

Characteristics of an effective nursing clinical instructor: The state of the science

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Aims and objectives: To analyse the perceived characteristics of an effective nursing clinical instructor and methods for measure instructor effectiveness. This review also examined importance of characteristics based on student age.

Background: The clinical instructor has a vital role in clinical education. While the role may be well defined, the characteristics these instructors need to do their jobs effectively are not.

Design: An integrative review from 1985 to present using four key terms: nursing, clinical, teaching and effectiveness. This review revealed 37 articles that met the inclusion criteria for analysis.

Methods: Inclusion criteria included studies related to nursing clinical teaching effectiveness of the clinical instructor in a direct patient care setting. An integrative review table of the studies was made by the author. Keywords were analyzed in the results column, and same concepts were grouped together.

Results: A synthesis of current research revealed three dominant themes: competency, the ability to develop interpersonal relationships and certain personality traits. The analysis of the literature suggests the ability to develop interpersonal relationships is the most valued skill. Overall, approachability emerged as the most important personality trait needed to be an effective clinical instructor. The analysis also revealed a difference regarding the priority of characteristics based on age of the student.

Conclusion: The analysis of the literature suggests the ability to develop interpersonal relationships is the most valued skill for clinical instructors. Overall, approachability emerged as the most important personality trait needed to be an effective clinical instructor.

Relevance to clinical practice: Future studies should continue to evaluate the extent of the dominant themes especially considering the rise of the millennial student generation.

KEYWORDS

clinical education, clinical effectiveness, student, systematic review, teacher

1 | INTRODUCTION

Nursing education is a multifaceted process that includes didactic and clinical instruction. While the didactic component covers facts, theory and research, the clinical component prepares students for real-life nursing practice by giving them experiential learning

opportunities. The clinical learning environment enables students to combine nursing theory, practice and research while being immersed in nursing culture. In the clinical setting, the student is considered an apprentice who is led by the clinical instructor. This instructor has a vital role: teaching students to prioritise clinical tasks while fostering the flexibility and problem-solving skills they need to feel confident

working in a fast-paced environment. While the clinical instructor role is well defined, the characteristics these instructors need to do their jobs effectively are not.

2 | PROBLEM

Identifying the characteristics of an effective nursing clinical instructor is critical to the advancement of nursing education. The fact that no clear, accepted definition of effectiveness exists in nursing clinical education presents a challenge for the nursing profession (Salsali, 2005), particularly for hiring, training and evaluation. To help address this issue, the author presents in this article a review of the literature examining the characteristics of an effective nursing clinical instructor including what traits students value most. Methods for measuring and analysing instructor traits also are discussed.

In 2014, the National League of Nurses (NLN, 2014) census indicated that 82% of current nursing students are in the millennial generation. The millennial generation is defined as those born between 1982–2002 (Elam et al., 2007). The specific needs of millennial nursing students have not yet been addressed in the current body of literature, including what traits these students perceive as important for nursing clinical instructors. Therefore, the issue of how student age may affect the traits they consider most important also is addressed.

3 | PURPOSE

The overall purpose of this article was to present an analysis of the literature detailing the characteristics of an effective nursing clinical instructor. Gaps in knowledge that should be explored in future research also will be identified. The analysis includes an examination of existing evidence including theoretical, conceptual and evidence-based literature guided by the following question: How do students characterise effective clinical instructors?

4 | BACKGROUND

4.1 | Modern clinical education models

Several different models of clinical nursing education are currently being used. The direct supervision model assigns students to a setting where they receive oversight from the clinical faculty member. Most nursing programmes use an apprenticeship model (Wong & Wong, 1987) in which faculty members teach and evaluate students (Hunsberger et al., 2000). Alternatively, students in a preceptor model are assigned to work several shifts with a staff nurse while receiving indirect supervision from clinical faculty. In this model, the preceptor and clinical faculty are jointly responsible for clinical evaluations (Hunsberger et al., 2000). A Dedicated Education Unit (DEU) is a newer clinical model in which staff nurses assist the clinical instructor with clinical teaching. In turn, clinical faculty promote DEU

What does this paper contribute to the wider global clinical community?

