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Featured Article

Instruments for assessing the preferences for everyday living of older people with various care needs across different care settings: an evidence map

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ABSTRACT

Considering the preferences for everyday living of older people with various care needs across different care settings is important in nursing care. Currently, there is no systematic overview of the various instruments, and it is unclear what instruments exist, and which preferences they measure. We systematically searched for studies in the electronic databases MEDLINE, CINAHL and PsycInfo. Title/abstract and full text screening were performed independently by two researchers. We mapped and described the identified instruments in two tables and one interactive evidence atlas. We identified 67 instruments for assessing the preferences for everyday living of older people with various care needs across different care settings. We clustered the identified instruments into two main categories: *broad* and *specific*. The results show a wide range of instrument types and assessment methods. Research gaps exist, for instruments developed for assessing preferences comprehensively for a particular topic for everyday living, particular populations, and settings.

Introduction

Taking preferences into account in the nursing of older people with various care needs in different care settings appears to be essential for high-quality nursing care and is a core element for evidence-based as well as person-centered practice.[1-8]

One of the core principles of nursing is to support older people with various care needs in coping with their various care needs in their everyday living and thus contribute to their ability to lead a self-determined life.[9] Research has shown that considering preferences for everyday living in nursing can be associated with positive outcomes among older people with various care needs (e.g., continence and nutrition status) and nurses as a work force are the largest professional group caring for older people.[10-12]

Despite the importance of preferences for everyday living in the nursing of older people with various care needs, nurses tend to document only a few details about psychosocial aspects in the nursing record.[13,14] This may lead to less awareness of psychosocial aspects, such as preferences, among nurses.[13] Additionally, documenting preferences without an instrument and thus through a nonsystematic assessment process seems to depend on individual nurses' sensitivity to the topic.[15] The use of instruments for systematically assessing preferences for everyday living could support nurses in increasing awareness of the topic and the importance of preferences for everyday living for older people with various care needs. Additionally, the use of an instrument could initiate the relationship and trust building process, and, as a result, sensitize nurses to the personhood of the older people with various care needs.[13,15,16]

Currently, there is no systematic overview of the various instruments for assessing the preferences for everyday living of older people with various care needs across different care settings. As a result, it is difficult for nurses to decide which instruments to use in their care setting and which everyday living topics might be important for older people with various care needs. In addition, a systematic overview could allow potential research gaps and/or further development

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needs to be identified. An evidence map could fill this current gap since it has the aim of describing the current research landscape for a specific topic in a user-friendly interactive and visual way.[17-19]

Research question

Our research question to define an evidence map is the following: "Which instruments exist for assessing the preferences for everyday living of older people with various care needs across different care settings?"

Material and methods

For our evidence map, we published a review/study protocol describing our methodological approach.[20,21] Whenever applicable, we use the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews Checklist[22] and the flow chart of the updated Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines[23] to report our evidence map (Supplementary Table 1 and Fig. 1).

Literature search

Because of the broad focus of the term "everyday living", one researcher from the team (MR-M) conducted a preliminary search in MEDLINE (via PubMed) and Google Scholar to identify definitions/theories/models/understandings of and relevant topics for everyday living. As a result, the conceptual model of nursing based on activities of living from Roper, Logan and Tierney[9] was chosen and supplemented with additional topics from identified instruments for assessing the activities of daily living of people with various care needs.[24] For example, the following topics were identified: body care, clothing, environment, finances, and leisure. The different topics were operationalized by three researchers (MR-M/DP/MR) into a combination of index search terms and keywords. Our search string was developed by one researcher with a professional nursing background (MR-M) and was checked by the whole research group (MR-M, DP, DR, KA, KVH, MR) according to the Peer Review of Electronic Search Strategies (PRESS) recommendations.[25] The search string was developed first for MEDLINE (via PubMed) and was modified by one researcher (MR-M) for CINAHL (via EBSCO) and PsycInfo (via EBSCO) according to the description in RefHunter Vers. 5.0.[26] The search strategy for MEDLINE (via PubMed) is provided in Supplementary Table 2. Between November and December 2020, we searched the following electronic databases: MEDLINE (via PubMed), CINAHL (via EBSCO) and PsycInfo (via EBSCO). In addition, we performed backward and forward citation tracking via reference lists and Google Scholar.

Study selection

In the first step, one researcher (MR-M) imported the identified records of our electronic database search into Covidence[27], and the records were automatically checked for duplicates. In the second step, all titles and abstracts of identified records were screened in Covidence by two researchers (MR-M/DP) against inclusion and exclusion criteria (Table 1). Discrepancies in the voting were discussed and resolved in regular video meetings. Third, full-text screening was conducted by the same two researchers (MR-M/DP); differences were discussed and resolved in regular video meetings.

