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To cite this article: Yuho Okita, Shiho Naga, Takuya Hirose, Syun Takase, Yuto Kishi, Chihori Tsukura, Monique Nair & Kounosuke Tomori (2023): A scoping review of occupational therapy scoping reviews – utilisation of the WFOT proposed international occupational therapy research priority, World Federation of Occupational Therapists Bulletin, DOI: [10.1080/14473828.2023.2193007](https://doi.org/10.1080/14473828.2023.2193007)

To link to this article: <https://doi.org/10.1080/14473828.2023.2193007>

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 Published online: 04 Apr 2023.

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A scoping review of occupational therapy scoping reviews – utilisation of the WFOT proposed international occupational therapy research priority

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Abstract

Introduction: This study aims to map existing occupational therapy scoping reviews to identify their characteristics and highlight research priorities to help occupational therapy researchers conduct further research in the eight prioritized research areas proposed by the WFOT Delphi study.

Method: The review followed the scoping review guidelines from Arksey and O'Malley (2005). Six electronic databases (PubMed, ProQuest Central, Scopus, CINAHL and AHMED, and Web of Science) were used for the search. The inclusion criteria were set as follows: written in English; related to occupational therapy and scoping reviews.

Results: A total of 189 articles were mapped to the WFOT research priorities: Effectiveness of occupational therapy interventions (n = 57); evidence-based practice and knowledge translation (n = 74); healthy aging (n = 26); participation in everyday life (n = 29); occupational therapy professional issues (n = 29); community development and population (n = 10); occupational therapy and chronic conditions (n = 41); technology and occupational therapy (n = 11); and some non-categorized studies.

Conclusion: Our findings also support the WFOT study findings indicating the current research focus in evidence-based practice and knowledge transition.

ARTICLE HISTORY

Received 5 September 2022
Accepted 15 March 2023

KEYWORDS

Occupational therapy;
scoping review;
methodology; knowledge
gap; research priority

Introduction


Occupational therapy (OT) is an essential health care profession aiming to enable people to promote their health and wellbeing through their occupation and help them participate in meaningful everyday activities (World Federation of Occupational Therapists, 2013). To maintain professional standing and responsibility, Occupational therapists are expected to deliver services that reflect the philosophical base of occupational therapy following established evidence-based practice (American Occupational Therapy Association, 2021). Evidence-based practice requires therapists to understand a clinical question, collect the most relevant evidence, critically assess the evidence, integrate the evidence in practice based on clinical reasoning skills, and evaluate the changes or outcomes (Larsen et al., 2019).

The World Federation of Occupational Therapists (WFOT) conducted a Delphi study in 2017 to determine international research priorities in occupational therapy practice. This study confirmed eight research priorities to be addressed in occupational therapy

research. The priorities are described in rank order as follows: (1) Effectiveness of OT interventions; (2) Evidence-based practice and knowledge translation; (3) Healthy aging; (4) Participation in everyday life; (5) Occupational therapy professional issues; (6) Community development and populations; (6) Occupational therapy and chronic conditions; (8) Technology and occupational therapy (Mackenzie et al., 2017). The priorities were ranked based on subjective responses from WFOT members, and they did not directly identify research gaps. Therefore, it remains unclear whether the findings from the WFOT would be a reliable reflection of current evidence gaps and research priorities.

Scoping reviews, which synthesize and map key concepts from existing evidence, have been utilized to address knowledge and evidence gaps in current practice. Scoping review methodology has been evolving over the past decade, but the original design proposed by Arsey & Malley in 2005 has been used widely (Cacchione, 2016). To date, several scoping reviews have investigated the extent, nature, and use of completed scoping reviews in the healthcare field

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 Supplemental data for this article can be accessed online at <https://doi.org/10.1080/14473828.2023.2193007>.

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(Colquhoun et al., 2020; Pham et al., 2014; Tricco et al., 2016). A scoping review of scoping reviews was conducted recently by Colquhoun and colleagues in 2020 to investigate the extent, scope, and quality of evidence in existing rehabilitation scoping reviews across health fields. While Colquhoun et al. (2020) included some occupational therapy scoping reviews, no scoping review solely focusing on occupational therapy scoping reviews was identified, except the scoping review published by the Australian Occupational Therapy Journal (McKinstry et al., 2013). This scoping review mapped existing occupational therapy scoping reviews to identify evidence gaps. Their findings only included nine articles published between 2009 and 2012, significantly limiting the scope of assessing research needs (McKinstry et al., 2013). Since there has been a large increase in the number of scoping reviews published in the last ten years, this highlights the need for an updated review to establish the state of current literature. Scoping reviews are the first step of research to investigate existing literature in the selected field (Colquhoun et al., 2020). Moreover, they can illuminate current trends in occupational therapy scoping review topics which is vital for identifying further research needs to facilitate evidence-based practice. To identify the current trend, we have used the eight prioritized research areas proposed by the WFOT to categorize the identified article (Mackenzie et al., 2017).

