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SCOPING REVIEW

Instruments assessing nurse educator's competence: A scoping review

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Abstract

Aim: The aim of this review was to synthesize the instruments that assess nurse educators' competence.

Design: A scoping review was conducted with the five-stage process informed by Arksey and O'Malley.

Review Methods: The predetermined search strategy was used including an additional hand search. The studies were selected according to inclusion and exclusion criteria to answer the research questions followed: (1) "What instruments are used to assess nurse educators' competence?", (2) "How are the psychometric properties of nurse educators' competence instruments reported in the literature?". The thematic synthesis was used.

Data Sources: The literature search was conducted in January 2021 using the CINAHL, MEDLINE and ERIC databases from January 2000 to December 2020.

Results: Of the 1,567 articles searched through, 25 met the inclusion criteria. A total of 19 instruments with 10 areas of competence were identified. Typical competence areas were pedagogical and nursing competence. In addition, leadership in managerial competence was included in several instruments. However, the theoretical backgrounds of the instruments varied and the psychometric properties were reported in varied ways in reviewed studies.

Implications for the Profession: This study provides evidence about the valid and comprehensive assessment of nurse educators' competence, as competent nurse educators promote excellence in nursing education. To assess a nurse educators' competence comprehensively, a variety of theoretical backgrounds of this competence and more than one instrument for the measurement need to be considered. The selection of the instruments to assess nurse educators' competence should be based on the selected theoretical background and use of valid measurements.

Reporting Method: This study was reported by following the reporting recommendations of the PRISMA extension for Scoping Reviews (PRISMA-ScR).

Patient or Public Contribution: No Patient or Public Contribution was applied, since research design was a scoping review.

KEYWORDS
competence, instrument, nurse educator, scoping review

1 | INTRODUCTION

Nurse educators' competence is essential to promoting excellence in nursing education (FINE (The European Federation of Nurse Educators), 2021, NLN (National League for Nursing), 2021). Globally, increasing appreciation of universal health coverage (WHO (World Health Organization), 2015), growing needs of the support for older people (Soares et al., 2018, WHO, 2022) and patients with complex chronic disease (Chapman et al., 2018), technological development as well as shortages of nurses set requirements to nursing education. Nurse educators play a significant role in meeting requirements as they develop nursing through their teaching. Educators need to be competent and properly trained in the use of evidence-based pedagogical strategies and technological solutions and also demonstrate clinical competence in nursing content areas (WHO, 2009, 2021). They play also a key role across educational and health sectors as change agents and inspiring healthcare leaders (Adelman-Mullally et al., 2013). Therefore, there is a clear need to evaluate nurse educators' competence systematically and identify the competence development needs. The competence requirements depend on how and where the nursing education is arranged and who defines them (NLN, 2021; Oprescu et al., 2017; WHO, 2016).

2 | BACKGROUND

Nurse educators' competence is a multidimensional and universal concept defined in many educational strategy documents (e.g., ANTS (Australian Nurse Teachers' Society), 2010; FINE, 2007; NLN, 2021; WHO, 2016). Different researchers have described the competence of educators with varied terms during different decades: characteristics (Mogan & Knox, 1987), skills (Johnsen et al., 2002), roles (Davis et al., 2005), tasks (Kalb, 2008), requirements (Salminen, 2000), competences (Green, 2006; Salminen et al., 2013) and capabilities (McAllister & Flynn, 2016). In this scoping review, the definition of competence includes knowledge, skills (Valloze, 2009) and capabilities (McAllister & Flynn, 2016) which can be fostered with experience and continuous learning (Valloze, 2009). To guarantee the competence, some countries have exams and certifications for educators. Certification has been said to be a mark of professionalism. NLN has created an Academic Nurse Educator Certification Program to promote the excellence of the academic and clinical nurse educators (Fitzgerald et al., 2020, NLN, 2021).

The widely known competence descriptions are those of the World Health Organization (WHO, 2016) and the National League for Nursing (NLN, 2021), which have defined general competence areas for nurse educators (Table 1). These areas are formed based on the tasks and the duties of nurse educators which educators should possess at a minimum in their work, and which depend on educators' working environment in academic settings, clinical settings, or both.

According to the WHO the competence of nurse educators consists of eight competence areas: theories and principles of adult learning; curriculum and implementation; nursing practice; research and evidence; communication, collaboration, and partnership; ethical/legal principles and professionalism; monitoring and evaluation; and management, leadership, and advocacy (WHO, 2016). These competences describe common international standards of nurse educator competence and can be used as a basis of nurse educator education globally, even though they have been criticized arguing that they are not empirically investigated (Fitzgerald et al., 2020).

The content of the WHO and NLN competence areas are quite the same even though their names are little bit different. NLN emphasizes that the main role of the nurse educator is to promote students' learning and professional development as also Bono-Neri (2019) states. Comparing Competence areas of WHO and NLN the FINE describes

TABLE 1 Definitions of nurse educator's competence.

Organization	Competence areas
WHO (World Health Organization) (2016)	Theories and Principles of Adult Learning
	Curriculum and Implementation
	Nursing Practice
	Research and Evidence
	Communication, Collaboration and Partnership
	Ethical/legal Principles and Professionalism
	Monitoring and Evaluation
	Management, Leadership and Advocacy
NLN (National League for Nursing) (2021)	Facilitate Learning
	Facilitate Learner Development and Socialization
	Use Assessment and Evaluation Strategies
	Participate in Curriculum Design and Evaluation of Program Outcomes
	Pursue Continuous Quality Improvement in the Academic Nurse Educator Role
	Engage in Scholarship, Service and Leadership
FINE (The European Federation of Nurse Educators) (2007)	Competence as a person
	Operative competencies
	Competence regarding academia
	Collaborative competencies

educators' competence areas in a more abstractive level (Table 1). Mikkonen et al. (2019) have defined educators' competence based on the research and literature reviews more widely from a health and social care educators' perspective through knowledge, skills and attitudes/values. According to the definition posed by Mikkonen et al. (2018), health and social care educators' competence includes the capability to practice as an educator in different areas (e.g., nursing subject, ethics, pedagogy, cultural and linguistic diversity) and continuous professional development (Mikkonen et al., 2019). In addition, the competence of nurse educators consists of both nursing and pedagogical competence combined with positive attitudes and values (Mikkonen et al., 2018; Salminen et al., 2013), but it seems that the competence definitions are not directed by nursing theory.