Data charting process

Our data extraction form was based on the template for scoping reviews developed by the Joanna Briggs Institute[28] and was created in Covidence.[27] The following topics and subcategories were included: *source* (primary and additional publications and country), *instrument details* (name of the instrument, type of preferences, number of questions and/or items, assessment method, used in the population, use of the instrument, used in the setting) and *development*

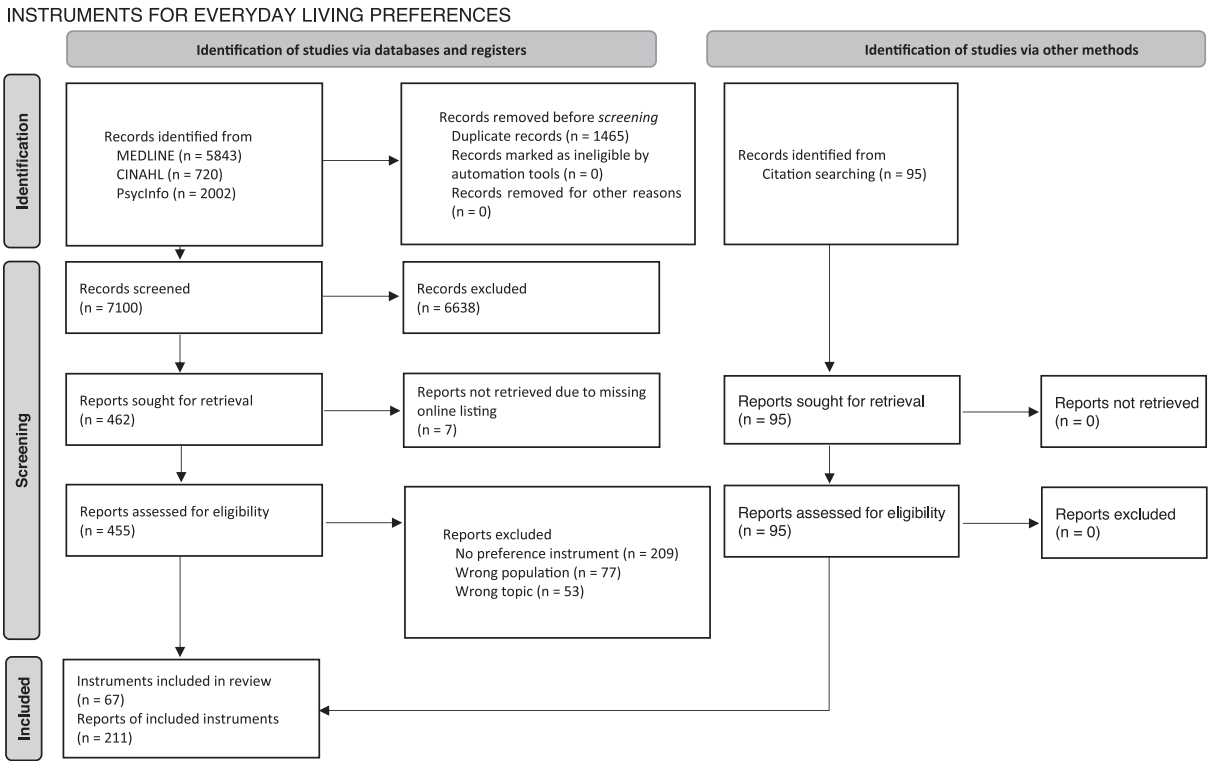

Fig. 1. PRISMA 2020 flow diagram [23] demonstrating the identification, screening and eligibility assessments of records preceding evidence map inclusion.

Table 1
Inclusion and exclusion criteria.[20]

Criteria	Definition
Population	▫ We considered studies with a study population of people older than 60 years (mean or median age >60 years [111]) with various care needs. ▫ By various care needs, we mean a need (specified or unspecified) for daily nursing regardless of the setting in which the person lives or resides (e.g., community, home care, nursing facility, hospital). ▫ We also considered older people with a medical diagnosis that has an impact on everyday living (e.g., diabetes) or a need for day-structuring activities that may be important in a setting such as adult day service.[112-114]
Concept of interest	▫ We included only studies that explicitly described or mentioned instruments for assessing the preferences for everyday living of older people with various care needs. ▫ As instruments, we considered any form (e.g., questionnaire, guidelines for observation, cards, scales, devices) that had at least, for example, two questions or items systematically assessing the concept of everyday living preferences. ▫ We considered all assessment methods (e.g., questions, sorting, stimuli). ▫ We defined everyday living as a context in which individuals' daily routines are shaped and defined by their preferences. ▫ According to the conceptual model of nursing from Roper, Logan and Tierney [9] and additional topics from identified instruments for assessing activities of daily living [24], we focused on the following topics: Þ Care, Clothing, Environment, Finances, Health, Learning, Leisure, Nutrition, Religion, Safety, Sexuality, Sleep, Socializing, Temperature, Work ▫ In contrast to the model of Roper, Logan and Tierney, [9] which considers dying as a topic of activities of living, we decided to exclude studies focusing on end-of-life, palliative care, or the hospice setting, due to the different focus from the topic of everyday living. ▫ We excluded all studies that did not use/report an instrument or that did not assess preferences for everyday living.
Study design	▫ Given the broad focus of this evidence map and the thematic focus and various uses of instruments in research, we included all types of study designs.
Other	▫ We included all publication types of studies (e.g., peer-reviewed, select gray-literature) in the English or German language. ▫ There were no restrictions on publication status or date. ▫ We excluded all studies that were not published in English or German.

