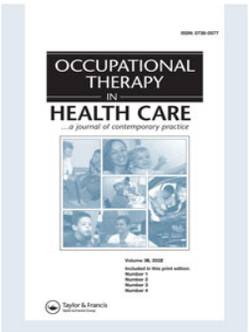

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REVIEW

Self-Assessments of Mentoring Skills in Healthcare Professions Applicable to Occupational Therapy: A Scoping Review

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ABSTRACT

Introduction: This scoping review explores the professional literature in allied healthcare to determine which self-assessments of mentor skills are the most valid and reliable for use in occupational therapy doctoral capstone programs. The aims of this scoping review include mapping evidence related to mentor assessments in healthcare, exploring implications for occupational therapy doctoral mentor training programs, and identifying common characteristics of mentor self-assessments for occupational therapy programs to consider when developing capstone mentoring resources.

Methods: Researchers applied and reported via PRISMA Extension for Scoping Reviews (PRISMA-ScR). A librarian and authors formulated keywords and database selections to search PubMed/MEDLINE/PMC, and Embase were searched from across healthcare professions for training outcomes, mentor self-assessment, mentor attributes, and use of researcher-developed assessments. The search was limited to English publications from the last 20 years. Data were extracted for quantitative information regarding study characteristics and qualitative information about mentoring skills.

Results: A total of 852 results were delivered across all databases. Nineteen papers met the final eligibility criteria and were included in the data extraction. Populations were included from several healthcare professions, including 11 nursing, four healthcare researchers, one pharmacy, one midwifery, one medicine, and one medical dietetics. Countries included the United States (n = 7), Finland (n = 5), United Kingdom (n = 4), Japan (n = 1), South Africa (n = 1) and Canada (n = 1).

Conclusion: The authors identified four valid self-assessment tools, demonstrating III and IV levels of evidence, that may be implemented by occupational therapy programs as they develop resources for mentor programs. Occupational therapy programs can use the mentor attributes found in this scoping review to create their own mentor assessment measures or

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may choose to use a validated tool. The authors recommend additional research in mentor education and mentor skill acquisition.

Introduction

Mentoring is an iterative process for growth that evolves over time and involves student, site, and mentor (Low et al., 2018). As a tool for professional development and teaching, mentoring is a bidirectional process that supports both the mentor and mentee and is an important professional activity among the allied health professions (Burgess et al., 2018). Mentors use their skills to shape the abilities of the next generation of healthcare providers, particularly when the mentees are early-career health professionals (Coppin & Fisher, 2016; Henry-Noel et al., 2019). Being a mentor allows occupational therapy professionals to create and sustain practice competencies, expand skills in evidence-based practice, and expand their practice of being lifelong learners (World Federation of Occupational Therapists (WFOT)), 2012).

Mentoring is common throughout occupational therapy practice and education. The Accreditation Council for Occupational Therapy Education (ACOTE) defines mentoring as "A relationship between two people in which one person (the mentor) is dedicated to the personal and professional growth of the other (the mentee). A mentor has more experience and knowledge than the mentee" (Accreditation Council for Occupational Therapy Education, 2018, p. 51). Occupational therapy practitioners seek out or serve as mentors to promote professional development when advancing their skills, transitioning to new practice settings, or taking on new roles (Doyle et al., 2019; Hoyt & Kringle, 2020; National Board for Certification in Occupational Therapy, 2019). Mentorship has long been argued as important for supporting new or junior occupational therapy faculty (Foy, 2017; Paul et al., 2002). Mentoring has also been shown to support occupational therapy students' academic success and leadership (Doyle et al., 2019; Gafni Lachter & Ruland, 2018).

Occupational therapy programs often use mentorship models in their curricula, particularly entry-level occupational therapy doctoral (OTD) programs, which require a doctoral capstone to be completed with a mentor (Accreditation Council for Occupational Therapy Education, 2018). In fact, it is one of the central tenets utilized during the occupational therapy doctoral capstone (Accreditation Council for Occupational Therapy Education, 2018; DeIuliis & Bednarski, 2019; Kemp et al., 2020; Stephenson et al., 2020). While ACOTE does not require that the doctoral capstone mentor be an occupational therapist, the mentor must have expertise in

the student's focus area. Thus, this general definition provides OTD programs with the freedom to develop mentors and mentor training content that fits their program mission and values.

Entry-level OTD programs are required to verify the doctoral capstone mentors' experience to ensure mentors are experts in the student's selected focus area(s) (Accreditation Council for Occupational Therapy Education, 2018). To date, in occupational therapy, there is no agreed-upon way to assess mentor experience and knowledge, nor are there formal mentor development structures that specifically support occupational therapy capstone programs, mentors, and/or students. The verification or selection of mentors with expertise can be done by reviewing resumes, curriculum vitae, providing access to self-assessments, or other program-developed methods. While literature is available on mentoring in occupational therapy, little has been published on mentor assessment (Doyle et al., 2019). In turn, this means that each entry-level OTD program must create their own capstone mentor guidelines, leading to inconsistency across programs (DeIuliis & Bednarski, 2019; Jirikowic et al., 2015; Stephenson et al., 2020).