This study aims to map existing occupational therapy scoping reviews to identify their characteristics and highlight research priorities to inform further research directions to facilitate evidence-based practice. The findings will be analyzed to help occupational therapy researchers conduct further research in the prioritized areas.

Method

We completed the scoping review following five steps stated by Arksey and O'Malley (2005): (1) to identify the research question; (2) to identify the relevant studies; (3) to select studies; (4) to extract data; (5) to summarize and report the results.

Stage 1: Research questions

The research questions guiding this study were as follows:

- What would be a current trend and overall characteristics of existing scoping reviews about occupational therapy areas?
- What would be the characteristics of scoping review classified by the eight WFOT priority list?
- Which occupational therapy area requires further research along with the findings from the Delphi

study from WFOT? – What would be the research priority?

Stage 2: Identifying relevant studies

A search strategy was developed by all the authors collaboratively based on the terms 'scoping review' and 'occupational therapy'. The following electronic journals were used for searching in this scoping review: PubMed; ProQuest Central; Scopus; CINAHL; AMED; and Web of Science. The search strategy for all databases is attached in Supplemental file 1. Reference lists of the included articles were also hand-searched for additional relevant studies.

Stage 3: Selecting studies

This review included only scoping reviews written in English associated with occupational therapy. No search limitation was applied to the date of publication. We did not include scoping reviews on conference papers or protocol papers to ensure that only high-quality articles were included. The methodological quality of the articles was not considered in the screening process as this was not an essential part of the scoping review process following the guidelines (Arksey & O'Malley, 2005). At least two authors reviewed titles and abstracts to eliminate duplicates and irrelevant studies not associated with scoping reviews in occupational therapy. Two authors then conducted the full-text screening for each article to confirm whether the study met the inclusion criteria or not. A third author managed any discrepancies between them.

Stage 4: Extracting data

To classify each article into different categories, this research utilized the research priority classification and the corresponding explanations (Mackenzie et al., 2017). Keywords describing the content of each article were extracted from the article's research question. The extracted keywords were used to identify the main theme of each scoping review, following the rationale and scope presented in Table 3 from the Final Research Priorities (Mackenzie et al., 2017) are described in Table 1.

Each article theme was independently identified by at least two authors. Then, the authors discussed with each other to decide the article theme. Examples of theme identification are explained in Table 2.

All the authors developed the charting template in a discussion considering the research used to create the research questions (Colquhoun et al., 2020; Mackenzie et al., 2017). Each author was allocated a certain number of articles, with two authors extracting data and deciding on the theme for a single article. Findings

Table 1. Research priorities and its description.

Research priorities	Description
(1) Effectiveness of OT interventions	Establishes the value of OT, assists in attracting funding for and commissioning OT services, Highlights the importance of engagement in occupation for health, focuses on broad interventions, best use of outcome measures that are psychometrically sound, person-centred qualitative outcomes, and cost-effectiveness.
(2) Evidence-based practice and knowledge translation	Evidence-based practice in OT, knowledge translation, development of clinical practice guidelines, and reviews of evidence around specific practice areas.
(3) Healthy aging	OT services for the aging population and aging-related medical conditions such as dementia, falls, injuries, and social issues.
(4) Participation in everyday life	Interventions that facilitate participation in daily activities, community activities and occupation. Advocacy, environmental intervention, and lifestyle programs that focus on participation as an outcome.
(5) Occupational therapy professional issues	Education, fieldwork models, continuing professional education, international competencies, awareness of the profession, and policy.
(6) Community development and populations	Practice with homeless people, displaced people, rural populations, people experiencing violence or conflict, refugees, ethical issues, and disaster prevention. Community development, service providers, non-government agencies and evaluating effective service delivery models.
(6) Occupational therapy and chronic conditions	Effective management of chronic diseases that may include but are not limited to the following: autism, stroke, cancer, HIV/AIDS, mental health and recovery, arthritis, diabetes and obesity.
(8) Technology and occupational therapy	The use of technology in OT practice, technology design, telehealth, and how technology can facilitate participation and engagement in occupations. It was hypothesized that several scoping reviews could fall under multiple themes.

Table 2. Examples of the theme identification.

Based on research questions – Examples (Reference)	Keywords	Decision and explanation
To address the evidence supporting the effectiveness of expressive art techniques as intervention tools to enhance the occupational profile for clients with the aforementioned communication deficits. (Eschenfelder et al., 2018)	intervention, occupational profile, expressive art	(1) Effectiveness of OT interventions: The research questions and keywords consist of 'to enhance the occupational profile', which is aligned with this category topic of 'highlights the importance of engagement in occupation for health'. (2) Evidence-based practice and knowledge translation: This research question and extracted keywords (intervention, occupational profile, expressive art) show specific evidence-based practice in OT and knowledge translation.
Does teaching JA strategies improve engagement in occupations and co-occupations for children and families living with ASD? (Eschenfelder & Gavalas, 2017)	ASD, JA strategies	(2) Evidence-based practice and knowledge translation: This research question and extracted keywords (JA strategies) show specific practice and knowledge translation interventions. (6) Occupational therapy and chronic conditions: This study's research question and extracted keywords explain chronic conditions.
Based on types of interventions Intervention mainly about OT particular intervention Intervention about a specific intervention Intervention mainly for participation in everyday life		Decisions (1) Effectiveness of OT interventions (2) Evidence-based practice and knowledge translation (4) Participation in everyday life
Based on target population For aging population For homeless people/community population For chronic conditions		Decisions (3) Healthy aging (6) Community development and populations (6) Occupational therapy and chronic conditions.
Based on other factors if the theme was about occupational therapy professional issues If the article explained any technology use in occupational therapy		Decisions (5) Occupational therapy professional issues (8) Technology and occupational therapy