details (psychometric properties and further developments). Detailed definitions of the various subcategories can be found in Supplementary Table 3. Data extraction was performed by one researcher (MR-M) and randomly checked for consistency by another researcher (DP) after extraction was completed. If deviations between the extracted data and the reported data in the studies were identified, they were discussed and resolved in regular video meetings between the two researchers (MR-M/DP). The results of the data extraction were discussed with three researchers in a video meeting (MR-M, DP, MR) with a focus on implications for upcoming data synthesis.

Mapping of instruments

We used the extracted data to synthesize and map the identified instruments in two ways. First, using Microsoft Word, we created two different tables, one with tick boxes (Table 2) and the other in a more narrative style (Supplementary Table 4), to map the various instrument characteristics. Table 2 synthesizes the data into a summary style (e.g., primary publication, population, setting) and provides additional information about the different assessment methods of the various instruments. This table is integrated within the article to provide a quick and concise overview. In contrast, in Supplementary Table 4, detailed information on the various instruments is reported in narrative form. Here, the focus is particularly on the additional publications and details about the development of the identified instruments. Second, rather than the method for creating a bubble plot using R Version 4.0.3 and ggplot2[29] described in our review protocol,[20] we decided to create an evidence atlas (Fig. 2) using EviAtlas[19] to provide readers with interactive, easy, user-friendly, and visual access to the information about the various instruments.[19] For this, we used the data we extracted and transferred it to a comma-separated values (CVS) file. We uploaded the CVS file to the website of EviAtlas[19] and created the evidence atlas with the following parameters: ESRI.WorldStreetMap, clustering map points and color points by category. We then saved the evidence atlas data as a hypertext markup language (HTML) file, which is available in the online version of this article. In addition to the information presented in Table 2, the content of the evidence atlas also includes information about types of preferences, psychometric testing, and the specific focus of the instruments regarding the population.

Results

We initially identified 8565 records through our electronic database search. After the removal of duplicates, 7100 records were screened for relevance, and 116 reports reporting 67 instruments were included in the review.[30-96] Furthermore, 95 additional reports, such as those reporting on the development of the 67 instruments, were identified by backward and forward citation tracking. Fig. 1. illustrates the identification, screening, and eligibility assessment of records prior to their inclusion in the evidence map. For readability, we list only the primary publication in the following text, which is intended to encompass all additional publications of the instrument.

Instrument characteristics

The identified instruments (n = 67) are mainly from the United States of America (USA) (n = 33).[30,34,36-38,40,42,47,48,50-52,56,60,61,65,69,74-76,79-88,92,94,96] The remaining instruments are from Canada (n = 6),[43,45,53,68,72,91] the Netherlands (n = 6),[39,46,57,62,63,90] the United Kingdom (n = 5),[67,70,77,89,93] Australia (n = 5),[35,58,59,71,78] Germany (n = 2),[32,55] Poland (n =2),[64,97] Austria (n = 1),[49] China (n = 1),[41] France (n =1)[33], Norway (n = 1)[73], Portugal (n = 1)[54], Sweden (n =1),[66] Switzerland (n =1)[44] and Israel (n =1).[95] Most of the identified instruments focus on older people with various care needs (n = 16)[30,32-34,47,48,50,52,56,59,60,62,66,74-76] or older people with care needs caused by specific diseases (n = 51). Seven instruments were identified that address both older people with various care needs and people with dementia (nonspecific type of dementia, n = 5)[37,78,85,87,90] (Alzheimer type, n = 2).[69,94] We identified 14 instruments that exclusively target people with neurodegenerative diseases (nonspecific type of

