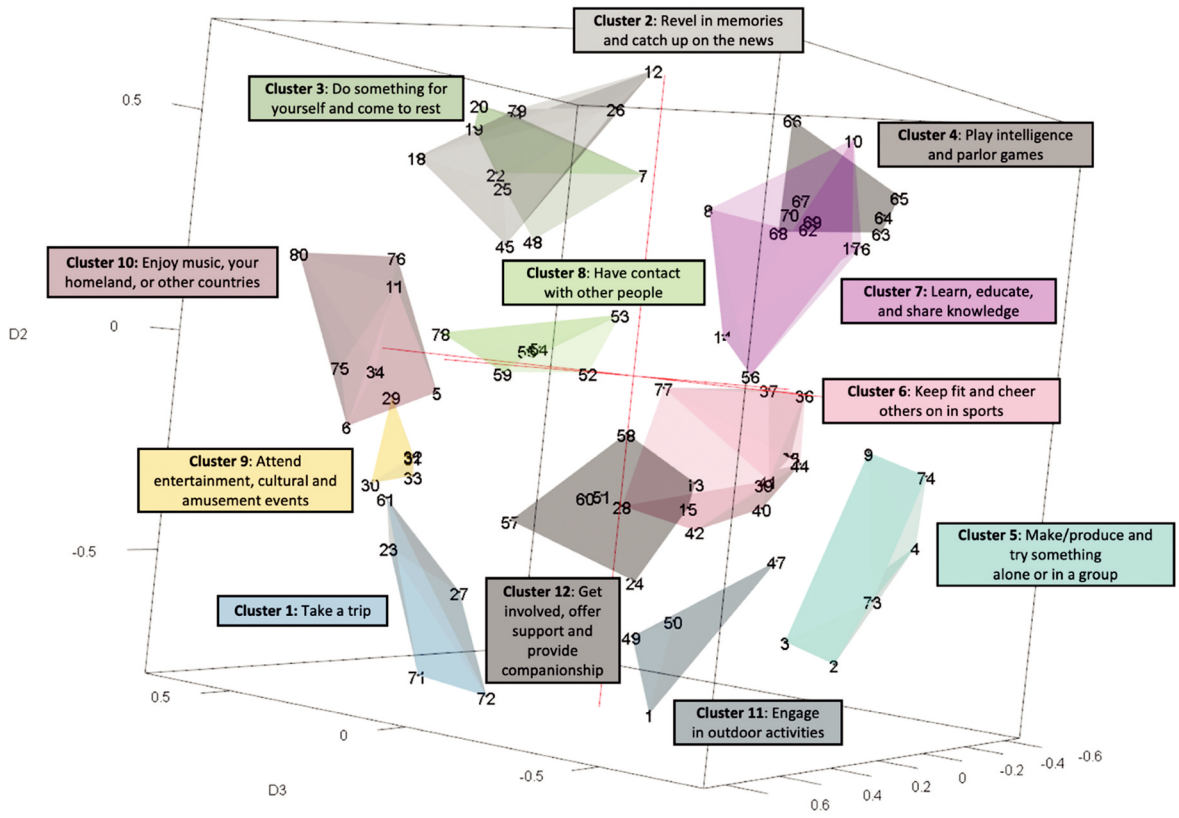

Figure 1. Three-dimensional cube with 12 clusters (Rommerskirch-Manietta, Bergmann, et al., 2023).

Methods

Study design

In this article, we report on the utilization step of our concept mapping approach. The utilization step of concept mapping is described by Trochim and McLinden (2017) as an ongoing process that is determined by the aim of the mapping process. For example, with a focus on instrument development, concept mapping (conceptualization) is used in the utilization step to develop an initial version of an instrument that can then be piloted and further tested.

In our utilization step, we report on the development of an initial version of an instrument and how we conducted cognitive interviews with people receiving ADS to revise, preliminarily validate and preliminarily finalize our instrument (Beatty & Willis, 2007; G. B. Willis, 2005).

Ethical approval was granted by the ethics committee of Witten/Herdecke University (No 226/2020).