- Students perceive the ability to develop interpersonal relationships is the most valued skill for clinical instructors.
- Overall, approachability emerged as the most important personality trait needed to be an effective clinical instructor.

staff members' professional development by orienting them to the school's curriculum and faculty expectations (Tanner, 2010).

Education in both the apprenticeship and DEU models takes place in real-world hospital settings. A hospital immersion experience places students in a fast-paced, unpredictable environment. Several factors make these environments unpredictable: the complexity of the health-care process, patients with multiple acute and chronic health issues, high nurse-to-patient ratios that require nurses with strong time management skills, and lack of student socialisation to the unit. Students depend on their instructors to initiate them into the often-overwhelming hospital setting, guide them through clinical training expectations and help them become socialised to the role of a nurse. For these reasons, clinical instructors play a vital role in nursing education.

As the number of hospital clinical sites dwindles, simulation has become an important way to supplement students' clinical experiences. In contrast to the hospital setting, simulation is a planned clinical experience involving a patient care scenario within a safe laboratory (Tanner, 2010). High-fidelity simulations involve programmed, computerised mannequins that mimic physiological responses attributed to patient pathophysiology. Despite this advanced technology, simulation experiences are more predictable than scenarios that take place in hospital environments. Therefore, the characteristics of an effective simulation instructor may differ slightly from an instructor involved in direct patient care. For that reason, this article excludes clinical instruction that takes place within simulated environments and scenarios.

4.2 | Definitions

4.2.1 | Nursing clinical education

The American Association of Colleges of Nursing (AACN, 2008) describes the nursing clinical rotation as an immersion experience. During clinical experiences, students engage in direct patient care. Gaberson and Oermann (2007) described clinical education as direct observation of the patient.

4.2.2 | Clinical nursing instructor

The term clinical instructor and clinical teacher are used interchangeably in the literature. The clinical instructor is a registered nurse

employed by the nursing school who is responsible for helping nursing students achieve their learning outcomes. This person is responsible for planning and conducting instruction as well as evaluating student performance (Kube, 2010). Becker and Neuwirth (2002) defined an instructor as one who integrates theory into practice and creates an optimal learning environment. Both Brown (1981) and Bergman and Gaitskill (1990) defined a clinical teacher as one who instructs in a practice setting.

4.2.3 | Effectiveness

In a general sense, effectiveness is defined as “producing a result that is wanted: having an intended effect” (Merriam-Webster, 2015, para 1). Bergman and Gaitskill defined effectiveness as “producing a desired result, accomplishing goals and expectations” (1990, p. 36). Wong & Wong (1987) concluded that an effective clinical instructor is an expert in the art of teaching and stays involved in the profession. Gaberson and Oermann stated “Effectiveness of clinical teaching can be judged on the extent to which it produces intended learning outcomes” (2007, p. 21).

5 | METHODS

The integrative review began with a search of the Cumulative Index to Nursing and Allied Health Literature (CINAHL) from 1985 to present using four key terms: nursing, clinical, teaching and effectiveness. The year 1985 was chosen as it was the year that Mogan and Knox (1987) developed the Nursing Clinical Teaching Effectiveness Inventory (NCTEI). This instrument has a seven-point Likert-type scale with five categories: teaching ability, nursing competence, evaluation, interpersonal relationship and personality. The initial search yielded 21 results. Inclusion criteria included studies related to nursing clinical teaching effectiveness of the clinical instructor in a direct patient care setting. Articles excluded addressed simulation or research not related to clinical instruction or direct patient care. After examining the abstracts, 11 articles were excluded, leaving 10 that met the inclusion criteria. The same four keywords were used

to search the Education Resources Information Center database, yielding 84 articles. After review, 11 additional articles met the inclusion criteria. References from those articles then were used to identify other relevant research not found in the original database search. Twelve additional studies were found that met the inclusion criteria using this cross-referencing method. A final search was conducted in PubMed. This search yielded four additional studies related to nursing clinical teaching effectiveness. Of the final 37 articles, 23 were quantitative, seven were qualitative, five were mixed methods, and two were dissertations (See Figure 1). An integrative review table of the studies was made by the author. One column in the table contained the results of the study which identified the characteristics of an effective clinical instructor. Keywords were analysed in the results column, and same concepts were grouped together. Some characteristics identified were isolated findings and not well supported by the literature. However, 24 of the 37 studies identified competency, the ability to develop interpersonal relationships or certain personality traits as the most important characteristic of an effective nursing clinical instructor (Appendices A–C). These three themes were well supported by the current literature.