Table 2
Instrument characteristics

Reference	85	86	87	46	47	88	48	67	68	75	92	37	36	76	35	34	96	93	94	84	98	82	81	80	79	95	57	89	70	61	62	63	64	65
Continent																																		
North America (n = 39)	x	x	x		x	x	x		x	x	x	x	x	x		x	x		x	x	x	x	x	x	x					x			x
Europe (n = 21)				x				x										x									x	x	x		x	x	x	
Australia (n = 5)															x																			
Asia (n = 2)																										x								
Population																																		
Older people with																																		
various care needs (n = 23)	x		x		x		x			x		x		x		x			x											x			
neurodegenerative diseases (n = 21)	x	x	x			x		x	x			x						x	x	x	x	x	x	x	x	x		x						
chronic diseases (n = 11)																											x		x					
cancer or survived cancer (n = 7)				x																										x				x
mental health issues (n = 4)															x																	x		
cardiac health problems (n = 3)																																	x	
neurological diseases (n = 3)											x																							
development disabilities (n = 2)													x				x																	
Setting																																		
Nursing facilities (n = 24)	x	x	x				x	x		x		x	x			x			x	x			x		x	x				x			
Acute care (n = 19)				x														x									x	x	x	x	x	x	x	x
Community (n = 18)	x		x			x				x	x		x	x		x										x				x			
Adult day services (n = 13)	x		x						x	x			x	x			x				x	x	x	x		x								
Rehabilitation (n = 8)																																		
Home care (n = 6)	x															x											x			x				
Ambulatory care (n = 4)																																		
Psychiatry (n = 4)															x																	x		
Translational care (n = 2)					x																													
No specific (n = 1)																																		
Instrument type																																		
Questionnaire (n = 53)	x	x	x	x	x	x	x			x		x	x		x	x	x	x	x							x	x	x	x	x	x	x	x	x

Reference	85	86	87	46	47	88	48	67	68	75	92	37	36	76	35	34	96	93	94	84	98	82	81	80	79	95	57	89	70	61	62	63	64	65
Guidelines for observations (n = 8)								x	x											x	x	x	x	x	x									
Cards (n = 2)											x			x																				
Scale (n = 2)																																		
Device (n = 1)																																		
Guideline for an interview (n = 1)																																		
Assessment method																																		
Self (n = 54)				x	x		x			x		x	x	x	x	x	x										x		x	x	x	x	x	x
Self and/or proxy (n = 8)	x	x	x			x					x								x															
Proxy (n = 3)																		x								x		x						
Questions																																		
Closed-ended (n = 46)		x	x	x	x	x	x					x	x	x	x	x		x								x	x	x		x	x	x	x	x
Open and closed-ended (n = 8)	x									x							x		x															
Open-ended (n = 3)																													x					
Likert or numeric scale (n = 35)																																		
Points	5	3		4	3	3	4			3			4		3			10	4							5	7	4		9		5	4	9
Rating																																		
Agreement (n = 10)										x					x																			
Importance (n = 10)	x			x	x	x	x												x															
Like/Dislike or most/least preferred (n = 9)																		x								x	x			x		x		x
Frequency (n = 6)		x											x															x				x		
Stimuli in addition to (a) or instead of questions (b)																																		
Items (n = 8)								b	b											b	b	b	b	b	b									
Pictures (n = 8)	a	a/b									b			b			a													a				
Assessment methods used in addition to (a) or instead of questions (b)																																		
Choice or Yes/No (n = 23)								b	b				a			a			a	b	b	b	b	b	b					a				
Ranking (n = 15)								b	b	a				b					a	b	b	b	b	b	b									
Scoring (n = 14)						a											a														a			
Sorting (n = 3)	a	a/b									b																								
Adjustment (n = 1)																																		

(*continued*)

Reference	85	86	87	46	47	88	48	67	68	75	92	37	36	76	35	34	96	93	94	84	98	82	81	80	79	95	57	89	70	61	62	63	64	65
Classify (n = 1)																																		
Video recording (n = 1)																																		
Instrument focus																																		
Broad (n = 9)	x	x	x	x	x	x	x	x	x																									
Specific (n = 58)																																		
Leisure (n = 17)										x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x								
Eating and drinking (n = 12)																											x	x	x	x	x	x	x	x
Health (n = 10)																																		
Care (n = 9)																																		
Environment (n = 2)																																		
Learning (n = 2)																																		
Safety (n = 2)																																		
Socializing (n = 2)																																		
Sexuality (n = 1)																																		
Sleep (n = 1)																																		