Development of a new preference instrument

To utilize our conceptualization to develop a new instrument, the Preferences for Everyday Living Inventory (PELI) was adopted and adapted (Stacke et al., 2021; Van Haitsma et al., 2013). This development was needed because healthcare professionals from ADS centers in Germany indicated that the various preference topics of the culturally translated German version of the PELI (PELI-D I) were not specific enough for the services offered in ADS centers (a focus on activities instead of, for example, bath routines) (Stacke et al., 2020, 2021).

The PELI is a valid and reliable questionnaire developed to identify and honor the preferences for everyday living of older adults in the community (Van Haitsma et al., 2013) and in nursing homes (Curyto et al., 2016). The PELI starts by providing an introduction to the older adult being interviewed and includes 72 questions regarding possible preferences in the respondent's everyday living, such as preferences for the environment, daily routines, social contact, and personal development. The structure of the PELI is divided into two parts. In the first part, the older adult is asked about the importance of different preferences. Possible responses include ranging from *very important* to *not important at all*; *important but can´t do*; *no response/NA*. An example item is as follows: *How important is it to you to do what helps you feel better when you are upset?* If an answer of *very important [1]*; *somewhat important [2]* or *important but can`t do, no choice [5]* is given or indicated with the numbers 1, 2, or 5, further specification questions are asked, such as, *Which things help you feel better when you are upset?* If the older adult responds that the preference is *not very important [3]; not important at all [4] or doesn't response [9]*, the interviewer proceeds to the next preference question. The numbers of the different answer options can be used by the respondents for simplification (i.e. only the number can be used as an answer). Consequently, the reported numbers do not form a total score for the evaluation of preferences (Curyto et al., 2016).

With respect to the current research, one researcher (MRM) adopted the introduction of the PELI and made changes to adapt it to the leisure context. Next, this researcher adopted the 12 cluster labels provided by the participants during the previous concept mapping steps (Rommerskirch-Manietta, Bergmann, et al., 2023) and developed them into individual questions. For example, the cluster label *Revel in memories and catch up on the news* was adapted into two individual questions: *How important is it for you to revel in memories?* and *How important is it for you to catch up on the news?* These questions were sorted according to the order of importance assigned to the 12 clusters beginning with the most important one. The aim was to ask about the most important preferences for leisure activities at the beginning of the interview, thus facilitating the conversation and preventing possible interviewee fatigue (Rommerskirch-Manietta, Bergmann, et al., 2023).

In addition, the response scale of the PELI was adopted, and the researcher organized the numbers for the importance ratings (important: 1, 2, 5; not important: 3, 4, 9) in a more logical manner (important: 1, 2, 3; not important: 4, 5, 6) for use with nonacademics/nonresearchers.

Furthermore, the researcher (MRM) developed two specification questions. The first specification question aimed to provide further details regarding preferences that were rated as "*important*," e.g.,

What do you like to do to revel in memories? This open-ended question format was chosen to develop a proactive and timeless instrument. Therefore, the instrument does not resemble an interrogative checklist with specific, predetermined leisure activities; rather, it is intended to be used to assess individual preferences in the context of the question (e.g., the use of TikTok to revel in memories). In addition, an open-ended specification question offers the opportunity to obtain more in-depth responses and facilitate conversation based on those responses, thus fostering relationship building (Roberts & Bowers, 2015).

The aim of the second specification question was to address the importance of barriers related to the engagement of people receiving ADS in their preferred leisure activities. Therefore, it is important for healthcare professionals to be aware of and have knowledge about these barriers (e.g., level of autonomy) if they are to address them (Rommerskirch-Manietta, Purwins, et al., 2023). Accordingly, we developed the following question: *If it is important but you can't do it or have no choice, what is or are the reason[s] for this situation?* This question is asked following the first specification question if the answer "*important but can`t do, no choice*" was previously given. Finally, the entire results of this process were synthesized by the researcher into a draft of the instrument (Figure 2).