*If the scoping review did not match with any of the themes above upon the discussion, the study was identified as 'n/a' in themes.

were compared between the two authors, with categorization confirmed by checking the keywords of the article. All discrepancies were reviewed in a discussion between the authors and a third author to reach a consensus. The following data was collected: Title of the article; Journal published in; Year published; Year range of included articles in the review; Number of studies included; Country of origin (first author's affiliation); Research question; Keywords; Classification theme (Mackenzie et al., 2017); and Main findings.

Stage 5: Summarizing the study

The primary author predominantly conducted the collation and summarizing of results by liaising with the

authors (K.T) and (N.M). All authors were involved in finalizing research articles to ensure the quality of the article. The data were qualitatively and quantitatively analyzed by considering the characteristics of each scoping review. The data were presented using diagrams and tables. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow chart was used to explain the study selection process (Tricco et al., 2018).

Results

Search strategy

Our search identified 1271 records after excluding the duplicated articles. Based on the title and

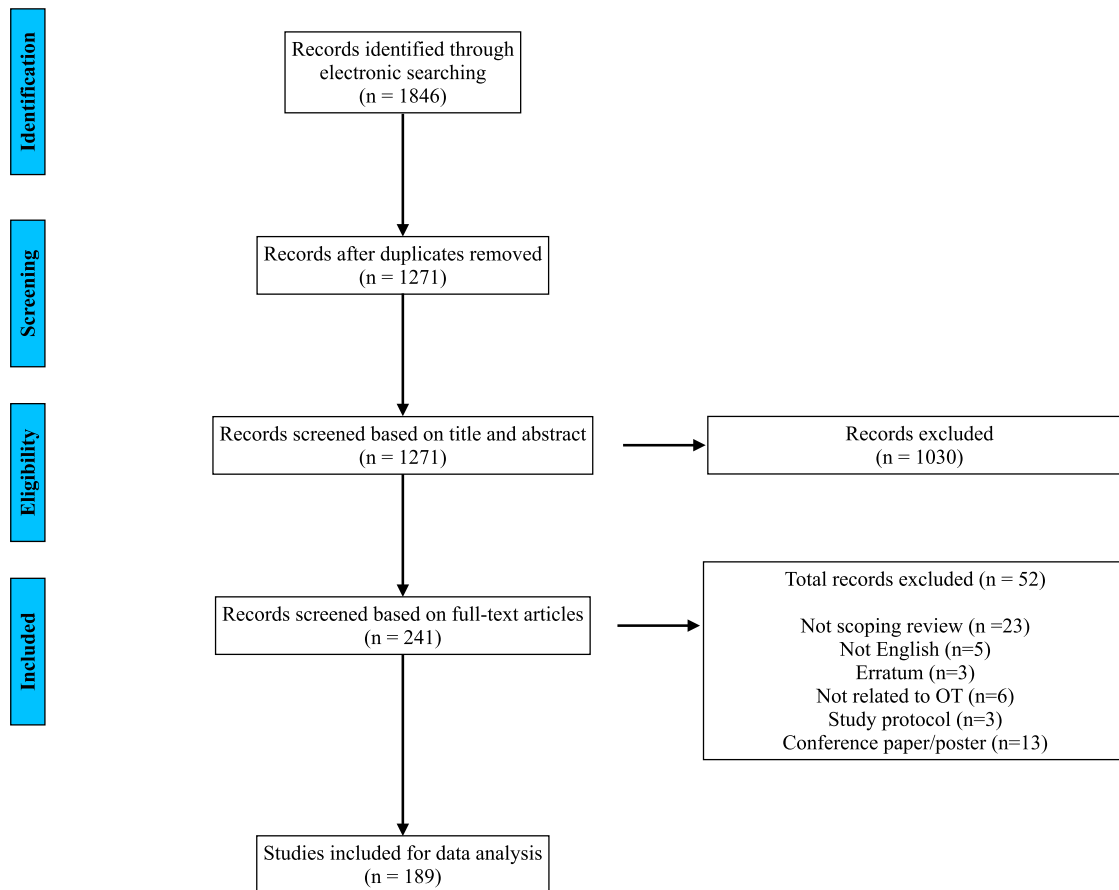


Figure 1. PRISMA flow diagram showing the study identification process.

abstract, we excluded 1030 records first, then excluded an additional 52 articles on full-text screening, which resulted in 189 records in total (refer to Figure 1). Reasons for excluding the 1030 records through the title and abstract screening were as follows: no description of occupational therapy; non-English study; study protocol; non-scoping review study. Reasons for excluding the 52 articles through the full-text screening were described in Figure 1.