Reference	66	90	71	59	58	72	73	45	44	43	42	74	41	40	49	50	69	51	52	53	54	55	56	60	91	39	38	33	32	77	30	78	97
Continent																																	
North America (n = 39)						x		x		x	x	x		x		x	x	x	x	x			x	x	x		x				x		
Europe (n = 21)	x	x					x		x						x						x	x				x		x	x	x			x
Australia (n = 5)			x	x	x																											x	
Asia (n = 2)													x																				
Population																																	
Older people with																																	
various care needs (n = 23)	x	x		x								x				x	x		x				x	x				x	x		x	x	
neurodegenerative diseases (n = 21)		x									x						x															x	
chronic diseases (n = 11)			x			x			x				x							x	x	x			x								x
cancer or survived cancer (n = 7)								x		x					x			x															
mental health issues (n = 4)														x																x			
cardiac health problems (n = 3)							x																				x						
neurological diseases (n = 3)					x																					x							
development disabilities (n = 2)																																		
Setting																																		
Nursing facilities (n =24)	x	x		x													x		x					x				x	x			x	
Acute care (n = 19)					x			x	x						x	x		x		x			x										x
Community (n = 18)					x					x			x	x			x		x									x	x		x			
Adult day services (n = 13)																					x													
Rehabilitation (n = 8)					x		x									x	x					x			x	x	x						
Home care (n = 6)															x		x																	
Ambulatory care (n = 4)			x		x							x																						x
Psychiatry (n = 4)											x																			x				
Translational care (n = 2)															x																			
No specific (n = 1)						x																												
Instrument type																																		
Questionnaire (n = 53)	x	x	x	x	x	x	x	x	x	x	x	x		x		x		x	x	x	x	x	x	x		x	x	x	x	x	x	x	x
Guidelines for observations (n = 8)																																		
Cards (n = 2)																																		
Scale (n = 2)													x		x																			

(*continued*)

Reference	66	90	71	59	58	72	73	45	44	43	42	74	41	40	49	50	69	51	52	53	54	55	56	60	91	39	38	33	32	77	30	78	97
Device (n = 1)																									x								
Guideline for an interview (n = 1)																	x																
Assessment method																																	
Self (n = 48)	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x
Self and/or proxy (n = 8)		x																							x								
Proxy (n = 3)																																	
Questions																																	
Closed-ended (n = 46)	x	x	x	x	x			x	x	x	x		x	x	x	x		x	x	x	x	x	x	x		x	x	x	x		x		x
Open and closed-ended (n = 8)						x	x					x																				x	
Open-ended (n = 3)																	x													x			
Likert or numeric scale (n = 35)																																	
Points	9	5		5	0-100%		10						5	2		10			5	4	5	6	4				4	5	5			5	
Rating																																	
Agreement (n = 10)	x	x		x	x															x	x							x	x				
Importance (n = 10)							x									x						x										x	
Like/Dislike or most/least preferred (n = 9)														x					x								x						
Frequency (n = 6)													x										x										
Stimuli used addition to (a) or instead of questions (b)																																	
Items (n = 8)																																	
Pictures (n = 8)																			a					a									
Assessment methods used in addition to (a) or instead of questions (b)																																	
Choice or Yes/No (n = 23)				a				a	a	a	a	a						a						a		a					a		a
Ranking (n = 15)							a					a		a		a																	
Scoring (n = 14)					a								a	a	a					a	a					a	a	a			a		a
Sorting (n = 3)																																	
Adjustment (n = 1)																									b								
Classify (n = 1)		a																															
Video recording (n = 1)																	a																

Reference	66	90	71	59	58	72	73	45	44	43	42	74	41	40	49	50	69	51	52	53	54	55	56	60	91	39	38	33	32	77	30	78	97
Instrument focus																																	
Broad (n = 9)																																	
Specific (n = 58)																																	
Leisure (n = 17)																																	
Eating and drinking (n = 12)	x	x	x	x																													
Health (n = 10)					x	x	x	x	x	x	x	x	x	x																			
Care (n =9)															x	x	x	x	x	x	x	x	x										
Environment (n = 2)																								x	x								
Learning (n =2)																										x	x						
Safety (n = 2)																												x	x				
Socializing (n = 2)																														x	x		
Sexuality (n = 1)																																x	
Sleep (n = 1)																																	x