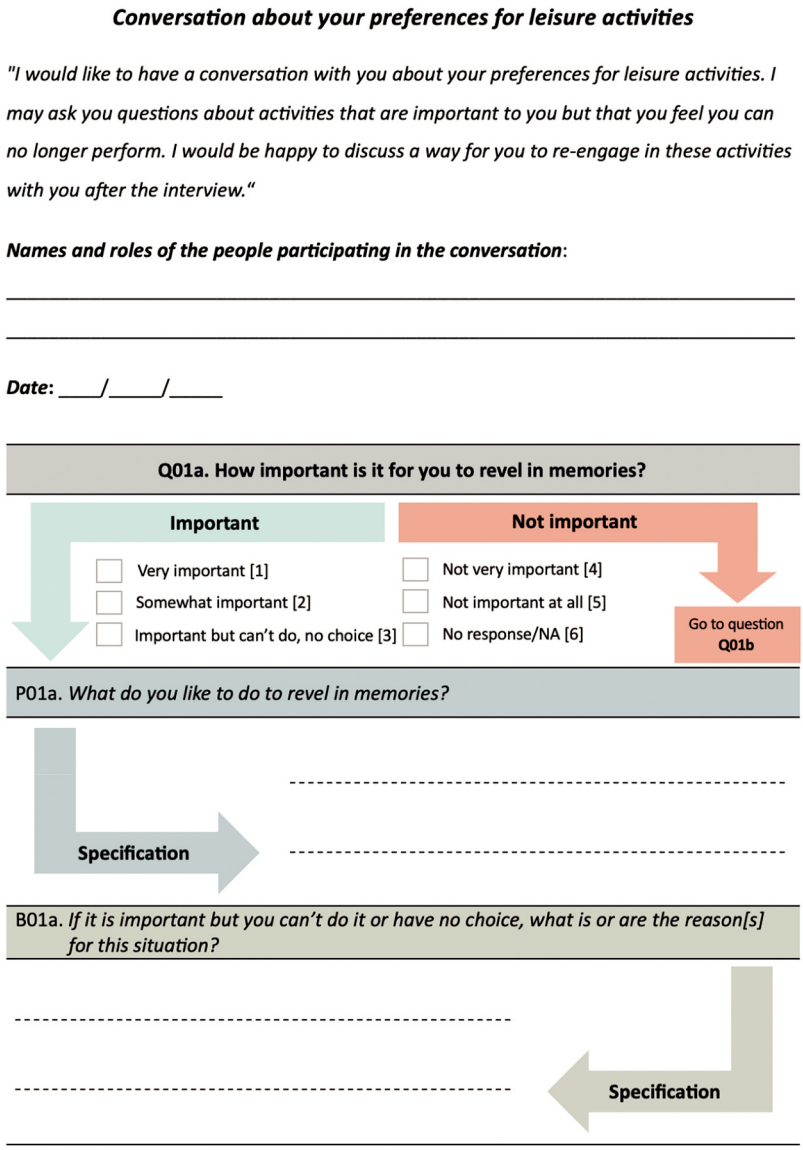

Figure 2. Excerpt from the draft of the instrument.

Finally, the draft of the instrument was reviewed in four individual meetings with the researchers (CM, ALHH, MR) and with a research assistant associated with the research group. The focus of these reviews was on the introduction, response scale, structure, and layout of the instrument, as well as the wording, comprehensibility, and possible overlap of the questions. Accordingly, an initial identification and collection of possible challenges for the people receiving ADS, such as instrument questions, were conducted. The results of the reviews, which took the form of critical comments, were all noted, summarized, and processed by one researcher (MRM) for the cognitive interviews with the aim of evaluating them alongside the people receiving ADS.

Cognitive interviews

To revise our draft and preliminarily validate our initial version of the instrument, we conducted cognitive interviews with people receiving ADS. Cognitive interviews are described as a method for pretesting instruments by referencing to small samples ($n = 5–15$) before the instrument is used, for example, in practice or research (G. B. Willis, 2005). The focus of these interviews is on whether the questions included in the instrument would provide the information intended by its author as well as the validity and meaningfulness of the questions (Beatty & Willis, 2007; Castillo-Díaz & Padilla, 2012).

Recruitment and participants

Since the cognitive interviews were conducted as part of the utilization step of our concept mapping, we recruited participants who participated in the previous steps of concept mapping (Rommerskirch-Manietta, Bergmann, et al., 2023). Participants were recruited in the previous steps of concept mapping if they a) used the ADS at least once per week or four times per month, b) were able to report their preferences verbally, and c) were able to sort cards by hand or verbally instruct others to do so on their behalf (Rommerskirch-Manietta, Bergmann, et al., 2023).