Table 3. Characteristics of occupational therapy scoping reviews.

Year of Publication		
Year	Number of articles	%
Before 2010	0	0
2010	4	2
2011–2016	33	17
2017–2021	152	80
Continent		
Continents	Number of articles	%
Asia	8	4
Africa	3	2
America	122	65
Europe	20	11
Oceania	36	19
Number of analyzed articles in each study		
Analyzed articles	Number of articles	%
0–50	141	75
51–100	25	13
101–200	16	8
> 200	7	4

Characteristics of included studies

A large number of articles (80%; $n = 152$) were published in the last five years (between 2016 and 2021), whereas no studies were published before 2010 in the analysis. Many studies appeared from North and South America (65%; $n = 122$), including the United States of America (USA), Argentina, Brazil, Canada, and Georgia. However, only a small number of studies appeared from Asia (4%; $n = 8$), such as China, Iran, Israel, Korea, Philippines, and Africa (3%; $n = 2$), including South Africa and Zimbabwe. Most scoping reviews appeared to include up to 50 articles in their analysis (75%; $n = 141$), whereas only seven (4%) appeared to include over 200 articles. Table 3 displays a summary of the characteristics of the included studies. Published journals were listed in Supplementary File 2.

Research priorities and characteristics of each category

Some scoping reviews related to multiple themes, but each article theme was identified upon discussion with at least two authors. If the scoping review does not fall under any of the themes above, the study was identified as 'n/a' in themes. Characteristics of each category, examples of the identified articles with their

theme, research questions and extracted keywords are displayed in [Table 4](#).

Discussion

This scoping review was conducted to identify and map trends of occupational therapy scoping reviews and highlight research priorities to inform further research needs in particular areas.

Demographic and characteristics of the identified scoping reviews

This scoping review included 189 scoping reviews specifically relating to the field of OT. The findings show that the number of scoping reviews in OT has been increasing over the last five years. This could be due to the advancement and development of scoping review guidelines such as the PRISMA for scoping reviews (Tricco et al., 2018), the Joanna Briggs Institute (JBI) scoping review guidelines, which have been recently updated (Peters et al., 2021), and an international education training course for scoping reviews (Stern et al., 2018). As English has been a barrier for researchers in non-English speaking countries to smoothly undertake the JBI program (Stern et al., 2018), translated programs or compatible programs in other languages, need to be developed. Similarly, English is also a barrier to accessing scoping review guidelines as translations in different languages are currently very limited.

Overall finding in research themes

Professionals participating in the WFOT Delphi survey (Mackenzie et al., 2017) highlighted occupational therapy research needs in ‘evidence-based practice and knowledge transitions’. Our findings also support the Delphi study, highlighting that the current focus in occupational therapy research seems to be on ‘evidence-based practice and knowledge transitions’ (Mackenzie et al., 2017). More specifically, our study reveals that a large number of studies categorized under ‘evidence-based practice and knowledge translations’ investigated occupational therapy-related assessment or intervention in various settings.

(1) Effectiveness of OT interventions

Goal setting is a critical part of OT interventions regardless of the target population. Our results suggested that there is limited evidence related to technologies that support adults with ID to participate in goal setting (Waldman-Levi et al., 2019). This evidence gap was additionally found in a recent scoping review that the existing studies of technology-mediated goal setting in adult rehabilitation are mainly for facilitating self-management among people with chronic conditions such as diabetes and cancer

but did not identify any technology used for those with ID (Strubbia et al., 2020). The accessibility of information and communication technology (ICT), such as mobile phones, computers and internet tablets, among people with ID has been a concern due to their difficulty with navigation, reading and abstract thinking as well as negative belief of caregivers or staff limiting those to use ICT (Ramsten et al., 2018). As ICT can help increase the empowerment and self-determination of people with mild to moderate ID and participate in activities at home and community, leading to increased independence, further research in this area is required (Ramsten et al., 2018).

(2) Evidence-based practice and knowledge translation

The identified scoping reviews targeted particular interventions such as mindfulness, expressive art, Cognitive Orientation to daily Occupational Performance (CO-OP), aquatic therapy, joint attention strategies, and sensory integration. A recent systematic review summarized the best-available intervention evidence for children with disabilities and identified 135 interventions across 22 diagnoses (Novak & Honan, 2019). Forty interventions were rated as ‘do it’ and had supporting evidence. Examples include CO-OP, Goal-Directed Training, Token Economies, and Patient Education. Interventions included in our scoping review, such as mindfulness, joint attention, and CO-OP, were rated as highly evidence-based approaches. In contrast, sensory integration was rated as a ‘Don’t do it’ intervention as it was found to have a poor evidence level. Furthermore, expressive art and aquatic therapy were not identified in a list of the identified interventions, whereas our study identified its scoping review. Despite the lack of inclusion of these interventions in the recent systematic review (Novak & Honan, 2019), existing scoping reviews on these topics could indicate their growing attention and a need for further research. This indicates that some of the results are compatible with our study results, whereas some are not.