dementia, n = 11)[67,68,79-82,84,86,88,95,98] (Alzheimer type and frontotemporal dementia, n = 2)[89,93] (Parkinson's, n = 1).[42] Furthermore, eleven instruments were identified that focus on older people with a chronic disease (nonspecific, n = 1)[55] (pain, n = 2)[53,54] (cirrhosis, n = 1)[70] (diabetes mellitus, n = 1)[71] (kidney failure, n = 1)[57] (low vision, n = 1)[91] (osteopenia and osteoporosis, n = 1)[72] (rheumatoid arthritis, n = 1)[44] (diabetes mellitus and inflammatory diseases n = 1)[97] (diabetes and involuntary urinary leakage, n = 1)[41]. Five instruments address older people with cancer (nonspecific type of cancer, n = 3)[46,49,65] (breast cancer, n = 1)[61] (lung cancer, n = 1).[51] Two instruments focus on older people, who survive cancer and are in need of care (lung cancer, n = 1)[45] (endometrial cancer, n = 1).[43] We identified four instruments that focus on people with mental health issues (nonspecific, n = 2)[35,77] (depression, n = 1)[63] (schizophrenia and/or manic depression, n = 1).[40] Three instruments focus on older people with cardiac health problems or ongoing care needs after an acute cardiac incident (after a myocardial incident or cardiac event, n = 2)[64,73] (coronary artery disease, n = 1).[38] Another three instruments focus on older people with neurological diseases (acquired brain injury, n = 1)[39] (aphasia, n = 1)[92] (surviving stroke, n = 1)[58]; for older people with developmental disabilities, we identified two instruments.[36,96] The instruments are used in a variety of settings: nursing facilities (n = 24),[32-34,36,37,48,52,59,60,62,66,67,69,75,78,79,81,84-87,90,94,95] acute care (n = 19)[31,44-46,49-51,53,56-58,61-65,70,89,93] the community (n = 18)[30,32-34,36,40,41,43,52,58,62,69,75,76,85,87,88,92] adult day services (n = 13)[36,54,68,75,76,80-83,85,87,95,96] rehabilitation (n = 8)[38,39,50,55,58,69,73,91] home care (n = 6)[34,49,51,57,63,85] ambulatory care (n = 4)[58,71,74,97] psychiatry (n = 4)[35,42,63,77] and translational care (n = 2)[47,49]; for one instrument no setting was specified.[72] The instruments are used in one setting (n = 47)[30,35,37-48,51,53-56,59-61,63-66,68,70,71,73,74,77-80,82-84,86,88-94,96] or in multiple settings (n = 19).[32-34,36,49,50,52,57,58,62,67,69,75,76,81,85,87,95,97]

We identified several types of instruments; while most of them are different types of questionnaires (n = 53),[30,32-40,42-48,50-66,70-75,77,78,85-90,93-97] some are guidelines for observations (n = 8),[67,68,79-84] cards (n = 2),[76,92] scales (n = 2),[41,49] a device (n = 1)[91], and a guideline for an interview (n = 1).[69] The different types of instruments differ in their methods of assessing preferences. Questionnaires and scales mainly use self-reporting (n = 46)[30-66,70-75,77,78,96] with closed-ended questions (n = 45)[30-66,71,86-90,93,95] and a variant of a Likert scale (agreement, importance, like/dislike or most/least preferred, and frequency) or numeric scale (points/percent) (n = 35) to assess preferences.[32,33,35,36,38,40,41,46-48,50,52-59,61,63-66,73,75,78,85,86,88-90,93-95]

For some questionnaires (n = 7), it is reported that additional stimuli (pictures) or proxy reporting (e.g., relatives) should be used when assessing preferences in older people with dementia.[85-88,90,92,94] The guidelines for observations are so-called preference assessments for older people with dementia (n = 8). In these assessments, different

stimuli identified in advance are used to identify a preference for one stimulus or another. The identification of a preference is done by means of an observation, with a practitioner or researcher focusing on the time of the person's engagement with the items. These instruments use mainly paired stimuli (n = 5),[67,68,80,83,84] multiple-stimuli without replacement and free operant stimuli (n = 1),[82] multiple-stimuli without replacement (n =1),[81] or a combination of paired and free operant stimuli (n = 1).[79] Card-type instruments use pictures to identify preferences in older people with various care needs with a ranking approach[76] or in older people with aphasia with a sorting approach.[92] For older people with low vision, a device where the brightness and color of the light can be adjusted mechanically with two knobs can be used to assess their preferences themselves or by a proxy.[91]

Further information about the characteristics of the 67 instruments and the concrete (interactive) mapping of the individual instrument characteristics are shown in Table 2 and Fig. 2. In addition, full information with additional publications for each instrument is provided in Supplementary Table 4.

Focus of the identified instruments

We clustered the 67 identified instruments into two main categories: *broad* (n = 9) and *specific* (n = 58). Clustering of the main categories was based on the focus of the different instruments on either several (*broad*) or one (*specific*) topic of everyday living. Furthermore, we divided the category *specific* by types of preferences into the following subcategories: *leisure* (n = 17), *eating and drinking* (n = 12), *health* (n = 10), *care* (n = 9), *environment* (n = 2), *learning* (n = 2), *safety* (n = 2), *socializing* (n = 2), *sexuality* (n = 1), and *sleep* (n = 1).