Many instruments assessing nurse educators' competence have been developed (e.g. Farahani et al., 2015; Garbrah et al., 2020; Mikkonen et al., 2020) and competence can be assessed from different perspectives such as nurse educators themselves, students, head of nursing education, nurse mentors or nurse leaders (Salminen et al., 2013; Zlatanovic et al., 2017). Salminen et al. (2021) reported in their study that the graduating nursing students evaluated nurse educators' competence as being rather high. It has been discussed for what the students actually evaluate about their educators' competence (Salminen et al., 2021), do they more evaluate the satisfaction with their studies, the course arrangements or educators' enthusiasm for teaching than the educators' competence (Oermann, 2017; Uttl et al., 2017). Therefore, to have a comprehensive understanding of these instruments, the aim of this review was to synthesize the instruments assessing nurse educators' competence in academic and clinical setting. Based on the previous literature and the aim of this review, the research questions guiding this review are: (1) "What instruments are used to assess nurse educators' competence?", (2) "How are the psychometric properties of nurse educators' competence instruments reported in the literature?"

3 | METHODS

A five-stage scoping review process informed by Arksey and O'Malley (2005) was conducted in order to map instruments assessing a nurse educator's competence which can be used in different purposes, e.g. research or educators' annual evaluations. The process of the review included stages of: identifying the research question, identifying relevant studies, selecting studies, extraction and charting the data, and collating, summarizing and reporting on the results (Arksey & O'Malley, 2005). The reporting recommendations of the PRISMA extension for Scoping Reviews (PRISMA-ScR) were followed (Tricco et al., 2018).

3.1 | Identifying relevant studies

Three databases including CINAHL, MEDLINE and ERIC were used in January 2021 for a systematic search of studies published between January 2000 and December 2020 (Figure 1). The search strategy was performed with the assistance of an information specialist to ensure the optimal choice search strategy. The search terms were *nursing** AND *teacher** OR *educator** OR *lecturer** AND *competence** AND *instrument** OR *scale** OR *questionnaire** OR *measure** OR *assess** OR *evaluate**. A search strategy was applied using a proximity operator to search from among keywords, titles and abstracts with the terms *nursing* and *teacher* or *educator* or *lecturer* in CINAHL and MEDLINE. An additional hand search was performed on reference lists of the selected studies and policy papers included in the background.

3.2 | Selecting studies

The selection of studies involved three phases in the screening process by the search strategy (Figure 1, File S1). In the first and second phases, the two reviewers (TL, AP) independently screened the titles (n = 1,567) and abstracts (n = 165) based on the inclusion and exclusion criteria. In the third phase, after a full-text screening (n = 62), a total of 25 studies met the inclusion criteria. The selected studies (n = 25) were discussed and approved by all the authors. The following inclusion and exclusion criteria were set to select the studies:

Inclusion criteria:

- articles about the instruments assessing nurse educators' (academic and/or clinical) competence: knowledge, skills and/or capabilities
- articles where the assessors were: nurse educators, health and social care educators, nursing faculty members/ co-teachers, nursing administrators, nursing programme administrators, nursing instructors, nursing education experts, nursing students, nursing leaders, head nurses, nurse mentors
- peer-reviewed articles
- articles published after 2000 as The Bologna Declaration signed in the year 1999 and which launched a Bologna process to ensure the comparability of the standards and quality of higher-education qualifications (EHEA (European Higher Education Area), 2021; European Commission, 2021)
- articles written in English
- empirical studies
- literature reviews

Exclusion criteria:

- studies focusing on the nurse educator's role, identity, responsibilities, performance, professional values, effectiveness of the education, the specific content of education or the perceived value of the certification

3.3 | Data extraction and charting

Two authors (TL, TH) extracted the study characteristics, methods and results of the studies with all the authors checking the results to

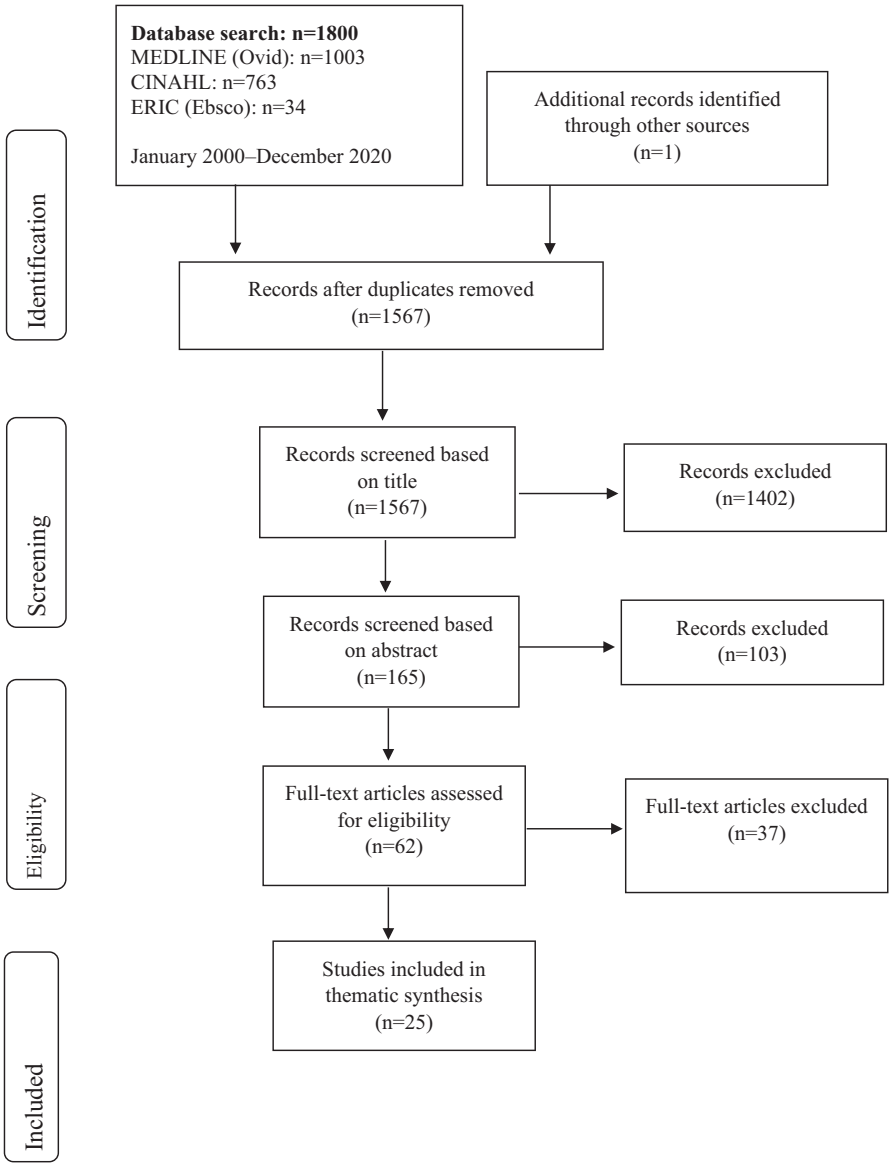

FIGURE 1 Search and selection process (Moher et al., 2009; Tricco et al., 2018).

ensure rigour and transparency. Data extraction sheets were used with the headings of: Authors, Country, Year of publication, Design, Aim of the study, Participants and Instrument assessing the nurse educators' competence (Table 2).