(3) Healthy aging

A meta-analysis investigating the effectiveness of OT interventions in frail older people concluded that there is strong evidence supporting OT intervention for improving functioning in community-dwelling physically frail older people (De Coninck et al., 2017). Compatible with our study findings, this meta-analysis did not look at specific outcomes of frailty; instead, they looked at impacts as a result of frailty, such as Activities of Daily Living (ADL), social participation and mobility (De Coninck et al.’s, 2017). Our identified scoping review focusing on the aging population found a lack of validity in measures of frailty (Fritz et al., 2019). Frailty measures can be useful for estimating fall risks and additional OT prevention service needs such as home modification and

Table 4. Research theme classification and example references

Research theme (identified number of articles)	Characteristics of each category and examples of the identified studies	Examples of research questions/objectives (Reference) and (*Examples of extracted keywords related to the identified theme)
Effectiveness of OT interventions (n = 57)	<p>Several scoping reviews of OT interventions or outcomes of chronic conditions such as intellectual disabilities (ID), Traumatic Brain Injury (TBI), and community-dwelling adults were identified. The study by (Waldman-Levi et al., 2019) investigated the characteristics and effectiveness of a non-technology and a technology-based intervention to improve the everyday performance of adolescents and adults with ID. The study highlighted that video modeling and prompting methods were the most frequently used and effective interventions for promoting the activity performance of the population. The study also revealed vital research gaps as they found limited studies investigating self-chosen goals or activities and using technology as continuous support among middle-aged and older adults with moderate to severe ID (Waldman-Levi et al., 2019). Another study specifically targeted randomized controlled trials to investigate the effects of nonpharmacological interventions on disability in community-dwelling older adults (Wu et al., 2019). Interestingly, most of the identified studies in this review concluded that nonpharmacological interventions had little or no effect in reducing disability for older adults. Thus, it was suggested that further research is needed to develop a screening tool to estimate disability progression and to create a strategy to facilitate complex interventions for treating disability.</p>	<p>What are the characteristics and effectiveness of nontechnology and technology based interventions used to improve everyday performance of adolescents and adults with IDD? (Waldman-Levi et al., 2019) (Intervention)</p> <p>To examine the effects of nonpharmacological interventions on disability in community-dwelling older adults participating in randomized controlled trials. (Wu et al., 2019) (Non-pharmacological intervention)</p>
Evidence-based practice and knowledge translation (n = 74)	<p>The largest number of articles (n = 74) appeared to mention the theme of this topic. Multiple scoping reviews targeted a single type of intervention such as mindfulness, expressive art, Cognitive Orientation to daily Occupational Performance (CO-OP), aquatic therapy, joint attention strategies and sensory integration. However, only a limited number of scoping reviews mapped evidence relating to a particular occupational therapy delivery mode or setting. A study investigating how mindfulness interventions are used in rehabilitation for physical disorders found clinically significant positive outcomes in self-efficacy for disease management, increased quality of life, and acceptance of pain symptoms (Hardison & Roll, 2016). Additionally, no studies reported adverse effects of mindfulness interventions, which could highlight the value of implementing mindfulness in rehabilitation services.</p>	<p>How is mindfulness being used in physical rehabilitation, and what are the implications for occupational therapy practice and research? (Hardison & Roll, 2016) (Mindfulness)</p> <p>What is the current state of knowledge regarding mindfulness and human occupation in the occupation-based disciplines of Occupational Therapy and Occupational Science (Goodman et al., 2018) (Current state of knowledge)</p>
Healthy aging (n = 26)	<p>Twenty-six scoping reviews were included in the analysis of this category. Many scoping reviews under this category focused on interventions or outcome measures for the aging population in community, home-based or residential care settings, whereas no studies targeted in-patient settings. One scoping review emphasized barriers to delivering evidence-based intervention for older adults, including time restraints, costs, and organizational hindrances. To overcome the barriers, this study suggested implementing some strategies such as workshops, follow-up consultations from experts, peer mentoring and standardized training. Also, liaising with caregivers and families is another important consideration in delivering evidence-based practice (Juckett & Robinson, 2018). Another identified scoping review investigated OT interventions to improve outcomes among frail, community-dwelling older adults. Frailty, which can cause older adults to reduce their ability to manage everyday activities, is seen in between 10% and 25% of older adults in later life (Fritz et al., 2019). Although the concept of frailty has been increasingly acknowledged in aging research, most identified studies in this scoping review specifically looked at the OT intervention. They did not use validated frailty measures to identify frail older adults. This highlights the future occupational therapy research to utilize the standardized frailty measure to accurately target the population and deliver the evidence-based approach (Fritz et al., 2019).</p>	<ol style="list-style-type: none"> 1. What factors influence effective implementation of evidence-based interventions specifically designed for older occupational therapy clients? 2. What types of implementation strategies (e.g. practitioner trainings, workshops, manuals) have been used to enhance the implementation of interventions with the older adult population? 3. What implementation outcomes (e.g. fidelity, feasibility, sustainability) have been assessed in the occupational therapy literature related to adopting evidence-based interventions with older clients? (Juckett & Robinson, 2018) (older adult) <p>To (1) characterize how frailty was defined and operationalized in occupational therapy interventions delivered to frail older adults, (2) characterize and describe the types of occupational therapy treatments delivered as part of those studies and the treatment dose used, and (3) describe the primary outcomes of interest. (Fritz et al., 2019) (Older adult)</p>
Participation in everyday life (n = 29)	<p>Twenty-nine articles were included under this category. A large number of identified scoping reviews investigated environmental modification and return to work interventions. Several scoping studies targeted populations such as veterans or military personnel, people with visual impairments, and the aging population. No scoping reviews of lifestyle programs were identified. With limited practice guidelines for OT return to work interventions for people with trauma and stress-related mental health conditions, a recent scoping review in 2020 highlighted existing evidence in person-focused versus environment and occupation-focused interventions (Edgelow et al., 2020). The</p>	<p>To describe occupational therapy return to work interventions for trauma and stress-related mental health conditions found in the literature. (Edgelow et al., 2020) (return to work)</p> <p>To map the breadth and scale of the evidence base, identify themes and gaps in the evidence as well as grading home modifications research quality. (Carnemolla & Bridge, 2018) (home modification)</p>