Mentoring literature shows that the development of mentors is essential to support a mentor workforce, mentoring education increases perceived mentor confidence, and building mentor capacity is possible through education (Houghton, 2016a; LaRock, 2009; Tuomikoski et al., 2020). As a foundation for mentor program development, a starting point for occupational therapy programs is to assess the skills of current and potential mentors (e.g., external stakeholders, community partners, occupational therapy practitioners). Therefore, it is essential to explore methods to accurately assess mentor skills and competency (Fleming et al., 2020; Ng et al., 2020; Tuomikoski et al., 2018a; 2018b; Yukawa et al., 2020). Ng et al. (2020) work found that most mentoring assessment tools emphasized or focused on the perceptions of the mentee. However, mentee assessment may be problematic, particularly if done in isolation. Commonly, in clinical practice and teaching roles, evaluation of performance is derived from more than one source such as client, mentee, or student feedback, peer review, competency assessment, and manager or department annual performance reviews. While one of the strengths of capstone requirements is the vast difference in types and experiences of mentors, it requires assessment be more broad, that is, not just for occupational therapy mentors. Currently, there is no tool for occupational therapy mentor evaluation.

One method, self-assessment, may provide structure and oversight to a mentoring experience (Qiao Ting Low et al., 2018). Mentoring and mentorship is an informed process that is derived or created from personal experience. Using a self-assessment tool may allow mentors to understand their abilities and solidify their own personal mentor/

mentorship vision and advance along a continuum of mentorship growth and skill implementation (Broughton et al., 2019). A mentor may use self-assessment as a baseline or frequently throughout their career, allowing them to demonstrate progress, intentionally develop their mentoring process over time, and direct future educational focus areas (Broughton et al., 2019).

For this scoping review, we examined the current self-assessment measures of mentoring skills available for practicing healthcare professionals. The primary aim was to discover which self-assessment of mentor skills for healthcare professionals is the most valid and reliable for use in occupational therapy mentorship programs. A secondary aim was to determine which mentor skills were most frequently assessed across healthcare professions when creating their own mentor self-assessments or mentor training programs. A tertiary aim was to explore implications for the development of potential mentor training programs.

Methods

This study was a scoping review completed according to the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) (Arksey & O'Malley, 2005; Tricco et al., 2018). A health sciences librarian from Northern Arizona University acted as a search coordinator. The librarian and authors formulated keywords and database selections to search PubMed/MEDLINE/PMC, Embase, PsycINFO, Cochrane, NARIC, OTSeeker, PEDro, CINAHL, and ERIC databases on 25 August, 2020. Our search strategy involved translating the original research question, "For practicing allied health care professionals, what self-assessment of mentor skills is the most valid or reliable for occupational therapy mentorship programs?" into unique searches to be employed in each database. Table 1 shows the search query deployed in PubMed. The query was adapted as needed in other databases.

("Allied Health Occupations"[mesh] OR "Allied health occupations/education"[mesh] OR "Nursing Education Research"[mesh] OR "Health Occupations/growth and development"[Mesh] OR "Occupational Therapy"[mesh] OR "occupational therapists"[mesh] OR "physical therapists"[mesh] OR "physical therapy specialty"[mesh] OR "research personnel"[mesh]) AND ("Mentors"[mesh] OR "Mentors/psychology"[mesh] OR "Mentors/education"[mesh] OR "Mentors/organization implications and administration"[mesh] OR "Mentoring"[mesh] OR "Mentoring/methods"[mesh] OR "Mentoring/organization and administration" OR "Mentoring/standards"[mesh]) AND ("mentoring competency assessment" OR "Mentor development" OR "Surveys and Questionnaires"[mesh] OR "Self-Evaluation Programs"[Mesh] OR "Professional Competence"[Mesh] OR "Self-Evaluation Programs/methods"[Mesh] OR "Program evaluation"[mesh] OR "program evaluation/methods"[mesh]) AND ((english[Filter]) AND (2000:2020[pdat]))

Table 1. Evidence table.