3.4 | Collating, summarizing and reporting the results

Two authors (TL, TH) conducted the thematic synthesis informed by Thomas and Harden (2008) for the main results. The authors undertook the initial synthesis separately (TL n = 13 studies, TH n = 12 studies). Firstly, authors coded text "line-by-line" according to research questions. Secondly, authors developed the descriptive themes that were instruments (theoretical background, content, assessor, scaling) assessing the competence of nurse educators and psychometric properties of the instruments (validity, reliability, others, e.g. missing data) (Table 2, File S2). Then they met to undertake consensus construct and refinement of themes. Thirdly, themes were reviewed by all the authors to reach an agreement on the final analytical themes that was a step "beyond" the content of the original studies.

3.5 | Ethics

Ethical approval was not required.

4 | RESULTS

4.1 | Study characteristics

The initial search yielded 1,800 studies and 1,567 proceeded for screening process after all duplicates were removed. After screening of 1,567 studies by title, abstract and full texts, 25 studies were

TABLE 2 Overview of studies included.

Authors (year), country	Design	Aim of the study	Participants	Instrument assessing the nurse educator's competence	Focus on academic nurse educator or clinical nurse educator or both
Al-Nasiri et al. (2017), Oman	A quantitative study with descriptive design	To assess novice nurse educator's preparedness to assume the role of faculty	Novice nurse educators ($n = 17$)	The Nursing Education Competence Inventory (NECI)	Academic
Burns (2020), USA	A descriptive, correlational study	To describe the level of cultural competence among nursing faculty teaching	Nurse educators ($n = 152$)	The Cultural Diversity Questionnaire for Nurse Educators (CDQNE-R)	Academic
Cha et al. (2020), Republic of Korea	A mixed-method study (survey and focus-group interviews)	To assess improvement in the competence of nursing students and faculty members	Nursing students ($n = 45$), faculty members/co-teachers ($n = 12$)	self-evaluated teaching efficacy	Academic
Dürrheim and Ehlers (2001), Republic of South Africa	An exploratory survey	To assess the lecture room instructional management competence of novice nurse educators (NNEs')	Novice nurse educators ($n = 32$), mentors ($n = 18$) and students ($n = 160$)	3 × questionnaire	Academic
Farahani et al. (2015), Iran	A methodological study	To develop and evaluate the psychometric properties of Nursing Instructors' Clinical Teaching Performance Inventory (NICTPI)	Nursing instructors and Nursing students ($n = 137$)	The Nursing Instructors' Clinical Teaching Performance Inventory (NICTPI)	Both
Garbrah et al. (2020), Finland	Delphi panel, pre-pilot study and pilot study		Gerontological nursing education experts ($n = 19$), nursing students ($n = 7$), nursing students ($n = 196$)	The Gerontological Nurse Teacher Scale (GeNTS)	Academic
Hou et al. (2011), China	Instrument development and validation study	To develop and psychometric test the Clinical Nursing Faculty Competence Inventory	Nursing faculty members, students and administrators ($n = 237$)	The Clinical Nursing Faculty Competence Inventory	Both
Johnsen et al. (2002), Norway	Correlational study	To explore nurse educators' opinions of the importance and application of different nurse educator competence domains	Nurse Educators ($n = 828$)	The Ideal Nursing Teacher Questionnaire	Academic
Liu et al. (2019), China	A cross-sectional survey	To assess the effectiveness of education courses and modules	Part-time Clinical Nurse Educators ($n = 50$)	A standardized four-section questionnaire developed by the authors	Clinical
Lovrić et al. (2014), Croatia	Prospective cohort study	To examine the specificities and differences between expectations and evaluations of clinical faculty's competences	Nursing students ($n = 135$)	The Nursing Clinical Teacher Effectiveness Inventory (NCTEI)	Both

(Continues)

TABLE 2 (Continued)

Authors (year), country	Design	Aim of the study	Participants	Instrument assessing the nurse educator's competence	Focus on academic nurse educator or clinical nurse educator or both
Lovrić et al. (2015), Croatia	Prospective study	To identify the differences between the students' assessment of the clinical faculty member's competencies and the faculty member's self-assessment	Nursing students (n = 135), clinical faculty members (n = 35)	The Nursing Clinical Teacher Effectiveness Inventory (NCTEI)	Both
Lovrić et al. (2017), Croatia	Mixed-methods (survey and written reflections)	To explore what competences nursing students expect from their clinical faculties during their clinical training and did the expectations change during their studies (three year)	Nursing students (n = 34)	The Nursing Clinical Teacher Effectiveness Inventory (NCTEI)	Both
McAllister and Flynn (2016), Australia	Development and testing of a questionnaire that used a cross-sectional survey	To develop an effective measure to assess capabilities for nurse educators	Nurse educators (n = 266)	The Capabilities of Nurse Educators (CONE) questionnaire	Academic
Melnyk et al. (2008), USA	A descriptive survey	To describe nurse educator's knowledge, beliefs and teaching practice regarding EBP	Nurse practitioner educators (n = 79)	Survey items were developed with the Transtheoretical Model of Change and Control Theory as the guiding framework	academic
Mikkonen et al. (2020), Finland	A cross-sectional survey	To develop and to test psychometric properties of an instrument (the HeSoEduCo) for assessing health and social care educators' competence in higher and professional education	Health and social care educators (n = 390)	The Health and Social Care Educator's Competence (HeSoEduCo) instrument	Academic
Nguyen et al. (2017), Australia (Vietnam)	A multi-setting survey (development and validation study)	To develop and validate the Clinical NurseEducator Skill Acquisition Assessment (CNESAA) instrument	Clinical Nurse Educators (n = 363)	The Clinical Nurse Educator Skill Acquisition Assessment instrument.	Clinical
Poindexter (2013), USA	A cross-sectional survey	To identify essential entry-level nurse educator competencies	Nursing program Administrators (n = 374)	The Novice Nurse Educator Competencies	Academic
Ramsburg and Childress (2012), USA	A survey and validation study	To design and validate a skill acquisition model for the nurse educator role	Nurse Educators (n = 339)	Nurse Educator Skill Acquisition Assessment Tool	Academic
Reneau (2013), USA	Nonexperimental, descriptive, correlational design	To examine the levels of cultural competency	Faculty members (n = 222)	The Cultural Diversity Questionnaire for Nurse Educators (CDQ-NE)	Academic