6 | RESULTS

In reviewing the available literature regarding clinical teaching effectiveness, many characteristics were discussed. Whittemore and Kirkevold's quality appraisal approach was used during the evaluation process for quality criteria. All studies with a quality appraisal greater than five of 11 or with a score of three or greater out of four using Kirkevold quality appraisal were considered quality articles and were included (Whittemore & Knafl, 2005). In analysing the results, there were some concepts that were isolated and not well supported by the literature. Those included being a role model, leader (Adelman-Mullally et al., 2013), evaluator (Salsali, 2005) or mentor. Allen et al. (2012) established the need for clinical instructor effectiveness by finding a positive correlation between clinical teaching effectiveness and emotional intelligence ($r_s = .599, p < .01$). However, three overriding characteristics were noted. Of the 37 studies reviewed, 24

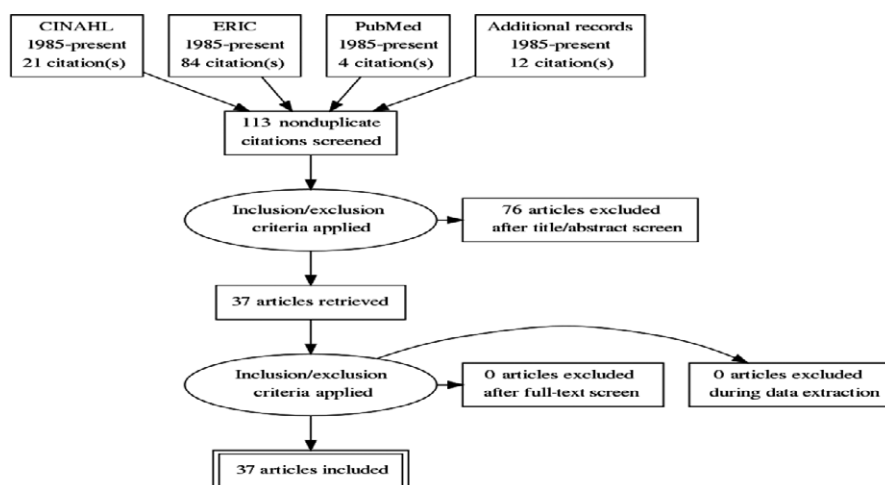


FIGURE 1 Integrative review flow chart

identified competency, the ability to develop interpersonal relationships or certain personality traits as the most important characteristic of an effective nursing clinical instructor.

6.1 | Competency

Empirical studies revealed nursing students desire a competent nursing instructor (Table 1 and Appendix A) or one who demonstrates clinical skills and judgement (Gaberson & Oermann, 2007). Beitz and Wieland (2005) identified positive behaviours that contribute to nursing competency including having knowledge about nursing, remaining current in their specialty and being a positive role model. Mogan and Knox's definition is broader and defines nursing competency as "the clinical teacher's theoretical and clinical knowledge used in the practice of nursing as well as the teacher's attitude toward the profession" (1987, p. 332). This definition encompasses two key aspects: (i) theoretical and clinical knowledge and (ii) attitude towards the profession. Of the 37 studies analysed, eight ranked nursing competency as the top characteristic for an effective nursing instructor. Of those eight, three were published between 1990–1997. Gignac-Caille and Oermann (2001) conducted a more recent study with associate degree nursing students in Michigan using the NCTEI. Although this study was conducted 15 years ago, competency was identified as the most important characteristic of an effective clinical instructor ($M = 4.94$) (Gignac-Caille & Oermann, 2001).