For the cognitive interviews, the 16 participants from the previous steps of concept mapping were asked by a nurse on site at the ADS centers if they would like to be involved. If they agreed, their ongoing informed consent (Rommerskirch-Manietta, Purwins, et al., 2021), which was formally signed during the first step of concept mapping by them and/or their legal guardians, was evaluated by the researcher on the day of the interview.

Data collection

Based on the draft of the instrument (Figure 2), the critical comments made by the research team and cognitive interview probes (Beatty & Willis, 2007), one researcher (MRM) developed the interview protocol for the cognitive interviews. For this purpose, the critical comments made by the research group were phrased as category selection probes (e.g., *Is there a difference for you between very important and somewhat important?)*, comprehension probes (e.g., *What does the phrase revel in memories mean to you?*), and question reduction probes (e.g., *Is there a difference for you between learning something and further educating yourself?)*. Additionally, for each instrument question, another follow-up category selection probe (e.g., *Why is revel in memories very important or not important at all for you?*) was developed. Subsequently, the draft instrument questions and the various anticipated follow-up probes were synthesized into the interview protocol, which was discussed by the research group. As a result, a spontaneous probe (*How would you phrase this question in your own words?*) was added.

The cognitive interviews were audio recorded and conducted by one researcher (MRM) with a background as a geriatric nurse and experience in conducting qualitative interviews with older people both with and without dementia. For this purpose, we printed the response scale in large type font (size = 48), and the cognitive interviews were conducted in German, face-to-face, on-site at the ADS centers between May and July 2023. In addition, one researcher (MRM) collected further information about the participants from the nursing records, such as the disease or the degree of care needed.

Data analysis

Each cognitive interview was analyzed by one researcher (MRM). The coding was performed using MAXQDA 2022 Plus (VERBI Software, 2022) with the assistance of the Question Appraisal System (QAS-99). This coding guideline (B. G. Willis & Lessler, 1999) was used to identify challenges (e.g., challenges pertaining to clarity, assumptions, sensitivity/bias, or knowledge/memory) faced by the participants with regard to the introduction, response scale, and questions contained in the instrument. The challenges and critical comments of the participants were reviewed in subsequent meetings with a member (CM) of the research group and questions were revised. This occurred, for example, if a participant gave the same answers to different questions (leading to "merging" of the different questions) or if follow-up questions were asked by the participants because the intention of the question was not clear to them (leading to the "deletion" or "rephrasing" the question). Subsequently, the instrument was updated, reviewed by the research group, and preliminarily finalized by one researcher (MRM).

Results

Our draft instrument included 25 questions regarding the leisure activity preferences of people receiving ADS. As a reference to our previous study (PELI-D I) and to highlight the importance of the PELI in the process of developing our new instrument, we named it the Preferences for Leisure Activities Inventory (P-LAI). To revise and preliminarily validate the draft of the P-LAI, we conducted eight cognitive interviews. Most of the participants reported that they were female (n = 5), their ages ranged from 64 to 92 years, and 5 had a diagnosis of dementia (Table 2). The length of these interviews ranged from 26 to 119 minutes, with a mean length of 56 minutes.

Revising and validating the P-LAI

Overall, 28% (7 out of 25) of the questions included in the P-LAI were revised based on the results of the cognitive interviews (Table 3).

All questions but one (*How important is it for you to get involved?)* were rated as "*important*" (*very important*, *somewhat important*, or *important but can't do, no choice*) by at least one participant. Their answers to the specification questions provided rich, and detailed information about their preferences regarding leisure activities that the instrument aimed to elicit, thus providing evidence for the preliminary validity of the P-LAI based on the response processes (Table 4).

Five questions were indicated as overlapping by the participants, and it was recommended by them and/or identified by us that these questions could be merged and/or rephrased. For example, the three questions regarding preferences for different events (pertaining to entertainment, culture, and amusement) were said as being overly specific, or the same answers were given to these questions by the participants. As a result, these questions were merged and rephrased as follows: "*How important is it for you to attend at events?."* Furthermore, we deleted the question "*How important is it for you to get involved?*," which led to uncertainty in the responses, and the participants provided feedback indicating that the topic of this question (to get involved) was too vague. In addition, we received responses indicating that it was important for the participants to share not only their knowledge but also their experience. Therefore, we broadened the

Table 2. Characteristics of the participants.