TABLE 2 (Continued)

Authors (year), country	Design	Aim of the study	Participants	Instrument assessing the nurse educator's competence	Focus on academic nurse educator or clinical nurse educator or both
Salminen et al. (2013), Finland	A descriptive, cross-sectional survey	To assess the competence of nurse educators	Nurse Educators ($n = 342$), Nursing Students ($n = 202$), Educational Administrators ($n = 17$), Nurse Leaders ($n = 64$) and Nurse Mentors ($n = 64$)	A Tool for Evaluation of Requirements of Nurse Teacher (ERNT)	Academic
Sealey et al. (2006) USA	A survey study	To examine the level of cultural competence among faculty teaching	Nursing faculty members ($n = 163$)	The Cultural Diversity Questionnaire for Nurse Educators (CDQNE)	Academic
Staykova (2012), USA	A pilot study used a mixed-method, Delphi design	To identify a set of competencies for nurse educators when designing nursing curriculum	Nurse educators ($n = 5$)	A conceptual framework, competency model, and instrument developed and validated by Southern Regional Education Board (SREB) in 2002, Nurse educator competencies were used	Academic
Ume-Nwagbo (2012), USA	A descriptive correlational survey design	To explore the relationship between nurse educators' cultural competence and the recruitment and graduation of minority nursing students	Nurse educators ($n = 9$)	The Cultural Diversity Questionnaire for Nurse Educators (CDQNE)	Academic
Wang et al. (2017), China	A cross-sectional survey study	To explore the current admittance situation of clinical teachers for masters of nursing specialist (MNS) postgraduates and to test the competence of clinical teachers in self-evaluation and other evaluations	MNS Postgraduates ($n = 80$), their Clinical Teachers ($n = 80$) and Head Nurses ($n = 80$) from six hospitals	The Clinical Teachers' Competence Inventory of MNS Postgraduates (CTCIMNSG)	Clinical
Zlatanovic et al. (2017), Norway	A configurative systematic review	To investigate how the competencies of nurse teachers are addressed in the existing research	25 studies, Australia ($n = 9$), USA ($n = 7$), Norway ($n = 3$), Finland ($n = 2$), Australia/UK ($n = 1$), Europe ($n = 1$), Netherlands ($n = 1$), UK ($n = 1$)	A Tool for Evaluation of Requirements of Nurse Teacher (ERNT) Nurse Educator Skill Acquisition Assessment Tool The Ideal Nursing Teacher Questionnaire	Academic

synthesized. The selected studies ($n = 25$) with study characteristics are presented in Table 2. Studies were conducted in the USA ($n = 8$), Croatia ($n = 3$), China ($n = 3$), Finland ($n = 3$), Australia ($n = 2$), Norway ($n = 2$), Iran ($n = 1$), Oman ($n = 1$), the Republic of South Korea ($n = 1$) and the Republic of South Africa ($n = 1$). Studies were published between 2001 and 2020 and included from 5 (Staykova, 2012) to 828 (Johnsen et al., 2002) participants. Study designs were quantitative cross-sectional descriptive or correlational or prospective designs ($n = 19$), a mixed-method study ($n = 4$), methodological study ($n = 1$) or systematic review ($n = 1$). A minority of the studies were instrument development and validation articles ($n = 6$).

4.2 | Instruments assessing nurse educators' competence

Instruments assessing nurse educators' competence ($n = 19$) were used as a self-assessment instrument ($n = 14$) and/or other persons assessment instrument ($n = 7$, students, nursing faculty members, administrators, head nurses, nurse mentors) (Table 2, File S2). Instruments assessing nurse educators' competence ($n = 19$, Table 2) were questionnaires ranging from 4- to 7-point Likert scales ($n = 15$), a semantic differential scale ($n = 1$) or a scale from 0 to 100 ($n = 1$) or a dichotomous scale ($n = 1$). In 17 studies the instrument was used to evaluate nurse educators' competence from academic nurse educators', in three studies the instrument was used to evaluate the clinical nurse educators' and in five studies both.

Typically, the theoretical background of the instruments was based on previous literature ($n = 9$) regarding the competence of nurse educator. In other words, most of the instruments were constructed by using findings from literature reviews. However, some of the instruments were based on or other existing instruments ($n = 5$) or the National League for Nursing Core Competencies of Nurse Educators ($n = 4$). Moreover, some of the instruments were based on previously developed models, theories, training objectives or competency frameworks, such as the Campinha-Bacote's (1999, 2003) model of cultural competence-theoretical framework ($n = 1$) or Prochaska and Velicer's Transtheoretical Model of Organizational Change and Control Theory ($n = 1$) or Benner's (1984) stages of professional development ($n = 1$) or consultation ($n = 1$) or training objectives for MNS postgraduates ($n = 1$) or the core competence of nurses specialist ($n = 1$).

The content of the instruments covered altogether 10 areas of competence (Table 3). Clinical nursing competence was assessed often as nursing competence. Pedagogical competence was assessed typically with pedagogical/teaching skills or ability. Evidence-based practice competence was manifested in the content of the instruments, for example, in engagement in scholarship and integration of scholarship in teaching. The competence to facilitate individual learning was assessed, for instance, as the ability to facilitate learning or learner development. Competence to create a safe learning environment was manifested typically in the content of the instruments as the ability to manage the physical lecture room environment.

The competence to develop education was assessed in the instruments, for example, through participation in curriculum design or evaluation of programme outcomes. Competence to develop personal/professional characteristics was typically assessed as stress and conflict management or problem-solving ability. Managerial competence was typically manifested in the content of the instruments as leadership, whereas, Cultural competence as cultural knowledge and competence related to inter-personal relationships were assessed mostly through a given subject's relationship with students.