Four studies conducted within the past 10 years ranked nursing competency as a top priority (Hou, Zhu, & Zheng, 2010; Jowett & McMullan, 2007). Hou et al. (2010) studied 237 nursing faculty members, students and administrators from six colleges in China. This study performed psychometric measures to create the Clinical Nursing Faculty Competence Inventory scale. The scale's Cronbach's α was .91, indicating it has internal reliability. One study compared competencies by first-, second- and third-year undergraduate nursing students ($N = 135$) (Lovic et al., 2014). The study identified second- and third-year nursing students had higher expectations of clinical faculty competencies. This study concluded the quality of clinical practice depended on the faculty competencies. Jowett and McMullan's (2007) mixed-method study, 228 students and mentors in the

TABLE 1 Review of studies rating competency as top characteristic

Name/Date	Study design
Benor and Leviyof (1997)	Quantitative
Fong and McCauley (1993)	Quantitative
Gignac-Caille and Oermann (2001)	Quantitative
Hou et al. (2010)	Quantitative
Jowett and McMullan (2007)	Mixed method
Khan et al. (2012)	Mixed method
Lovic et al. (2014)	Quantitative
Nehring (1990)	Quantitative

United Kingdom evaluated the effectiveness of practice educators, students and mentors. The results linked effectiveness to the instructor's credibility. Another mixed-method study had consistent results identifying "demonstration" as most effective (Khan, Ali, Vazir, Barolia, & Rethan, 2012).

6.2 | The ability to develop interpersonal relationships

Thirteen of the 37 studies identified the ability to develop interpersonal relationships as the most important characteristic (Table 2 and Appendix B) of an effective nursing clinical instructor. After reviewing the literature, it appears that the nursing education discipline has accepted Mogan and Knox's (1987) definition of an interpersonal relationship: "a state of reciprocal interest or communication between two or more people excluding specific therapeutic communication between nursing and patient" (p. 332). Six of the 13 studies were quantitative, five were qualitative, and two were mixed method. The dates for the studies ranged from 1995–2010, and only five were conducted within the past 10 years. Regarding interpersonal relationships, the older research is consistent with the current research. Seven studies (conducted from 1995–2006) identified the interpersonal relationship between the student and instructor as the top characteristic of an effective instructor. Ralph, Wimmer, and Walker's (2008) multidisciplinary qualitative study analysed the views from 546 engineering, nursing and education practicum students of which 33 were nursing students. The results identified three themes for positive outcomes, the most important being supportive interrelationships.

Poorman, Mastorovich, and Webb (2008) interviewed 30 instructors from the eastern United States, and their results support the idea that positive relationships between students and teachers promote learning. The students expect the clinical instructor to be physically present and provide clear expectations (Poorman et al., 2008).

TABLE 2 Review of studies rating interpersonal relationship as top characteristic

Name/Date	Study design
Beitz and Wieland (2005)	Mixed method
Bergman and Gaitskill (1990)	Quantitative
Croxon and Maginnis (2009)	Mixed method
Dunn and Burnett (1995)	Quantitative
Gillespie (2002)	Qualitative
Kootnz et al. (2010)	Qualitative
Kube (2010)	Quantitative
Lee et al. (2002)	Quantitative
Pierson (2003)	Qualitative
Poorman et al. (2008)	Qualitative
Ralph et al. (2008)	Qualitative
Tang et al. (2005)	Quantitative
Shelton (2003)	Quantitative

These results are consistent with a later qualitative study with 10 Western Carolina University students in a semistructured focus group (Kootnz, Mallory, Burns, & Chapman, 2010). For these students, establishing a trusting relationship with the instructor resulted in a positive clinical learning environment. Croxon and Maginnis (2009) conducted a mixed-method study with 20 second-year undergraduate nursing students. These students' comments confirmed that the support offered to the student by the instructor was the most significant component. Kube's (2010) dissertation analysed the five NCTEI categories for frequency of usage by the clinical instructors. Ability to develop interpersonal relationships ranked the highest in a clinical setting ($M = 6.16$) and students identified approachability as the behaviour with the greatest influence on learning. Another dissertation by Pierson (2003) identified the student–teacher relationship as fundamental to the learning process.