Author	Participants	Purpose of article	Evidence level and study design (Gliner et al., 2017)	Self-assessment tool or strategy	Implications for occupational therapy mentor training programs
Andrews and Chilton (2000)	22 nurses, 11 students in North Wales	To examine and compare nurses' perceptions of their own mentoring abilities and student perceptions of their mentor	IV Cross-sectional comparative	Questionnaire with Likert scale adapted from the Measuring Mentor Potential (MMP) scale	Individual attributes influence mentor functioning Additional teaching qualifications may boost mentor confidence but a lack of qualifications does not impact student perception of effectiveness Mentees rate their mentors higher than mentors rate themselves Explicit criteria for mentor selection is needed
Dahlke et al. (2016)	32 nurse clinical faculty and preceptors in Canada	To discover the needs of clinical instructors in nursing	V Cross-sectional mixed-methods descriptive	Questionnaire with Likert scale and reflective questions	Mentors would benefit from mentorship and education in specific skills (e.g., time management, role modeling, conflict resolution, and communication)
Elmore et al. (2014)	26 pharmacy preceptors in the USA	To describe the design of a residency preceptor development program	VI Expert opinion	Questionnaire with Likert scale and reflective questions	Both new and experienced mentors can benefit from a mentorship development program
Fleming et al. (2013)	283 mentor-mentee researcher pairs from 16 USA universities	To determine psychometric properties of the MCA	III Nonrandomized experimental	Mentoring Competency Assessment (MCA) with Likert scale	The MCA can be used by both mentors and mentees to evaluate their perceptions of mentor effectiveness The MCA can be used to assess the efficacy of mentor training programs
Gandhi and Johnson (2016)	92 faculty American HIV research mentors	To describe the curriculum of the mentoring workshop	VI Expert opinion	Mentoring Competency Assessment (MCA) with Likert scale	Mentor training can improve outcomes of mentees Parallel training for mentees may work synergistically with mentor training to optimize outcomes The curriculum highlighted in this article could be helpful when developing a new mentor training program
Hishinuma et al. (2016)	1004 Japanese midwives	To develop a tool and determine psychometric properties	IV Exploratory quantitative	Mentoring Competencies of Clinical Midwives (MCCM) scale with Likert scale	Important aspects of mentorship include reflection, assessing student learning, providing feedback, and personal characteristics such as leadership and nurturing abilities The MCCM can be used to measure mentoring competencies

(Continued)

Table 1. (*Continued*)

Author	Participants	Purpose of article	Evidence level and study design (Gliner et al., 2017)	Self-assessment tool or strategy	Implications for occupational therapy mentor training programs
Houghton (2016a)	None	To provide overall strategies to develop within a mentorship role for nursing	VI Expert opinion	Portfolio system for self-assessment	Mentor development is essential to support, grow, and assess the future workforce The mentoring skills outlined in this article may be helpful to reference when developing a mentor training program
Houghton (2016b)	None	To discuss the importance of evaluating student learning experiences within nursing	VI Expert opinion	Reflective writing and strengths, weakness, opportunity, and threat (SWOT) analysis	Mentors must evaluate their role in mentoring for quality assurance and professional development This article includes several questions for reflecting on student learning that may be helpful to incorporate into a mentor training program
Hyatt et al. (2008)	45 nurse mentors in medical practice in the U.K.	To describe the development and function of the practice facilitator role and the results of an audit of their effectiveness	V Descriptive	Mentor audit questionnaire with self-reflective questions	Mentor discussion forums that share experiences can enhance support An established mentor helps to ensure that students receive accurate assessments of their practice
Johnson and Gandhi (2015)	34 mid-and senior-level American HIV researchers	To examine the effects of mentoring training on self-appraised mentoring skills	III Nonrandomized experimental	Mentoring Competency Assessment (MCA) with Likert scale	Participants in the training program rated strategies to improve communication and leadership skills as the most important concepts addressed of the mentor training When creating a mentoring program for mentors of diverse students, consider specific content related to topics such as unconscious bias and microaggression
Kopechek et al. (2017)	28 American medical faculty coaches	To determine the effectiveness of the coaching program	III Cohort	Self-assessment questionnaire with Likert scale	This article highlights an innovative curriculum including online training, workshops, and learning activities
LaRock (2009)	10 nurse mentors in South Africa	To examine the impact of nurse mentor training on self-confidence and mentoring skills	III Cohort	Mentoring skills self-assessment checklist with Likert scale	Building mentor capacity is possible through a training program Self-assessment can be used to measure the success of training and mentoring
Lipscomb and An (2013)	None	To provide mentoring tips for medical dietetics professionals	VI Expert opinion	Mentoring evaluation form with self-reflective questions	This article identifies several critical skills of successful mentors and strategies to improve mentoring relationships Encouraging mentoring increases performance and loyalty