4.3 | Psychometric properties of the instruments

In psychometric properties of the instrument assessing nurse educators' competence ($n = 19$, Table 4, File S1 and S2), the face ($n = 12$) and/or content validity ($n = 12$) was reported from almost all the instruments. Construct validity was reported from seven instruments. The reliability of the instrument was reported using the internal consistency with Cronbach's alpha for overall questionnaire and/or subscales ($n = 16$), test–retest ($n = 2$), inter-item total correlation ($n = 2$) and item-total correlations ($n = 1$).

5 | DISCUSSION

The aim of this scoping review was to describe the instruments assessing nurse educators' competence. This review presented the following findings about the instruments assessing nurse educators' competence: (1) several instruments have been developed ($n = 19$) to assess nurse educators' competence, (2) theoretical backgrounds of those instruments are mainly based on previous literature or definitions of competence by NLN, (3) typical areas of the competence were pedagogical competence and nursing competence, and (4) leadership in managerial competence was the major assessed competence area in several instruments. This review presented the following findings about the psychometric properties of the instruments that assess nurse educators' competence: (1) the psychometric properties of instruments were reported variously and (2) the systematic use of reporting guidelines for studies was missing. These results indicate that it is important to understand the theoretical background of nurse educators' competence to ensure a comprehensive assessment of this competence. In addition, the results indicate that the psychometric properties should be evaluated and reported comprehensively using different methods. Usually, only face and content validity and the internal consistency with Cronbach's alpha were reported.

In this review, 19 instruments with 10 competence areas to assess nurse educators' competence were included. A Likert scale was primarily used in the instruments (range from 4 to 7) and these instruments mainly focused on nurse educators' self-assessment. However, nursing students, nursing faculty members, nursing administrators, nursing instructors, nursing education experts, nursing

TABLE 3 The contents of the instruments based on the thematic synthesis

Competence areas	Competence content[a]	Instrument	Reference
Clinical nursing/ Nursing competence	Nursing competence	• The Ideal Nursing Teacher Questionnaire • A modified version of a questionnaire taken from The Nursing Clinical Teacher Effectiveness Inventory (NCTEI) • The Capabilities of Nurse Educators (CONE) • A Tool for Evaluation of Requirements of Nurse Teacher (ERNT) • The Clinical Teachers' Competence Inventory of MNS Postgraduates (CTCIMNSG)	Johnsen et al. (2002), Lovrić et al. (2014, 2015, 2017), McAllister and Flynn (2016), Salminen et al. (2013), Wang et al. (2017), Zlatanovic et al. (2017)
	Nurse educator role responsibilities of clinical practice	• The Novice Nurse Educator Competencies (CNESAA)	Poindexter (2013)
Pedagogical competence	Pedagogical/Teaching skills or ability	• Clinical Nursing Faculty Competence Inventory (CNFCI) • The Ideal Nursing Teacher Questionnaire • Clinical Educators' Teaching Ability • A modified version of a questionnaire taken from The Nursing Clinical Teacher Effectiveness Inventory (NCTEI) • The Capabilities of Nurse Educators (CONE) • The Health and Social Care Educator's Competence (HeSoEduCo) instrument • The Novice Nurse Educator Competencies (CNESAA) • A Tool for Evaluation of Requirements of Nurse Teacher (ERNT) • The Clinical Teachers' Competence Inventory of MNS Postgraduates (CTCIMNSG)	Hou et al. (2011), Johnsen et al. (2002), Liu et al. (2019), Lovrić et al. (2014, 2015, 2017), McAllister and Flynn (2016), Mikkonen et al. (2020), Poindexter (2013), Salminen et al. (2013), Wang et al. (2017), Zlatanovic et al. (2017)
	Educational intelligence	• Clinical Nursing Faculty Competence Inventory (CNFCI)	Hou et al. (2011)
	Instructional objectives	• The lecture room instructional management competence (LRIMC)	Dürrheim and Ehlers (2001)
	Confidence in major knowledge	• Teaching competency	Cha et al. (2020)
	Control or choice of appropriate teaching strategies	• Teaching competency • The lecture room instructional management competence (LRIMC) • Clinical Educators' Teaching Ability	Cha et al. (2020), Dürrheim and Ehlers (2001), Liu et al. (2019)
	Presenting the learning material	• The lecture room instructional management competence (LRIMC)	Dürrheim and Ehlers (2001)
	Skills and use of evaluation strategies	• The Ideal Nursing Teacher Questionnaire • Nursing Education Competence Inventory (NECI) tool • A modified version of a questionnaire taken from The Nursing Clinical Teacher Effectiveness Inventory (NCTEI) • Nurse Educator Skill Acquisition Assessment Tool (NESAA) • The Clinical Nurse Educator Skill Acquisition Assessment instrument • A Tool for Evaluation of Requirements of Nurse Teacher (ERNT)	Al-Nasiri et al. (2017), Johnsen et al. (2002), Lovrić et al. (2014, 2015, 2017), Nguyen et al. (2017), Ramsburg and Childress (2012), Salminen et al. (2013), Zlatanovic et al. (2017)
	Educational media	• The lecture room instructional management competence (LRIMC)	Dürrheim and Ehlers (2001)

(Continues)

TABLE 3 (Continued)