In addition to identifying the student–teacher connection as the most important characteristic of an effective clinical instructor, Gillespie's (2002) qualitative study also reported on the attributes and consequences of such relationships. Students reported that these key relationships helped increase their self-worth, self-esteem and self-confidence. In semistructured interviews, students described feeling at ease, more comfortable and less defensive and anxious with a connected instructor. The relationship with the instructor allowed them to learn more and “see the bigger picture” (Gillespie, 2002, p. 573). This study also identified appropriate boundaries of the student–teacher relationship. Those boundaries include the fact that the relationship focused on the students' learning needs, and only personal information relevant to a learning experience was shared. Gillespie (2002) identified several attributes of a connected instructor: being genuine, spending time with the students, providing opportunities for the student to talk and being emotionally and physically available.

6.3 | Personality traits

Ten of the 37 studies identified personality traits (Table 3 and Appendix C) necessary for a teacher to be an effective nursing clinical instructor. Mogan and Knox defined personality as “the totality of the individual's attitudes, emotional tendencies, and character

traits, which are not specifically related to teaching, nursing, or interpersonal relationship, but may affect all three” (1987, p. 332). When describing personality, the words characteristics and traits are used interchangeably in the nursing literature. Brown defined a personality characteristic as “a distinguishing trait or quality” (1981, p. 6). In an early study by Nehring (1990) using the NCTEI, students perceived the best instructors as being approachable ($M = 6.64$), self-confident ($M = 6.64$) and enjoying nursing ($M = 6.76$) and teaching ($M = 6.73$). These students stated that such instructors had good communication skills, listened attentively and promoted student independence (Nehring, 1990). Confirming Nehring's (1990) findings, a later study by Viverais-Dresler and Kuschke using the NCTEI (2001) identified the most desired instructor characteristics: approachability, fairness, openness, honesty and mutual respect. Among the students in this study, approachability was the highest rated characteristic ($M = 6.70$). Using the NCTEI, Beitz and Wieland (2005) indicated that an effective instructor is supportive, helpful, approachable, respectful, caring, enthusiastic, encouraging, open to suggestions, a good communicator and able to make students feel confident. A more recent study by Rowbotham and Owen (2015) found that self-efficacy increased with faculty who corrects without belittling, communicated expectations, observed frequently and suggested ways to improve.

Shelton (2003) used the Perceived Faculty Support scale with a sample of 458 ADN nursing students in Pennsylvania and New York. This study's results indicated that a supportive instructor is perceived as approachable, demonstrated mutual respect, corrected students without belittling and is genuine. Croxon and Maginnis (2009) mixed-method study also identified a constructive learning environment as one that had a friendly and approachable staff/instructor. Kube's (2010) confirmed approachability as the behaviour that had the greatest influence on learning.

From a student perspective, approachability is the one consistent characteristic mentioned in all of the above-described studies. In contrast, a study by Clark (2013) using the NCTEI that was completed by faculty only revealed four statements with the highest scores: “is a good role model,” “enjoys teaching,” “takes responsibility for own actions,” and “gives students positive reinforcement for good contributions, observations, or performance.” This finding suggests that students may place more emphasis on approachability than do instructors.

Salsali (2005) used a researcher-developed questionnaire to evaluate teacher effectiveness with 70 Iranian students. The results identified the following top-ranking statement: teachers should have “respect for students' abilities and experiences” (Salsali, 2005, p. 5). Although the article states that validity and reliability were tested, no statistical information related to factor analysis or test–retest procedure was provided. In a 2014 study with 170 students from Trivandrum, India, Reghuram and Preetha identified honesty towards students (80%) as the characteristic most needed for an effective instructor. Because these two studies were not conducted with American students, the results may not be generalisable to an American population.