Mikkonen et al. (2020)	1360 nurse mentors in five European countries	To assess an evidence-based model of mentoring student nurses and to establish psychometric properties of MCI	IV Cross-sectional	Mentors' Competence Instrument (MCI) with Likert scale (7 factors, 44 items)	This article identifies focal competencies that could be included in a mentor training program Mentoring is important within healthcare organizations and educational systems to enhance student competencies and professional growth and commitment
Nearing et al. (2020)	56 mentors of American medical faculty researchers	To describe the development and evaluation of a mentoring training program	VI Expert opinion	Survey with Likert scale and reflective questions	Optimizing mentor relationships should include specialized training for mentors and mentees It is important to evaluate the effectiveness of mentor programs
Oikarainen et al. (2018)	323 nurse mentors in Finland	To describe competencies of mentors in mentoring culturally and linguistically diverse students and explore factors that affect mentoring	V Cross-sectional descriptive exploratory	Mentors' Competence Instrument (MCI) with Likert scale (9 factors, 55 items) and Cultural and Linguistic Diversity in Mentoring Scale (CALD + Ms) with Likert scale	There is a need for innovative and effective strategies to ensure high-quality mentoring of students from diverse backgrounds Mentors need sufficient knowledge of student backgrounds and time to reflect on cultural differences
Tuomikoski et al. (2018a)	576 RNs in Finland hospitals	To determine psychometric properties and refine the MCI	V Cross-sectional descriptive exploratory	Mentors' Competence Instrument (MCI) with Likert scale (10 factors, 63 items)	The MCI may be a valuable tool for self-evaluation of mentoring competence More research is needed on the use of the MCI by mentees in other contexts
Tuomikoski et al. (2018b)	576 RNs in Finland hospitals	To describe and explain mentor competence and mentor profiles based on self-evaluation	V Cross-sectional descriptive	Mentors' Competence Instrument (MCI) (10 factors, 63 items) with Likert scale	Mentors have diverse needs related to building their mentoring competence Mentors who reported higher levels of competence participated in mentoring education more often than those who reported lower levels of competence The MCI can be used to identify targeted areas for mentor skill development
Tuomikoski et al. (2020)	150 nurse mentors in Finland	To examine the effect of an intervention on mentoring nursing students in practice	III Non-randomized quasi-experimental with pre-/post-test	Mentor Competence Instrument (MCI) with Likert scale (10 factors, 63 items)	Mentoring education increases mentors' self-evaluation of their competence Degree programs should include mentoring education Effective mentor training programs can include both face-to-face and online training More research is needed to evaluate mentoring competence and assess different methods for providing mentor education

The search was limited to English publications from the last 20 years. The following types of observational and experimental studies were included: expert opinions, dissertations, case reports, clinical studies, pragmatic clinical trials, observational studies, meta-analyses, systematic review types, peer-reviewed trials, and randomized controlled trials. Inclusion criteria were that the paper contained a self-assessment for mentor skills, mentors were healthcare professionals or researchers, and the full text was available. Studies were excluded if the assessments used were meant for student growth, were assessments of curriculum, and/or were student ratings of their mentors.

The investigators managed article review and data extraction online via Covidence (Covidence, n.d.; www.covidence.org). To ensure rigor, two investigators reviewed all titles and abstracts for inclusion, with disagreements resolved via the consensus of four investigators. Similarly, two investigators reviewed full-text articles for inclusion, with consensus for disagreements by four investigators. At least two authors reviewed and agreed on the data collected from each article, which included the title, authors, year of publication, country of study completion or target audience, study design, level of evidence according to Gliner et al. (2017), study objectives, population, setting, assessment used, intervention (if applicable), and relevant results. Two authors with experience in content analysis and coding separately interpreted the results of each article as they related to occupational therapy education. Through discussion, they came to an agreement on the overall implications for occupational therapy education (Tricco et al., 2018).

In addition to the database searches, the authors found the complete assessment tools in the appendices of the articles, through online searches, or by requesting copies of the tools from the authors. Two investigators used content analysis and coding to determine which attributes were most often evaluated in the self-assessments. They performed an initial round of coding to determine appropriate categories and, through discussion, finalized and defined the categories. A second round of independent coding was completed to assign each assessment item to an agreed-upon category. Finally, they reached a consensus on the appropriate attribute categories for each item (Creswell & Poth, 2018).

Results

Selection of sources of evidence

A total of 852 results were delivered across all databases. After deduplication, we selected 761 results for screening using Covidence. Citation searching yielded three additional papers. After the title and abstract