Competence areas	Competence content[a]	Instrument	Reference
Evidence-based practice competence	Clinical managing and research ability	• The Clinical Teachers' Competence Inventory of MNS Postgraduates (CTCIMNSG)	Wang et al. (2017)
	Engagement in Evidence-Based Practice (EBP)	• Survey developed with the Transtheoretical Model of Change and Control Theory as the guiding framework	Melnyk et al. (2008)
	Engage in Scholarship and Integration of scholarship	• Nurse Educator Skill Acquisition Assessment Tool (NESAA) • The Novice Nurse Educator Competencies (CNESAA) • The Clinical Nurse Educator Skill Acquisition Assessment instrument	Nguyen et al. (2017), Poindexter (2013), Ramsburg and Childress (2012), Zlatanovic et al. (2017)
	Research orientation and Research action	• The Capabilities of Nurse Educators (CONE) questionnaire	McAllister and Flynn (2016)
	Research development and innovation	• The Health and Social Care Educator's Competence (HeSoEduCo) instrument	Mikkonen et al. (2020)
Competence to facilitate individual learning	Facilitate learning	• Nursing Education Competence Inventory (NECI) tool • Nurse Educator Skill Acquisition Assessment Tool (NESAA) • The Clinical Nurse Educator Skill Acquisition Assessment instrument	Al-Nasiri et al. (2017), Nguyen et al. (2017), Ramsburg and Childress (2012), Zlatanovic et al. (2017)
	Facilitate Learner Development and Socialization	• Nurse Educator Skill Acquisition Assessment Tool (NESAA) • The Clinical Nurse Educator Skill Acquisition Assessment instrument	Nguyen et al. (2017), Ramsburg and Childress (2012), Zlatanovic et al. (2017)
	Career promotion	• The Gerontological Nurse Teacher Scale (GeNTS)	Garbrah et al. (2020)
	Differentiated learning	• The lecture room instructional management competence (LRIMC)	Dürrheim and Ehlers (2001)
Competence to create safe learning environment	Psychological climate	• The lecture room instructional management competence (LRIMC)	Dürrheim and Ehlers (2001)
	The physical lecture room environment and function on this environment	• The lecture room instructional management competence (LRIMC) • Nurse Educator Skill Acquisition Assessment Tool (NESAA) • The Clinical Nurse Educator Skill Acquisition Assessment instrument	Dürrheim and Ehlers (2001), Nguyen et al. (2017), Ramsburg and Childress (2012), Zlatanovic et al. (2017)
Competence to develop education	Continuous quality improvement of the process of clinical teaching	• Nursing Instructors' Clinical Teaching Performance Inventory (NICTPI) • Nurse Educator Skill Acquisition Assessment Tool (NESAA) • The Clinical Nurse Educator Skill Acquisition Assessment instrument	Farahani et al. (2015), Nguyen et al. (2017), Ramsburg and Childress (2012), Zlatanovic et al. (2017)
	Theoretical course and practical training development	• The Gerontological Nurse Teacher Scale (GeNTS) • Clinical Educators' Teaching Ability	Garbrah et al. (2020), Liu et al. (2019)
	Participate in curriculum design or Evaluation of Program Outcomes	• Nursing Education Competence Inventory (NECI) tool • Nurse Educator Skill Acquisition Assessment Tool (NESAA) • The Clinical Nurse Educator Skill Acquisition Assessment instrument	Al-Nasiri et al. (2017), Nguyen et al. (2017), Ramsburg and Childress (2012), Zlatanovic et al. (2017)
	Function as change agent	• Nursing Education Competence Inventory (NECI) tool • Nurse Educator Skill Acquisition Assessment Tool (NESAA) • The Clinical Nurse Educator Skill Acquisition Assessment instrument	Al-Nasiri et al. (2017), Nguyen et al. (2017), Ramsburg and Childress (2012), Zlatanovic et al. (2017)
	Develop an educator role	• Nursing Education Competence Inventory (NECI) tool • Nurse Educator Skill Acquisition Assessment Tool (NESAA) • Instrument developed and validated by Southern Regional Education Board (SREB)	Al-Nasiri et al. (2017), Ramsburg and Childress (2012), Staykova (2012), Zlatanovic et al. (2017)

TABLE 3 (Continued)

Competence areas	Competence content[a]	Instrument	Reference
Competence to develop personal/ professional characteristics	Professional knowledge/ competence	• The Gerontological Nurse Teacher Scale (GeNTS) • Nursing Instructors' Clinical Teaching Performance Inventory (NICTPI) • Clinical Nursing Faculty Competence Inventory (CNFCI)	Farahani et al. (2015), Garbrah et al. (2020), Hou et al. (2011)
	Professional interest	• The Gerontological Nurse Teacher Scale (GeNTS)	Garbrah et al. (2020)
	Professional attitude	• Nursing Instructors' Clinical Teaching Performance Inventory (NICTPI)	Farahani et al. (2015)
	Critical thinking	• The lecture room instructional management competence (LRIMC)	Dürrheim and Ehlers (2001)
	Motivation	• The lecture room instructional management competence (LRIMC)	Dürrheim and Ehlers (2001)
	Stress and conflict management	• The lecture room instructional management competence (LRIMC)	Dürrheim and Ehlers (2001)
	Problem-solving ability	• Clinical Nursing Faculty Competence Inventory (CNFCI)	Hou et al. (2011)
	Ethics	• The Health and Social Care Educator's Competence (HeSoEduCo) instrument	Mikkonen et al. (2020)
	The personal life of the nurse educators or personality factors	• The lecture room instructional management competence (LRIMC) • The Ideal Nursing Teacher Questionnaire • A modified version of a questionnaire taken from The Nursing Clinical Teacher Effectiveness Inventory (NCTEI) • A Tool for Evaluation of Requirements of Nurse Teacher (ERNT)	Dürrheim and Ehlers (2001), Johnsen et al. (2002), Lovrić et al. (2014, 2015, 2017), Salminen et al. (2013), Zlatanovic et al. (2017)
Managerial competence	Orienting students to the rules and regulations of the course	• Nursing Instructors' Clinical Teaching Performance Inventory (NICTPI)	Farahani et al. (2015)
	Effective time management	• The lecture room instructional management competence (LRIMC)	Dürrheim and Ehlers (2001)
	Leadership	• Teaching competency • The Gerontological Nurse Teacher Scale (GeNTS) • Clinical Nursing Faculty Competence Inventory (CNFCI) • The Capabilities of Nurse Educators (CONE) • The Health and Social Care Educator's Competence (HeSoEduCo) instrument • Nurse Educator Skill Acquisition Assessment Tool (NESAA) • The Novice Nurse Educator Competencies (CNESAA) • The Clinical Nurse Educator Skill Acquisition Assessment instrument	Cha et al. (2020), Garbrah et al. (2020), Hou et al. (2011), McAllister and Flynn (2016), Mikkonen et al. (2020), Nguyen et al. (2017), Poindexter (2013), Ramsburg and Childress (2012), Zlatanovic et al. (2017)
	Managing the administration of the lecture room	• The lecture room instructional management competence (LRIMC)	Dürrheim and Ehlers (2001)
	Maintaining discipline	• The lecture room instructional management competence (LRIMC)	Dürrheim and Ehlers (2001)
	Administrative management	• The Health and Social Care Educator's Competence (HeSoEduCo) instrument	Mikkonen et al. (2020)
	Economic management	• The Health and Social Care Educator's Competence (HeSoEduCo) instrument	Mikkonen et al. (2020)

(Continues)

TABLE 3 (Continued)