Occupational therapy professional issues (n = 29)	<p>following emerging practices were identified in the study: 'ReDO' intervention, support for active military members to manage operational stress to remain at work, and multidisciplinary team treatment (Edgelow et al., 2020).</p> <p>Another key aspect of this category is home modification, recognized as an essential delivery of care that can improve health and wellbeing (Carnemolla & Bridge, 2018). Carnemolla and Bridge (2018) mapped seventy-seven studies from 16 countries revealing that home modification intervention evidence is measured in a diverse range of effects. Still, fall prevention appeared to be the most robust evidence-based expected outcome of home modification (Carnemolla & Bridge, 2018).</p> <p>There were 29 articles included in this category. A large number of scoping reviews in this category targeted OT education, including undergraduate and postgraduate education, academic research, literacy institution, precertification health professional programs, interprofessional education and placement. Despite the category description, no professional awareness or policy scoping reviews were identified. One of the identified scoping reviews investigated occupational therapists' continuing competence assessment and maintenance. Their findings highlighted that professional development training should be set as a mandatory requirement and that further research needs to examine ways to incorporate the translation of evidence into practice. (Myers et al., 2017).</p>	<p>What is the extent and nature of research examining assessment and maintenance of continuing competence in occupational therapy? What methodologies and research designs are represented? What are the gaps in the knowledge base? (Myers et al., 2017) (Continuing competence in occupational therapy)</p> <p>The purpose of this scoping review therefore was to identify, summarize, and describe existing literature on ethical tensions in occupational therapy practice. (Bushby et al., 2015) (Ethical tension)</p>
Community development and populations (n = 10)	<p>A limited number of studies were identified in this category compared to other categories (n = 10). Scoping reviews in this category mainly targeted migration, racial issues, and rural/remote groups, whereas there were no scoping reviews for OT for refugees or OT services providers. One of the identified scoping reviews investigated the current knowledge of the occupational experiences of forced migrants. Forced migration, where people lose their meaningful occupations or activities due to unexpected circumstances, can significantly impact people's daily lives. Occupational therapists have been contributing to helping establish occupations or activities. Despite the potential of OT to support those in circumstances of forced migration, there is still limited evidence available to support an evidence-based program for this population, highlighting a critical research gap (Huot et al., 2016). Another scoping review mapped evidence to inform the experience and roles of occupational therapists in the context of natural disasters. Occupational therapists have supported survivors, their families and first responders in natural disaster incidents (Jeong et al., 2015). It mapped evidence in this area, showing that occupational therapists could develop accommodation and evacuation plans for people with disabilities. Occupational therapists can also support in post-injury phases, especially services for survivors' mental health and disaster management in their recovery phase. This study highlights OT's significant contribution to supporting disaster management and the importance of community-based rehabilitation to natural disaster survivors (Jeong et al., 2015).</p>	<p>The purpose of our scoping review was to synthesize current knowledge regarding the occupational experiences of forced migrants, as portrayed in the occupation-based literature. (Huot et al., 2016) (Migrant)</p> <p>What is known from the existing literature about OTs' experience and roles in supporting survivors, their families and first responders in the disaster phases of preparedness, response and recovery? (Jeong et al., 2015) (OTs' experience and roles in supporting survivors, their families and first responders)</p>
Occupational therapy and chronic conditions (n = 41)	<p>There were 41 articles included in this category. Particular chronic conditions such as diabetes, cancer, autism spectrum disorder (ASD), brain injury, ID, and chronic pain were identified in multiple scoping reviews. A limited number of OT scoping reviews targeted some chronic conditions such as mental health issues, other neurodevelopmental disabilities, and genetic conditions were found. One of the identified scoping reviews indicates that there is considerable evidence that shows how OT interventions can help short-term weight loss. More specifically, occupational therapists involvement in delivering a holistic approach, education on the role of activity, providing technological support, and prompting enjoyment in being active are essential interventions for obesity weight loss management (Nielsen & Christensen, 2018). A scoping review on OT chronic pain management states that occupational therapists have been contributing to chronic management by focusing on people's occupations (Lagueux et al., 2018). The result shows that the central role of occupational therapists in chronic management is to improve activities and participation primarily, and the majority of the interventions were designed to be unique for each individual (Lagueux et al., 2018).</p>	<p>What characterizes the interventions involving occupational therapists identified in the current evidence?</p> <p>Which significant improvements in lifestyle and health behavior were made by adults with overweight and obesity who participated in interventions involving occupational therapists? (Nielsen & Christensen, 2018) (diabetes, obesity)</p> <p>What is the current state of knowledge about OT for CP management in adults?</p> <p>What is the role of an occupational therapist for CP management in adults?</p> <p>Which assessment methods are available for use by the occupational therapist in CP management in adults?</p> <p>Which interventions support the OT intervention in CP management in adults? (Lagueux et al., 2018) (Chronic pain)</p>
Technology and occupational therapy (n = 11)	<p>Overall, a limited number of scoping reviews in this category were identified compared to other categories (n = 11). In the identified scoping reviews, several of them outlined OT using telehealth, virtual reality or augmentative reality, or assistive technology.</p>	<p>This scoping review synthesizes the findings of studies evaluating information and communication technology use within occupational therapy home assessments. (Ninnis et al., 2018) (Technology)</p>