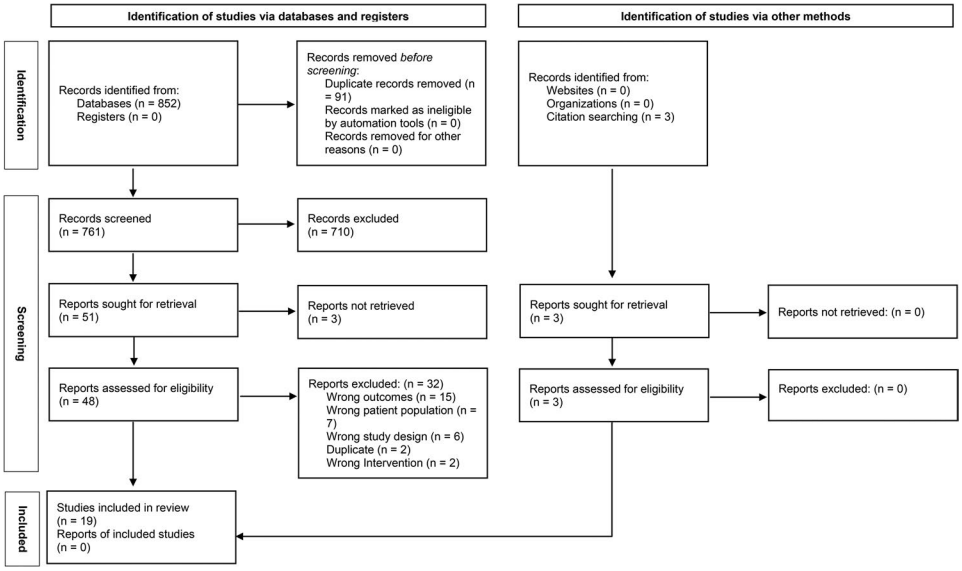

Figure 1. Visualization of PRISMA-ScR research methodology. *From:* Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71. For more information, visit: http://www.prisma-statement.org/

review, 51 papers met the inclusion criteria and were selected for full-text review. Nineteen papers met the final eligibility criteria and were included in the data extraction. Figure 1 displays a diagram of the complete PRISMA-ScR methodology used.

Characteristics of sources of evidence

We chose 19 articles for this review following the extensive screening process. The final selection contains five Level III, three Level IV, five Level V, and six Level VI articles (Gliner et al., 2017). Populations, on which a self-assessment of mentoring was used, were included from several healthcare professions, including 11 in nursing, four researchers in clinical and translational sciences, one in pharmacy, one in midwifery, one in medicine, and one in medical dietetics. The countries in which studies were conducted or in which target audiences of expert opinions were located included the United States (n = 7), Finland (n = 5), the United Kingdom (n = 4), and one each in Canada, Japan, South Africa, Italy, Lithuania, Slovenia, and Spain (please note that the total number of countries does not equal the total number of articles because one study was conducted in multiple countries). Additional information, including study design, is provided in Table 1.

Mentor self-assessment methods

Several methods of mentor self-assessment were identified in the literature, including self-assessment tools, reflective writing, and portfolio development. Self-assessment tools included three that have psychometric testing to demonstrate reliability and validity (Fleming et al., 2013; Hishinuma et al., 2016; Mikkonen et al., 2020). Other tools included researcher-created questionnaires that used Likert scales to consider confidence in or agreement with statements for various attributes (Andrews & Chilton, 2000; Hishinuma et al., 2016). A few other tools combined Likert scales with open-ended reflective questions (Dahlke et al., 2016; Elmore et al., 2014; Hyatt et al., 2008; Nearing et al., 2020). Reflective writing was another method of self-assessment identified, which involves responding to open-ended questions to appraise student learning and mentor effectiveness (Houghton, 2016b; Lipscomb & An, 2013). Finally, portfolio development was another self-assessment method identified, which involves gathering evidence of reflection on mentor competence (Houghton, 2016a). A summary of all extracted data appears in Table 1.

Valid and reliable assessment tools

Three self-assessments were discovered that have been examined for reliability and validity. The *Mentors' Competence Instrument* (MCI) (Mikkonen et al., 2020; Tuomikoski et al., 2018a) was created for nursing professionals initially in Finland and has been implemented and studied across five European countries (Finland, Italy, Lithuania, Slovenia, & Spain) and those respective languages (Mikkonen et al., 2020). This tool has been extensively studied, and the most recent version consists of seven factors (mentor's characteristics, mentor's motivation, goal-oriented mentoring, reflection during mentoring, student-centered evaluation, and constructive feedback) with a total of 44 items and demonstrated good internal consistency with Cronbach's alpha values between 0.83 and 0.94. The most recent version shared by the authors includes the *Mentor's Cultural Competence Subscale* (MCCI), which was developed from the *Cultural and Linguistic Diversity in Mentoring Scale* (CALD + MS) (Oikarainen et al., 2018) adding an additional 21 questions regarding working with culturally diverse students.

The *Mentoring Competency Assessment* (MCA) (Fleming et al., 2013) was developed in the United States for use in mentoring faculty researchers in clinical and translational sciences. This 26 item self-assessment was developed for use with a mentor training program assessing six areas (maintaining effective communication, aligning expectations, assessing understanding, addressing diversity, promoting professional development, and fostering independence) and has matching assessments for the mentor

and mentee. The reliability coefficient alpha scores for both mentor and mentee groups were greater than 0.90.

The *Mentoring Competencies of Clinical Midwives* scale (MCCM; Hishinuma et al., 2016) consists of 41 items within seven factors (supporting experimental study, personal characteristics, thoughtfulness and empathy for new midwives, self-awareness, and self-reflection for finding confidence, making effective use of the new midwives' own experiences, commitment to educational practices and sharing their midwifery practice) and was developed for use with Japanese midwives. This assessment demonstrated reliability coefficient (Cronbach's alpha) of 0.953 and test re-test reliability of 83.1%.