Broad instruments

We identified nine instruments with a broad thematic focus. Four instruments focus on similar populations (older people with various care needs and/or older people with dementia), settings (mainly in nursing facilities), and content (e.g., care, eating and drinking, activities). These include the “Preferences for Everyday Living Inventory” (types of preferences: e.g., growth and leisure activities, enlisting others in care, social contact),[85] “VoiceMyChoice” in combination with the “Preferences Assessment Questionnaire” (types of preferences: e.g., food, activities, daily living, pain),[86] the “Self-maintenance Habits and Preferences in Elderly” questionnaire (types of preferences divided in single usable modules: e.g., sleep, eat, dressing and grooming),[87] and the “Preferences Assessment Tool” (types of preferences: daily routines and activities).[48] The other five instruments differ from the four instruments we previously described in relation to population or setting and content. The “Cancer Patients’ Health Care Preferences’ Questionnaire”[46] assesses the preferences of older people with cancer in the acute care setting (type of preferences: e.g., food and beverages, habits, presence of love ones, privacy, rooms and facilities, healthcare worker experiences and attitudes). Two instruments, the “Values Assessment Tool”[47] and the “Values and Preferences Scale”,[88] focus on older people with various care needs and people with dementia and can be used to assess preferences in the settings of transnational care and community for topics such as daily routines, activities, privacy, pain, discomfort, environment, social network, personal autonomy and self-identify. In addition, the “Values and Preferences Scale” assesses preferences for financial aspects such as finances and cost of care.[88] The last two instruments, which do not have specific name, focus exclusively on people with dementia in nursing facilities and the adult day services and the assessment of preferences for leisure and food.[67,68]

Specific instruments

In contrast to instruments in the *broad* category, instruments in the *specific* category (n = 58) focus on one specific type of preference for everyday living.

Leisure

Of the 17 instruments, most (n = 10) focus on preferences related to activities in general.[36,37,79-84,92,96] Two instruments assess more specific preferred activities (group activities and physical activities),[76,95] and another assesses the preferred context of physical activities.[35] The other four instruments focus on assessing preferences regarding games,[75] arts and humanities,[34] humor,[93] and music.[94]

Eating and drinking

Most of the 12 instruments with a focus on *eating and drinking* assess preferred foods (n = 7).[57,61-64,70,89] Furthermore, we identified instruments with a focus on preferences for taste and smell,[65] color and ease of eating,[66] eating profiles,[90] diet,[71] and food services.[59]

Health

We identified 10 instruments with a focus on *health*. Most of these instruments (n = 7) assess preferences regarding exercise. This includes exercise in general,[44,58] exercise programs,[42,43,45,72] and exercise features.[73] The remaining three instruments focus on preferences for working on health goals,[74] voiding,[41] and social activities/seeking help.[40]

Care

We identified nine instruments with a focus on overall aspects of *care*. They focus on the following topics for preferences: self-care,[49,50] current care,[69] emotional concerns,[51] medication management tools,[52] social support for pain,[53,54] and communication with[55] and touch from professionals.[56]

Environment

The identified instruments related to the *environment* assess preferences related to nursing home design[60] and lighting.[91]

Learning

The identified instruments (n = 2) with a focus on *learning* assess the preferred learning styles of older people with neurological diseases and cardiac health problems.[38,39]

Safety

The instruments with a focus on *safety* assess preferences related to routines.[32,33]

Socializing

The identified instruments (n = 2) regarding to *socializing* focus on preferences related to how one is addressed and addressed others[77] and social exploration.[30]

Sexuality

The Intimacy and Sexuality Expression Preference tool[78] was the only instrument that we identified with a focus on preferences

regarding *sexuality*. The instrument assesses preferences for intimacy, sexual feelings, and sexuality in general.

Sleep

We identified one instrument that assesses the preferred circadian rhythm ("Composite Scale of Morningness").[97]

Discussion

To our knowledge, our evidence map is the first review that has systematically identified and mapped instruments for assessing the preferences for everyday living of older people with various care needs across different care settings. The particular strength of our evidence map are the methodological quality and the broad approach taken to identify a wide range of different types of instruments. This allowed us to present a broad overview of the current research landscape. Furthermore, the presentation of our results in the form of an evidence atlas enabled us to provide details about the instruments in a visual interactive and user-friendly way, considering the different types of readers (e.g., practitioners, researchers, and stakeholders) and their preferences for receiving and consuming information. The presentation of a broad variation of instrument types and topics of everyday living in the context of preferences could increase the awareness of this topic among nurses. Furthermore, nurses can use our results to select a broad or specific instruments appropriate to their professional focus to assess the preferences for everyday living of older people with various care needs. This would support the provision of evidence-based and person-centered care for older people with various care needs.[3-8]

In summary, we identified 67 instruments for assessing the preferences for everyday living of older people with various care needs. In terms of our research question, we identified a broad range of instrument types with a focus on *broad* or *specific* topics for everyday living. Most of the identified instruments are used with older people with various care needs in the setting of nursing facilities. Furthermore, we identified a variety of different methods for assessing preferences, which often correlate with specific types of care needs and/or diseases (e.g., the use of stimuli for older people with dementia). We found that preferences can be assessed not only by typical methods such as questioning but also by, e.g., the use of stimuli, ranking or sorting. This approach seems interesting, as it provides an opportunity to assess the preferences among a wide range of older people with various care needs and to adjust the assessment to their physical function, such as hearing, vision, and speech impairments.