Competence areas	Competence content[a]	Instrument	Reference
Cultural competence	Cultural awareness	• The Cultural Diversity Questionnaire for Nurse Educator-Revised Scale (CDQNE-R)	Burns (2020), Reneau (2013), Sealey et al. (2006), Ume-Nwagbo (2012)
	Cultural knowledge	• The Cultural Diversity Questionnaire for Nurse Educator-Revised Scale (CDQNE-R)	Burns (2020), Reneau (2013), Sealey et al. (2006), Ume-Nwagbo (2012)
	Cultural skill	• The Cultural Diversity Questionnaire for Nurse Educator-Revised Scale (CDQNE-R)	Burns (2020), Reneau (2013), Sealey et al. (2006), Ume-Nwagbo (2012)
	Cultural encounters	• The Cultural Diversity Questionnaire for Nurse Educator-Revised Scale (CDQNE-R)	Burns (2020), Reneau (2013), Sealey et al. (2006), Ume-Nwagbo (2012)
	Cultural desire	• The Cultural Diversity Questionnaire for Nurse Educator-Revised Scale (CDQNE-R)	Burns (2020), Reneau (2013), Sealey et al. (2006), Ume-Nwagbo (2012)
	Cultural & linguistic diversity competence	• The Health and Social Care Educator's Competence (HeSoEduCo) instrument	Mikkonen et al. (2020)
	Faculty transcultural teaching behaviours in nursing education and clinical practice	• The Cultural Diversity Questionnaire for Nurse Educator-Revised Scale (CDQNE-R)	Burns (2020), Reneau (2013), Sealey et al. (2006), Ume-Nwagbo (2012)
Competence related to inter-personal relationships	Communication & societal	• The Health and Social Care Educator's Competence (HeSoEduCo) instrument	Mikkonen et al. (2020)
	Collaboration	• The Health and Social Care Educator's Competence (HeSoEduCo) instrument • The Novice Nurse Educator Competencies (CNESAA)	Mikkonen et al. (2020), Poindexter (2013)
	Teaching relationships	• The Capabilities of Nurse Educators (CONE)	McAllister and Flynn (2016)
	Relationship with students	• The Ideal Nursing Teacher Questionnaire • A Tool for Evaluation of Requirements of Nurse Teacher (ERNT)	Johnsen et al. (2002), Lovrić et al. (2014, 2015, 2017), Salminen et al. (2013), Zlatanovic et al. (2017)
	Clinical Faculties' Interaction with students, patients/families and the health team.	• A modified version of a questionnaire taken from The Nursing Clinical Teacher Effectiveness Inventory (NCTEI)	Lovrić et al. (2014, 2015, 2017)
	Interpersonal skills	• The Clinical Teachers' Competence Inventory of MNS Postgraduates (CTCIMNSG)	Wang et al. (2017)

[a]Contents of the subsets in the instruments.

TABLE 4 The evaluation of the psychometric properties of the instruments.

		Validity			Reliability				Others[a]
	Instrument and references	Face validity	Content validity	Construct validity	Internal consistency	Test–retest	Inter-item total correlations	Item-total correlations	
1.	Nursing Education Competence Inventory (NECI) tool (Al-Nasiri et al., 2017)	X			X				
2.	The Cultural Diversity Questionnaire for Nurse Educator-Revised Scale CDQNE-R (Burns, 2020, Reneau, 2013, Sealey et al., 2006, Ume-Nwagbo, 2012)		X	X	X				
3.	Teaching competency (Cha et al., 2020)				X				
4.	The lecture room instructional management competence (LRIMC) (Dürrheim & Ehlers, 2001)	X							
5.	Nursing Instructors' Clinical Teaching Performance Inventory (NICTPI) (Farahani et al., 2015)		X	X	X	X			
6.	The Gerontological Nurse Teacher Scale (GeNTS) Garbrah et al., 2020)	X	X	X	X				
7.	Clinical Nursing Faculty Competence Inventory (CNFCI) (Hou et al., 2011)	X	X	X	X				
8.	The Ideal Nursing Teacher Questionnaire (Johnsen et al., 2002, Zlatanovic et al., 2017)	X	X		X				
9.	Clinical Educators' Teaching Ability (Liu et al., 2019)				X				
10.	A modified version of a questionnaire taken from The Nursing Clinical Teacher Effectiveness Inventory (NCTEI) (Lovrić et al., 2014, 2015, 2017)	X			X				
11.	The Capabilities of Nurse Educators (CONE) questionnaire (McAllister & Flynn, 2016)	X	X		X	X	X		
12.	Questionnaire based on Transtheoretical Model of Change and Control Theory as the guiding framework (Melnyk et al., 2008)	X	X						
13.	The Health and Social Care Educator's Competence (HeSoEduCo) instrument (Mikkonen et al., 2020)	X	X	X	X				X[a]

(Continues)

TABLE 4 (Continued)

	Instrument and references	Validity			Reliability				Others[a]
		Face validity	Content validity	Construct validity	Internal consistency	Test–retest	Inter-item total correlations	Item-total correlations	
14.	Nurse Educator Skill Acquisition Assessment Tool (NESAA) (Ramsburg & Childress, 2012, Zlatanovic et al., 2017)				X				
15.	The Novice Nurse Educator Competencies (CNESAA) (Poindexter, 2013)		X		X				
16.	The Clinical Nurse Educator Skill Acquisition Assessment instrument (Nguyen et al., 2017)	X	X	X	X		X	X	
17.	A Tool for Evaluation of Requirements of Nurse Teacher (ERNT) (Salminen et al., 2013, Zlatanovic et al., 2017)	X			X				
18.	Instrument developed and validated by Southern Regional Education Board (SREB) (Staykova, 2012)	X	X						
19.	The Clinical Teachers' Competence Inventory of MNS Postgraduates (CTCIMNSG) (Wang et al., 2017)		X	X	X				

[a]Missing at Random (MAR), Missing Completely At Random (MCAR) and Missing Not at Random (MNAR) values.

leaders, head nurses, and nurse mentors were also assessors, which provided objectivity to measurement. With these other assessors, the difficulty may be that they can assess nurse educators' performance or content of education and not the competence of a nurse educator. It has been discussed that the students mainly assess the satisfaction or performance of educators (Oermann, 2017). Although some instruments were used to evaluate only either the competence of academic or clinical nurse educator (Table 2), the results demonstrated that the instruments measured the same competence areas (Table 3). Therefore, it could be argued that there are similarities in terms of nurse educators' competence despite the context where they are employed. Further, instruments assessing nurse educators' competence need to have a wider range of measurement options (e.g., simulation) from different perspectives or different instruments for measuring different phenomena (e.g., the satisfaction of teaching methods or the course arrangements). In addition, it is important to accurately describe the developed or used instruments and the assessors in the research study reports. In further studies, the nurse educator students' competence assessment also needs to be considered (Kalb & Skay, 2016; Salminen et al., 2009) to ensure their professional development. Passing the certification exam would ensure that the graduating nurse educator students have sufficient competence (NLN, 2021).