Mentor self-assessment items

To address our second aim, we analyzed a total of 249 items across the 12 self-assessment tools (validated and researcher-created) identified in the research. We coded six items, such as the site availability of resources, as irrelevant to mentor self-assessment, thus eliminating them from our analysis. We coded and organized the remaining 243 items into one of 11 categories related to mentor attributes or skills. In order of frequency, the mentor skills or attributes identified are 1) *coach/support* 2) *assess and provide feedback* 3) *communicate* 4) *reflect* 5) *build the relationship 6) personality characteristics 7) obtain knowledge 8) facilitate mentee reflection 9) cultural awareness 10) facilitate mentee goal setting* and *11) instruct and demonstrate*. These 11 categories with examples are detailed in Table 2.

Each of these categories is also an aspect of a mentee-mentor relationship. The primary goal appears to be to provide *coaching*, encouragement and support to the mentee. *Assessing* the mentee and *providing feedback* regarding performance on goals is another central tenet to being a good mentor. Clear *communication* skills may contribute to the mentor's ability to *provide feedback* and build a solid mentee-mentor *relationship*. *Personality characteristics* such as enthusiasm, empathy, and approachability were often seen on the self-assessments. Both the ability to *self-reflect* on the mentor's own strengths/weaknesses and performance and the ability to *facilitate the mentee* in completing self-reflection were seen on the self-assessments. This self-reflection for both is also tied to the ability to *help the mentee set* and meet their own learning goals. Another teaching strategy often seen was the ability of the mentor to directly *instruct and/or demonstrate* a skill, usually a clinical skill. The last category of *obtaining knowledge* is related to the mentor's own ability to learn about their institution's process for mentoring and obtaining their own clinical or professional expertise.

Table 2. Analysis of self-assessment items.

Category	Definition	Count	Item examples
Coach/support	Encourage, motivate, and guide; assist with networking; provide safe space for learning	37	Create a safe and supportive environment (Kopechek et al., 2017) Motivating your mentees (Fleming et al., 2013) Encouraging work choices that promote growth and persistence (Nearing et al., 2020)
Assess and provide feedback	Evaluate mentee learning and growth; provide constructive feedback	32	Provides positive feedback, points out weaknesses, and discusses further learning (Andrews & Chilton, 2000) I question the student concentrating on knowledge, understanding, and opinion (Hyatt et al., 2008)
Communicate	Use clear communication styles; manage and address conflict	27	I give clear explanations (Elmore et al., 2014) I have the skills to overcome communication barriers in situations where the student lacks sufficient language skills (Mikkonen et al., 2020)
Reflect	Be self-aware; reflect on skills, abilities, experiences and growth	24	Awareness of my coaching challenges (Kopechek et al., 2017) Taking into account the biases and prejudices you bring to the mentor/mentee relationship (Fleming et al., 2013)
Build relationship	Establish a mentor-mentee relationship based on trust and clear expectations; accept and use feedback on the relationship	22	Toward new midwives, respect their position as students or new midwives (Hishinuma et al., 2016) Brokering relationships (LaRock, 2009) What are your goals for this mentoring relationship? (Lipscomb & An, 2013)
Personality characteristics	Be enthusiastic, dedicated, positive, caring, helpful, empathetic, approachable, flexible, patient, supportive, equitable, and confident	21	I display enthusiasm for teaching (Elmore et al., 2014) Toward new midwives, show an empathetic attitude (Hishinuma et al., 2016) I am patient during the mentoring of students (Mikkonen et al., 2020)
Obtain knowledge	Obtain professional and clinical knowledge; learn about the institution and mentoring process	21	I have all the information I need to work with student nurses (Dahlke et al., 2016) I am well-acquainted with the mentoring process of students in clinical practice within my organization (Mikkonen et al., 2020)
Facilitate mentee reflection	Encourage the mentee to self-reflect on their learning and experiences	20	I encourage the resident to further develop their ability to self-assess during this learning experience (Elmore et al., 2014) I ask the student to critically and holistically reflect upon why things happened the way they did (Mikkonen et al., 2020)
Cultural Awareness	Be aware of cultural differences that affect the mentoring relationship	14	Working effectively with mentees whose personal background is different from your own (age, race, gender, class, region, culture, religion, family composition, etc) (Fleming et al., 2013) I treat culturally diverse and native students equally (Oikarainen et al., 2018)

Table 2. (*Continued*)