(Continued)

Table 4. Continued.

Research theme (identified number of articles)	Characteristics of each category and examples of the identified studies	Examples of research questions/objectives (Reference) and (*Examples of extracted keywords related to the identified theme)
Non categorized studies (n = 20)	<p>Considering OT's high demand and limited availability to travel to the client's house, technologies have been utilized in the assessment process. The scoping review mapped evidence evaluating information and communication technology for OT home assessments. Some facilitators were identified, such as usefulness, ease of use and potential cost-effectiveness. Despite the facilitators, some barriers were identified, such as poor usability and unsustainability for some populations (Ninnis et al., 2018).</p> <p>Some scoping reviews (n = 20) appeared not to fall under any categories. Many of these scoping reviews investigated the meaning of specific terms such as 'occupational justice', 'occupational adaptation', 'occupation', and 'activity'.</p>	<p>What is the extent and nature of telehealth research in occupational therapy? Which part of methodological issues of telehealth research is more interesting for researchers in occupational therapy? Which kind of telehealth technologies is more attractive for researchers in occupational therapy? Which area of telehealth research in occupational therapy is still unexplored? (Nobakht et al., 2017) (Telehealth technologies) What does the literature reveal about contemporary occupational therapy philosophy and practice in acute hospital settings? (Murray et al., 2020) (Occupational therapy philosophy) How is the construct of occupational adaptation defined and applied in different areas of occupational therapy practice? What are potential gaps in the literature on the application and use of occupational adaptation as a construct? (Grajó et al., 2018) (Occupational adaptation defined and applied in different areas of OT practice)</p>

*Please note that only the relevant keywords to the categorized theme are displayed in this table.

assistive technology (Kim et al., 2022). Therefore, further research needs to be conducted to develop valid measures of frailty used by OT to improve OT outcomes among frail older adults.

(4) Participation in everyday life

Emerging evidence shows that home modifications are common compensatory strategies utilized by an occupational therapist to improve occupational performance and help clients participate in everyday life (Stark et al., 2017). Home modifications can enhance a client's participation, reduce their risk of falls and decrease demands on caregivers, which can lead to improved possibilities of adults remaining in the community (Stark et al., 2017). Like our study findings, a recent systematic review also highlighted the effectiveness of home modifications for improving the function of the aging population with various health conditions by reducing the risk of falls with strong evidence (Stark et al., 2017). However, some financial and procedural barriers to accessing home modification for the aging population still exist, and further research and policy change, as well as improvement of accessibility, are required (Wiseman et al., 2021).