Name[+]	Age	Gender	Origin	Education	Former work	Degree of care needed*	Dementia diagnosis
Wolfgang	64	Male	Germany	College; master's degree	Architect	4	Yes
Stenzel	79	Male	Silesia	Basic primary/secondary school	Industrial mechanic	3	Yes
Annette	65	Female	Germany	Basic primary/secondary school	Saleswoman	4	No
Rita	92	Female	Germany	Basic primary/secondary school	Nurse	2	Yes
Jutta	69	Female	Germany	Basic primary/secondary school	Housekeeper	3	No
Regina	84	Female	Germany	Basic primary/secondary school	Hairstylist	2	Yes
Klaus	79	Male	Germany	Basic primary/secondary school	Locksmith	3	Yes
Edith	80	Female	Germany	High school	Secretary	3	No

[+]Pseudonymized; *Ranges from 0 to 5; higher scores indicate higher dependency on care.

Table 3. Revising the P-LAI.

Introduction, response scale, questions, and specification questions included in the P-LAI	Revisions
Introduction	*No revision*
Response scale	*No revision*
Q01a. How important is it for you to revel in memories?	*No revision*
Q01b. How important is it for you to catch up on the news?	*No revision*
Q02. How important is it for you to have contact with other people?	*No revision*
Q03a. How important is it for you to enjoy music?	*No revision*
Q03b. How important is it for you to enjoy your homeland?	*No revision*
Q03c. How important is it for you to enjoy other countries?	*No revision*
Q04a. How important is it for you to learn something?	*4a – 4b: Merged and rephrased*
Q04b. How important is it for you to further educate yourself?	
Q04c. How important is it for you to share your knowledge?	*Rephrased*
Q05a. How important is it for you to do something for yourself?	*No revision*
Q05b. How important is it for you to come to rest?	*No revision*
Q06a. How important is it for you to make something?	*No revision*
Q06b. How important is it for you to try something new?	*No revision*
Q07a. How important is it for you to play intelligence games?	*No revision*
Q07b. How important is it for you to play parlor games?	*No revision*
Q08. How important is it for you to take a trip?	*No revision*
Q09a. How important is it for you to get involved?	*Deleted*
Q09b. How important is it for you to support others?	*No revision*
Q09c. How important is it for you to provide companionship to others?	*No revision*
Q10. How important is it for you to engage in outdoor activities?	*No revision*
Q11a. How important is it for you to attend entertainment events?	*Q11a – Q11c: Merged and rephrased*
Q11b. How important is it for you to attend cultural events?	
Q11c. How important is it for you to attend amusement events?	
Q12a. How important is it for you to keep fit?	*No revision*
Q12b. How important is it for you to cheer others on in sports?	*No revision*
SQ1: What do you like to do to [. . .]	*No revision*
SQ2: *If it is important but you can't do it or have no choice, what is or are the reason[s] [. . .]?*	*No revision*

Table 4. Example answers from the cognitive interviews.

The P-LAI and corresponding probes	Example answers
Q04a: How important is it for you to learn something?	*I think that's somewhat important.*
Probing: What does it mean for you to learn something?	*General education.*
Probing: Why is it somewhat important for you to learn something?	*That you can also have a say in everything. Unfortunately, I can't do that either. I also have problems sometimes. When someone gives me a talk, I just look at him and my head gets smaller and smaller. What are you telling me? Something like that, right? That's when I'm sitting there like a dullard and can't join in the conversation. I think that's terrible. And that happens very often with me. Even if I am such a blabbermouth. But it happens very often that I can't join in the conversation.*
Q04b: How important is it for you to further educate yourself?	*How important is it for you to further educate yourself? We've talked about that already.*
Probing: Is there a difference for you between learning something and further educating yourself?	*Learning something and further educating yourself are the same thing. Yes, very simple. Not for you, eh?*
Probing: How would you phrase this question in your own words?	*For me, it means learning something new*

question "*How important is it for you to share your knowledge and experience?*" to encompass this aspect.