Category	Definition	Count	Item examples
Facilitate mentee goal-setting	Facilitate the mentee's progress in realistic learning and professional development goals	13	Helping mentees develop strategies to meet goals (Fleming et al., 2013) I guide students in setting the goals that they want to achieve during the clinical practice (Mikkonen et al., 2020)
Instruct and demonstrate	Provide instruction to enhance learning, knowledge, and skills of the mentee; be a role model; demonstrate skills to mentee	12	Teaches patient care-related knowledge and competence skillfully, gives guidance, allows time to practice and encourages the student to learn through experience (Andrews & Chilton, 2000) Toward new midwives, explain what they experienced in connection with knowledge or theory based on the textbooks (Hishinuma et al., 2016)

Mentoring programs

Regarding our final aim, many of the articles extracted also contain information that could be useful in developing a mentor training program; see Table 1 for details. Several articles identified that mentors express a need for or can benefit from support and training in specific mentoring skills (Dahlke et al., 2016; Elmore et al., 2014; Houghton, 2016a; Tuomikoski et al., 2018b). Multiple studies demonstrate that participation in a training program enhances the mentors' competence and confidence and improves outcomes of the mentees (Johnson & Gandhi, 2015; Kopechek et al., 2017; LaRock, 2009; Nearing et al., 2020; Tuomikoski et al., 2020). Essential concepts that could be addressed in a mentor training program include skills such as establishing goals and expectations for the mentoring relationship, communication skills and providing feedback (Dahlke et al., 2016; Gandhi & Johnson, 2016; Hishinuma et al., 2016; Kopechek et al., 2017; Lipscomb & An, 2013; Mikkonen et al., 2020). Finally, mentor self-assessment tools, such as the MCI, MCA, or MCCM, were used to evaluate mentor competence and the effectiveness of a mentor training program (Fleming et al., 2013; Hishinuma et al., 2016; Tuomikoski et al., 2020).

Discussion

This scoping review maps the current evidence of mentor self-assessments across several healthcare professions and provides information on existing mentor training programs. Our key findings can serve as guides for occupational therapy mentor program development or refinement. First, we identified numerous author-created mentor self-assessments and a few validated self-assessments that could work for occupational therapy. Second, we discovered that mentor self-assessments across healthcare professions share common attributes, including cultural humility and reflection, as

well as personal attributes, such as flexibility and enthusiasm. Finally, the literature suggests that mentor education is foundational for professional development and the success of mentors and mentoring programs. We posit that understanding valid mentor self-assessments and common mentor attributes will support educational programs that develop program-specific mentor evaluation tools or training programs.

Self-assessment tools

Adopting a common valid and reliable self-assessment tool may be useful as occupational therapy professionals and non-occupational therapy professionals take on mentor roles with doctoral capstone students or practitioners and as new faculty are recruited to academia. The MCI and MCA are tools that have general headings of mentor attributes that would work for many healthcare professions, including occupational therapy. The MCCM covers many of the same topics, but the language used is specific to midwifery, so modifications are needed to improve applicability to occupational therapy practitioners or students. The MCI has been studied most extensively in a clinical setting and therefore may be most useful for mentors that are considering working with OTD capstone students. As the number of OTD programs increases, the number of capstone mentors required, and mentors' educational needs will grow quickly. While exposure to preceptorship and mentorship may occur during the initial entry-level education, the skills needed to be effective clinical teachers and mentors will continue to be developed during future clinical practice (Smith, 2009). Given that mentorship has also been useful for supporting new or junior occupational therapy faculty (Foy, 2017; Paul et al., 2002), the MCA may be appropriate for use with faculty mentor programs as it was designed for faculty researchers.

Beyond individual application, it is important for the profession to consider taking an organized approach in educating and supporting mentors (Broughton et al., 2019). Thus, the occupational therapy profession may benefit from a nationwide mentor training program, like AOTA's Fieldwork Educator certificate program, which may incorporate the use of a common self-assessment and could be applicable for new faculty, capstone mentors, and new practitioners. The development of such programming could also include the various skills and attributes identified in this review and discussed below.

Mentor attributes

In developing a mentor training program or a new self-assessment tool, programs may want to consider items from the 11 categories of mentor

attributes found in the tools in this review. Several of the constructs that appear on the self-assessments overlap with each other and may be hard to tease apart. For example, effective feedback is collaborative and bidirectional, occurs in a supportive relationship, and supports communication among healthcare teams, which in turn supports mentoring (Myers & Chou, 2016). This suggests that numerous mentor attributes are intertwined and that mentor training programs or assessment tools should be designed to encompass a broad set of attributes.