Gaps exist regarding instruments that comprehensively assess preferences on a particular topic for everyday living. Aside from the Instrument by Jones, Moyle and Van Haitsma,[78] no other specific instruments could be identified that comprehensively assess a particular topic. Here, instruments that focus on a particular topic for everyday living (e.g., leisure, with the various instrument topics identified in our evidence map, for example games, humor, or music), a particular population, and setting (e.g., older people receiving adult day services) may be more tailored to a particular population and setting than broad instruments. Tailoring preference instruments, which results in a more precise modularization than the approach of Cohen-Mansfield and Jensen,[87] could be one way, among others,[99,100] to ensure these instruments' high feasibility and good practicability, which are important points for the successful implementation[101] and use of instruments in nursing practice.[102] However, we need to consider that it is unknown whether, for example, the instruments we identified on the topic of leisure are sufficient or whether there are other preferences that are important. For the example, the literature shows that other aspects, such as shopping or gardening, may also be of importance for older people.[103]

Except for those instruments for older people with dementia, we found no instruments for older people with highly complex care needs due to diseases or conditions such as multiple sclerosis, paraplegia, or disease amyotrophic lateral sclerosis. For these populations in particular, everyday living appears to be significantly impacted, and thus, the assessment and consideration of preferences for everyday living is likely to be of high importance.[104-106] In addition, it can be assumed that due to the high complexity of care needs, a high level of detail in the description of preferences is necessary; here, the question is whether the assessment is possible at this level of detail with the current instruments.

Furthermore, we could not identify an instrument explicitly developed for older people with immigration backgrounds or from ethnic minorities who have various care needs. The literature suggests that values, beliefs and, as a result, preferences probably also differ between older people with and without an immigration backgrounds or between those who do and do not belong to ethnic minorities and that nurses' consideration of this aspect is important.[107,108] Accordingly, the question arises whether the instruments we have identified are sufficiently sensitive or whether modifying existing instruments with additional questions/items or additional instruments are needed with a focus on this population.

Limitations

The evidence map we designed has some limitations. First, it should be mentioned that we used only the model of nursing based on activities of living according to Roper, Logan and Tierney[9] and instruments for assessing activities of daily living.[24] In doing so, it cannot be ruled out that some aspects for everyday living, especially for older people with specific care needs, were not considered. Second, we did not include terms for diseases (e.g., dementia) and other populations than older people (e.g., ethnic minorities) in our search string. This may have resulted in the fact that we did not identify instruments for older people with diseases or from a particular population. However, by using various terms for older people, we have aimed to provide a broad overview of instruments for older people with various care needs. Third, we defined instruments very broadly to include any type of systematic assessment of preferences. Therefore, we also considered guidelines for observations in the form of preference assessments. This can be viewed critically; however, we have observed that there is a trend in practice and research to use observations when assessing the preferences of older people with dementia. Fourth, we included only instruments that were explicitly described in the studies for assessing preferences. Consequently, it is possible that we missed instruments that were not explicitly described as instruments to assess preferences. Finally, due to the nature of an evidence map,[18] we reported psychometric testing but did not evaluate the psychometric properties of the identified instruments. This must be considered by using the instruments in practice and/or research.

Conclusion

Our evidence map provides a broad overview of the current research landscape and can be used as a basis for various next research steps. It is recommended that the psychometric properties of the identified instruments be evaluated, for example, in the form of a systematic review following the Consensus-based Standards for the Selection of Health Status Measurement Instruments (COSMIN) checklist,[109] to provide recommendations on the use of the identified instruments for practitioners/researchers and stakeholders. Further (participatory[110]) research, should focus on particular topics for everyday living that are meaningful for older people with particular care needs receiving nursing in a particular setting. For this purpose, the first step is to

investigate which topics are important and which level of preference detail is crucial for these older people, for example, in relation to leisure activities in adult day service.[21] Additionally, it seems important to investigate whether current instruments are sufficiently sensitive to assess the preferences for everyday living of older people with immigration background or from ethnic minorities.

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Supplementary materials

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