Critical comments on the introduction were lacking, and only in some cases, participants avoided using the rating scale and answered the question as either "*important*" or "*not important*." However, this did not lead to a revision of the rating scale since the majority of the participants evaluated the grading of the rating scale as positive.

Based on these results, we preliminarily finalized the initial version of the P-LAI, which is provided in the supplementary material in the original German version used in this study and in the untested English version that simply underwent one-way translation by a researcher (MRM).

Discussion

In our study (PELI-D II), we developed and revised an initial version of the P-LAI and provided evidence for the preliminary validity of the P-LAI based on the response processes. Most of the questions (72%) and the two specification questions did not receive critical comments from the participants, or challenges to such questions were not identified. Specifically, the critical aspects pertained mainly to

overlapping questions. Therefore, the questions of the initial P-LAI version seemed to be clear and comprehensible. Additionally, the narrative specification questions resulted in rich and detailed answers about the leisure activity preferences of the participants that the instrument was intended to elicit, which are important for fostering relationship building (Fazio et al., 2018).

These results provide further evidence that identifies concept mapping as an effective approach for the development of instruments (Rosas & Ridings, 2017). In this context, involving and honoring the *voices* of the participants during the development process, such as during the labeling of clusters, appears to be key to the comprehension of the P-LAI. Our findings highlight the importance of involving research approaches that consider the lived experience of the people for whom the research is intended (NIHR, 2021). As one of the most common diagnoses of people receiving ADS is a diagnosis of dementia (Lendon & Singh, 2021), it is particularly important to include people living with dementia in the development of instruments that address them (Gove et al., 2018). Studies show that people living with, for example, severe dementia can successfully communicate their preferences (Burshnic & Bourgeois, 2020; Wilkins et al., 2021). Furthermore, the competence of people living with dementia to participate in studies is often still questioned and they are often excluded from research due to stigmatizing prejudices about their cognitive ability (Garand et al., 2009; Rivett, 2017). However, more and more study results with the inclusion of, for example, people living with moderate and severe dementia (Wang et al., 2019) and also our results show that people living with dementia can be successfully included in research. As a result, the involvement of people living with dementia has a positive effect on the research itself as well as on those involved (Miah et al., 2019; Wang et al., 2019).

Furthermore, by adapting and adopting the structure of the PELI, we relied on a well-tested and established preference instrument as a starting point (Abbott et al., 2022; Heid et al., 2022; Madrigal et al., 2022; Stacke et al., 2021). Due to the experience of developing, testing, and implementing the PELI on which we were able to draw (Curyto et al., 2016; Kunkel et al., 2023; Stacke et al., 2021; Van Haitsma et al., 2013), this approach provided a solid foundation for the development of the P-LAI, which was supported by the positive feedback received during the cognitive interviews.

The results of the cognitive interviews helped us identify overlapping questions in the draft instrument and thus reduce the number of questions contained in the P-LAI. In particular, the feasibility of instruments for assessing preferences and thus the time spent by healthcare professionals to assess these preferences appear to be key to the decision of long-term care providers to implement such an instrument (Abbott et al., 2021). Therefore, the P-LAI, with its 21 questions, appears to be feasible, which, according to implementation frameworks, can positively influence providers' decision/willingness to implement such instruments (Damschroder et al., 2022).

Finally, our study on the development of the initial version of the P-LAI opens the field for further research. For example, psychometric tests (e.g., test-retest, content, and construct validity) similar to the development of the PELI should be conducted with larger samples and in a more culturally diverse environment (Van Haitsma et al., 2013, 2014). In addition, cultural two-way approaches (Ji, 2021) should be used in the translation of the P-LAI to improve the suitability of the instrument for international use (Stacke et al., 2021). The development of a proxy version similar to the PELI also appears to be important for the further development of the P-LAI so that providers and healthcare professionals can assess the preferences of people who are no longer able to provide this information (Heid et al., 2017; Kunicki et al., 2022).