Regarding the category *coach/support*, providing support is part of the definition of mentoring and has been discussed as a mechanism to enable successful mentoring (Doyle et al., 2019); it is not surprising that this skill is commonly assessed in a variety of tools. *Assessing and providing feedback* is another important aspect of a mentoring relationship. Shaw et al. (2017) found that constructive feedback was essential to learning in a clinical workplace environment, which is usually a central objective of a mentoring relationship. *Communication,* including open and honest communication and conflict management, has also been identified as essential to mentoring (Eby et al., 2013) and communication is a cornerstone that touches on many other mentoring attributes, skills, and behaviors. For example, communication is highlighted as a basis for providing feedback, building the relationship, instructing and demonstrating, and facilitating mentee goal setting (Andrews & Chilton, 2000; Elmore et al., 2014; Fleming et al., 2013; Kopechek et al., 2017). Finally, *reflection* in ideal mentor-mentee relationships provides opportunities to engage in reflective practice after receiving constructive feedback (Kopechek et al., 2017). In fact, Taylor (2020) suggests that self-reflection is central to building and sustaining successful relationships, which relates to *building the relationship*.

Importantly, *cultural awareness*, although not assessed as frequently as these other categories, warrants discussion due to the recent emphasis on justice, equity, diversity, and inclusion within the occupational therapy profession and education (American Occupational Therapy Association, 2021). Cultural awareness is essential in occupational therapy (Wells et al., 2016) and is relevant to mentor success (Fleming et al., 2013; Oikarainen et al., 2018). Upon review of articles, the CALD + Ms was found to be a tool to address cultural needs in a mentoring relationship (Oikarainen et al., 2018). When we received the latest version of the MCI from the researchers, it was noted to include a subscale called the *Mentor's Cultural Competence Instrument* (MCCI). The MCCI is an updated version of the CALD + MS by the same authors and supplants the CALD + MS as a useful tool for assessing cultural awareness and humility within the mentoring relationship. Occupational therapy programs should consider implementing the MCCI within their mentor training programs or when considering mentor self-assessments, especially in ethically diverse communities or populations.

Mentor training

Mentor self-assessments are one option found in the literature that were frequently used to evaluate not only mentor skills but also the efficacy of mentor training programs (Fleming et al., 2013; Kopechek et al., 2017; Mikkonen et al., 2020). Therefore, mentor self-assessment use can be twofold. First, occupational therapy programs can use mentor self-assessments to identify potential mentors with adequate mentoring skills. This would allow programs to better support students by aligning them with qualified mentors. In addition, using a validated mentor self-assessment may help potential and existing mentors grow in confidence, thus improving mentor and mentee perceptions of the mentoring relationship (Gandhi & Johnson, 2016; Tuomikoski et al., 2018a).

Second, mentor assessments can be used to develop mentor training curricula and assess the efficacy of the training. Because mentor training is a key to successful mentorship (Nearing et al., 2020; Tuomikoski et al., 2020), occupational therapy programs need to carefully consider how their mentor training programs are designed. The use of a validated mentor self-assessment may provide valuable information to guide the creation of a tailored training needed for the occupational therapy profession.

Implications for occupational therapy

The results of this review may support mentor self-assessment as essential to quality improvement of programs and professional development of practitioners, and that it is crucial that mentors evaluate their own roles in mentoring (Broughton et al., 2019; Houghton, 2016b). Using a self-assessment measure to verify mentor experience or opportunities for growth can strengthen overall qualification standards and serve to support, develop, and assess future capstone mentors (Elmore et al., 2014; Houghton, 2016a). In addition, mentor self-assessments may help identify specific mentor skills for occupational therapy practitioners and other professionals engaged in the role of mentor and support OTD programs to develop targeted mentor education. We regard the use of a self-assessment tool as a framework on which OT programs and the profession can build mentor resources for self-assessment and a path for developing mentor skills. Future research should explore methods for mentee assessment of mentors as well as mentor program assessment in order to build capacity of sites and individual mentors.

Limitations

This scoping review was limited. Despite a rigorous search of databases, there may be literature that only exists in alternative archives. Additionally,

our search only included articles written in the English language, excluding relevant articles in other languages. We did not complete a formal critical appraisal of the articles; however, we acknowledge several studies had limitations, including small study samples and a lack of validated self-assessment tools. Additionally, it was often difficult to isolate the self-assessments used from program evaluation outcome measures. Finally, although we explored implications regarding mentor training programs, our primary research question focused on mentor self-assessments. Thus, our conclusions regarding mentor education may be incomplete.

Conclusion

Mentoring self-assessments vary in scope and rigor across health professions. Self-assessment can be as simple as a reflective journal prompt (Houghton, 2016b) to something as robust as a formal validated assessment tool, such as the MCA or MCI (Fleming et al., 2013; Mikkonen et al., 2020). Programs must determine which effective mentor assessment tools best align with their program initiatives, mission, and values as they create and build mentoring programming. Programs can use the mentor attributes found in this scoping review to create their own mentor assessment measures or may choose to use a validated tool. While there is likely no one tool to fit all mentors and programs, the MCA and MCI are valid tools and appear to fit the needs of occupational therapy programs and potentially the profession at large.

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Conflict of interest

Authors have no conflicts of interest to declare.

Declaration of authorship

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