The theoretical backgrounds of identified instruments are mainly based on previous literature or definition of competence by NLN. Quite many competence requirements and instruments for assessing the competence of nurse educators can be found, but surprisingly, the theoretical framework was hardly ever described. The nursing theories direct neither the competence requirements nor the development of instruments, but it also seems that learning theories did not guide the instruments. Nowadays, the constructivist learning theory guides pedagogical solutions in education, including in nursing education and it emphasizes a student-centred approach (Mikkonen et al., 2020). Therefore, this should also take account of developing the instruments describing the nursing educators' competence.

The findings of this review showed that instruments that assessed nurse educators' competence covered measurement of nursing and pedagogical competence. However, the leadership in managerial competence was included in several instruments. Managerial competence was one of the major assessed competence areas, emphasizing the significance of leadership skills in the nursing profession (Curtis et al., 2011). Nurse educators' primary role is to promote students' learning and professional development (Bono-Neri, 2019). To best achieve this, educators need to show continuous professional development (Mikkonen et al., 2019), as well as nursing and pedagogical competence (Mikkonen et al., 2018; Salminen et al., 2013) in different areas, such as subject, ethics, pedagogy, cultural and linguistic diversity (Mikkonen et al., 2019). Further, these instruments approached competence areas from many different

components, and some of them included very basic competence areas, such as evidence-based practice, development of education and cultural competence. However, new areas of competence were also measured with the instruments, which may reflect current societal, healthcare-based and educational needs and, thus being more or less time-bonded, such as the competence to facilitate individual learning, to create safe learning environment as well as develop personal characteristics and inter-personal relationships. However, the positive attitudes and values did not clearly appear in the instruments; even the ethical issues are recognized as an essential competence of educators in our society (Salminen et al., 2016). Moreover, the WHO (2016) has cited the ethical competence of educators as one of the core competences of nurse educators. This finding shows that a more broad perspective should be taken when measuring the competencies of nurse educators.

The results of this review indicate that psychometric properties of instruments were reported variously and the systematic use of reporting guidelines for studies was missing. The systematic use of reporting guidelines or checklists, such as COSMIN checklist (COSMIN Tools, 2021) was lacking. In other words, usually only face and content validity and the internal consistency with Cronbach's alpha were reported. However, the psychometric properties should be evaluated and reported comprehensively using different methods (Mokkink et al., 2010). This could be ensured by using reporting checklists, such as a COSMIN checklist. Moreover, it might be useful to consider these reporting guidelines or checklists when planning an instrument development study. To conclude, there is a need for more thorough validation methods regarding instruments measuring the competence of nurse educators, such as construct and concurrent validity as well as test–retest reliability.

Nurse educators need to demonstrate knowledge and competence (WHO, 2009). With knowledge and competence, nurse educators can facilitate excellence in education and promote students learning and professional development. When nurse educators are properly trained in evidence-based pedagogical methods and technologies (WHO, 2009, 2021), their competence needs to be comprehensively and systematically evaluated. This scoping review provides international information about developed instruments to assess nurse educators' competence systematically and to identify development needs.

5.1 | Implications for education

There is an aim of excellence in nursing education (FINE, 2021) and one way to measure this excellence is the comprehensive and systematic assessment of nurse educators' competence. To assess this competence, there is a need for accurate selection of the instrument(s) to assess nurse educators' competence, use of valid instruments and use of assessors from a different perspective. In addition, a variety of measurement options should be used if available. The impact of nurse educators' competence on nursing students' learning outcomes should be explored when determining effective teaching. This review provides a base for the evaluation of the effectiveness in nursing education by synthesizing the instruments that assess nurse educators' competence.

5.2 | Limitations

The search strategy did not provide information on the development and validation process of all included instruments in this study. In addition, the grey literature was not included. The included studies were conducted in English, which led to the exclusion of some information from the review due to certain limitations of the language. The competence assessment is a multidimensional phenomenon, and one limitation of this study is that this review focused only on instruments assessing nurse educators' competence and not for example performance examination.

To ensure the rigour, transparency and reliability, the authors conducted the study independently and had many discussions throughout the process. The information specialist supported the optimal choice search strategy, two authors independently screened included studies and two authors who analysed the data.

6 | CONCLUSIONS

Internationally several instruments have been developed to assess nurse educators' competence and more than one of these instruments need to be used to achieve a comprehensive assessment of nurse educators' competence. To systematically assess a nurse educator's competence, a variety of the theoretical backgrounds of this competence need to be considered and understood. The selection process of the instruments needs to be based on the theoretical background of the competence required by the situation and use of valid measurements. Furthermore, there is a need to have instruments to assess nurse educators' competence with a wider range of measurement options from different perspectives and different instruments for measuring different phenomena, such as the satisfaction of teaching methods or the course arrangements.

The studies revealed that nurse educators' competence is a universal phenomenon, and it has been measured around the world. This study gathers evidence about the instruments that assess nurse educators' competence and provide base for further international studies, for example, for a comparative study of nurse educators' competence in different countries. A systematic evaluation of the psychometric properties of the developed instruments is needed. Moreover, the psychometric properties of instruments that measure the competence of nurse educators should be reported using reporting guidelines in order to increase the trustworthiness of the results.

AUTHOR CONTRIBUTIONS

The conception and design of study: TL, AP, LS, HV, TH; acquisition of data: TL, AP; analysis of the data: TL, TH; interpretation of data: TL, AP, LS, HV, TH; drafting and commenting the article: TL, AP, LS, HV, TH.

All authors have agreed on the final version and meet at least one of the following criteria [recommended by the ICMJE (http://www.icmje.org/recommendations/)]:

- substantial contributions to conception and design, acquisition of data or analysis and interpretation of data;
- drafting the article or revising it critically for important intellectual content.

CONFLICT OF INTEREST

None.

DATA AVAILABILITY STATEMENT

Data sharing not applicable - no new data generated.

ETHICAL STATEMENT

None.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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