Limitations

Despite our purposive sampling technique, the main limitation of our study is that the participants in the concept mapping process and the cognitive interviews were mostly homogenous in terms of their cultural background. In addition, we are unable to characterize the cognition of participants because we chose not to administer a cognitive screening test out of concerns for participant burden. Recent studies have reported that people with a migrant background are less likely to use professional care services in Germany (Tezcan-Güntekin et al., 2022), and studies from the U.S. have shown

that one of the most frequently reported diagnoses of people receiving ADS is dementia (Lendon & Singh, 2021), as reflected in our sample. Furthermore, it is unclear whether the underlying conceptualization of leisure that we used to develop the P-LAI also reflects the understanding of people from countries other than Germany. Moreover, the extent to which the P-LAI is accessible to people with different cultural backgrounds remains unknown. Therefore, studies that investigate the conceptualization of preferences for leisure activities of people receiving ADS should be conducted in more culturally diverse environments to enrich the further development of our instrument.

Furthermore, we actively and continuously worked with the same participants in the development of the P-LAI. This means that the people who were previously involved in the conceptualization also participated in the cognitive interviews that were 12 months apart. This could explain the few critical comments on the P-LAI questions and indicate a self-confirming bias among the participants. However, there was a long period between the data collections such that recall of the conceptualization can possibly be ruled out. Additionally, the labels we used for the P-LAI questions were selected by the participants by consensus from the 36 labels they had suggested in advance for the 12 clusters. This means that not every suggestion could be considered. Therefore a possible self-confirming bias cannot be assumed for every participant.

Our initial results regarding the validity of the P-LAI based on the response processes must be viewed with caution. This is only evidence of one form of validity. Further psychometric tests of validity, such as tests of construct validity, should to be conducted with a larger sample to draw conclusions about the validity of the P-LAI. However, cognitive interviews are an essential research method for the development and preliminary validation of instruments such as questionnaires (G. B. Willis, 2005). This research method appears complex and challenging, especially when it involves people living with dementia who receive ADS (Roos & Dichter, 2023). To ensure that the cognitive interviews were accessible for all our participants, we focused on specific questions (probes) about the individual P-LAI instrument. Additionally, we asked each P-LAI question separately. We did not use complex and challenging techniques such as "thinking aloud." However, we may not have identified all incomprehensible questions. Nevertheless, the participants' specific answers to the P-LAI questions about their preferences were detailed, and the content of the questions included in the preliminary finalized P-LAI was addressed. This indirectly confirms the participants' understanding of the questions and supports the validity of conducting cognitive interviews with this population.

Finally, one researcher translated the P-LAI from the original German version into English using a simple one-way approach. This means that inaccuracies or cultural differences in the comprehensibility of the translated questions cannot be ruled out. This should be considered when using the initial English version of the P-LAI.

Conclusion

Our study can serve as a starting point by providing an instrument for healthcare providers and professionals to assess the preferences for leisure activities of people receiving ADS. This means that our initial version of the P-LAI and the preliminary results of its validity must be followed by additional studies for further development and psychometric testing, including test-retest reliability as well as studies to evaluate the validity (e.g., content and construct validity) in larger and more diverse samples. In addition, a cultural and more complex translation of the P-LAI is required for use in English-speaking countries. Our initial version of the P-LAI can be used by ADS providers and healthcare professionals to gain initial experience in the assessment of preferences for leisure activities of people receiving ADS. The results of the assessment of preferences can be used to develop and implement a preference-based leisure activity program that relies on a person-centered philosophy of care. This approach, combined with comprehensive psychometric tests of the P-LAI in the future, could further promote the cultural change in the ADS environment, including the associated meaningful outcomes for people receiving ADS. For this purpose, it also seems important to evaluate the implementation and application of the P-LAI.

Clinical implications

- ADS providers and healthcare professionals can use the first version of the P-LAI on to assess preferences for leisure activities of people receiving ADS in German- or English-speaking countries in a structured way. This is an important first step in operationalizing the person-centered care philosophy in the ADS environment.
- For researchers, the P-LAI opens the field for further research (full-scale data collection of preferences in the ADS environment) and may lead to further insights, for example, regarding the outcomes of preference-based interventions. In this context, further evaluation and psychometric testing of the P-LAI are necessary.

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Data availability statement

Data are available upon request from the author.

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