(5) Occupational therapy professional issues

A primary occupational therapy professional issue is a widespread lack of understanding within and external to the profession (Turner & Knight, 2015). Occupational therapy professional identity, which develops over time, has not been fully understood in the community. Occupational therapists who perceive the public's lack of deep knowledge about occupational therapy's unique values and beliefs may feel undervalued and uncertain about one's professional identity. Turner and Knight (2015) highlight the importance of occupational therapists being able to perceive themselves and to be perceived by others as health professionals with a clear self-identify and sense of self. With the improvement of self-perception, occupational therapists can develop a professional identity and increase status in the community, promoting the occupational paradigm and facilitating the development of confidence and maturity (Turner & Knight, 2015). However, our scoping review emphasized that none of the identified scoping reviews investigated professional awareness or policy. Hence, further research needs to examine how to raise public awareness of OT and occupational therapist's self-professional identity.

(6) Community development and populations

Along with increased multiculturalism, occupational therapists are required to be able to adapt to working with populations with diverse cultural backgrounds. Cultural competence training has been emphasized in OT education (Agner, 2020); however, a recent study highlighted the paradigm shifts that OT needs to move towards to focus on cultural humility from cultural competence (Agner, 2020). Cultural

humility was defined by ‘*flexibility; awareness of bias; a lifelong, learning-oriented approach to working with diversity; and a recognition of the role of power in health care interactions*’. In short, this concept emphasizes that occupational therapists are not expected to be aware of all the details of a particular culture; rather, they are encouraged to be able to acknowledge different viewpoints on health, wellness, family, and role expectations in individual lives (Agner, 2020). This highlights the importance of occupational therapists developing cultural humility in their education to deliver services to diverse populations, including forced migrants.

(7) Occupational therapy and chronic conditions

OT practice guidelines for adults with chronic conditions has been recently published in 2022 (Fields & Smallfield, 2022). This guideline highlights that OT interventions such as education, goal setting, and helping to establish self-management habits and routines are evidence-based services for adults with chronic conditions. Additional recommendations suggest that telehealth delivery models, in combination with an in-person visit, can facilitate self-management skills in clients with chronic conditions (Fields & Smallfield, 2022). Our scoping review identified several scoping reviews (Bernardin et al., 2013; Cahill et al., 2016; Richardson et al., 2014) and investigated the evidence around self-management skills. However, none of the identified scoping reviews specifically examine the evidence around telehealth for people with chronic conditions. Considering the recent spike in telehealth use for people with chronic conditions, this indicates that further research needs to be conducted in this area, along with clinical practice guideline recommendations.

(8) Technology and occupational therapy

The number of scoping reviews related to ‘technology and occupational therapy’ appeared to be one of the least among all the identified scoping reviews. However, according to the World Health Organisation (World Health Organization, 2018), one billion people use assistive technology (AT) worldwide, and the number of users is expected to double by 2030 (World Health Organization, 2018). This may indicate the need to increase research in ‘technology and occupational therapy’ to increase evidence-based approaches for a range of technologies globally (Akyurek et al., 2017; World Health Organization, 2018). Additionally, there are still some usability issues with many technologies, highlighting the need for further research to improve technology use in clinical practice (Ninnis et al., 2018). A previous literature review about occupational therapy research on AT and physical environmental issues (Ivanoff et al., 2006) showed that AT research within occupational therapy predominantly focused on AT’s effects on body function rather than occupational performance.

Furthermore, this study suggests that future research in AT and environmental issues should reflect the core concepts of occupational therapy, which focus on the Person-Environment-Occupation (PEO) model (Ivanoff et al., 2006). Our study findings also indicate that current scoping reviews in occupational therapy are not yet investigating AT’s contribution to PEO. Instead, recent scoping reviews have established different types of digital technologies, technologies used in OT home assessments, and the effects of AT on dementia-related wandering behaviors. These findings demonstrate that there is not only a lack of technology-related occupational therapy scoping reviews but there is also a specific research gap in evidence related to AT and occupational therapy models.

Study limitations

Although this scoping review was successfully able to map existing scoping reviews of occupational therapy, we did not investigate the quality of the study. Further, methodology of the selected studies was not investigated and this might have impacted on robustness and the quality of reviews and the findings. Therefore, the reliability of the findings for the included studies remains unclear. Although a strict protocol was followed, we could not completely control for possible subjectivity bias in the classification process. Further, the mapping of evidence was referenced to the eight priority lists from the Delphi study, which may have limited the scope of our analysis.

This scoping review of occupational therapy scoping reviews aimed to map the research field and identify evidence gaps. While scoping reviews as a methodology have previously been demonstrated as useful and valid, we acknowledge that other study types should also be considered to gain a comprehensive overview of occupational therapy research. Further research, including randomized control, and qualitative and quantitative studies, would support and add to mapping existing occupational therapy research.

Additionally, this review only included occupational therapy scoping reviews published in English, which means some non-English language scoping reviews may have been excluded, which could have implications for the study findings.

Conclusion

This study has broadly mapped existing scoping reviews in occupational therapy to present the characteristics of the included studies and inform further occupational therapy research needs. Overall characteristics of identified articles were explained using the research priority categorization from the WFOT

Delphi study. The available evidence shows that many occupational therapy scoping reviews focus on ‘evidence-based practice and knowledge transition’, which supports the WFOT Delphi survey completed in 2017.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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