TABLE 3 Review of research identifying desired personality traits

Name/Date	Study design
Beitz and Wieland (2005)	Mixed method
Clark (2013)	Mixed method
Croxon and Maginnis (2009)	Mixed method
Kube (2010)	Quantitative
Nehring (1990)	Quantitative
Reghuram and Preetha (2014)	Quantitative
Rowbotham and Owen (2015)	Quantitative
Salsali (2005)	Mixed method
Shelton (2003)	Quantitative
Viverais-Dresler and Kuschke (2001)	Mixed method

6.4 | Age differences

When reviewing characteristics of an effective clinical instructor, it is important to determine what factors—such as age—may affect students' perceptions. Only a few empirical studies have addressed the possibility that students' ages affect their perceptions. One notable study by Wieck (2003) specifically analysed the differences between members of the "entrenched workforce" (nurses aged 40–68) and the "emerging workforce" (nursing students aged 20–35) using the Emerging Workforce Preference Survey. The entrenched workforce members ranked clinical competency and approachability as the most important faculty characteristics. While the emerging workforce ranked approachability as the top characteristic, competency was not among the top 10 characteristics for this group. This group of 20- to 35-year-old students wanted instructors who are receptive to people and ideas, supportive and good communicators. Although the information from this study is important, the instrument has questionable reliability and validity. However, these results are consistent with those of an earlier study by Benor and Leviyof (1997) indicating that younger students ranked ability to develop interpersonal relationships more important than instructional skills. Lee, Cholowski, and Williams (2002) study using the NCTEI found that students between the ages of 18 and 20 (51% of sample) perceived the ability to develop interpersonal relationships more important than did students between the ages of 21 and 50. Therefore, the results from these two studies indicate a possible age-related difference in students' perception of clinical instructor effectiveness.

7 | ANALYSIS

The importance of clinical teaching effectiveness has been established with a positive correlation between effectiveness and emotional intelligence. Although the literature related to clinical teaching effectiveness is sparse, academics need to find ways to use the available information. This analysis revealed that an overwhelming majority of recent studies conducted in the United States identify the ability to develop interpersonal relationships as the most important characteristic of an effective nursing instructor among students. This finding has been consistent in literature since the 1980s. Establishing a productive relationship may be the result of the instructor making students more comfortable, which can lessen their anxiety. Such relationships also create a positive learning environment where students can ask questions without the fear of being belittled, and see the bigger picture in a clinical setting. Several personality traits identified in the literature may help instructors be effective nursing clinical instructors and build positive relationships with their students. The results indicate that students likely gravitate to instructors who are approachable, fair, open, honest, enthusiastic and enjoy teaching and nursing.

While competency is valued, this concept appeared more frequently in earlier studies. An explanation for this change may relate to student age. Three studies' results indicated that younger students value interpersonal relationships between student and faculty

most highly (Benor & Leviyof, 1997; Lee et al., 2002; Wieck, 2003), while another indicated older students tend to value instructor competency most highly (Wieck, 2003). One possible explanation for this difference could be the accessibility of electronic databases. In the past, nursing students would spend hours in the library sorting through microfilm to find research articles. Now, current research is more readily available to students via the Internet. While such research augments an student's experience, it certainly cannot replace a productive relationship with an instructor. Analysis from the literature showed that faculty generally rate the importance of instructor competency higher than do students. Only one study's results indicated that faculty rated the ability to form interpersonal relationships higher than instructor competency.

Much of the research on clinical nursing education was conducted in the 1980s. Little research regarding this topic has been completed in the last decade. With the emergence of simulation, the research focus has shifted to issues surrounding clinical simulation—efficacy, effectiveness and students' perceptions—leaving many questions unanswered about clinical education that takes place in real-life, hospital settings. Even fewer studies relate to the clinical education needs of the millennial students that comprise 82% of current nursing students (NLN, 2014). New generations of nursing students may have different learning needs than those who came before. If so, these differences need to be explored.

8 | LITERATURE GAPS AND FUTURE RESEARCH

8.1 | Three themes

Although clinical education can be considered the cornerstone of nursing education, only a small body of knowledge covers it, leaving multiple gaps in the literature. In fact, several critical elements of nursing education are not addressed at all or only in outdated research. One gap is further research on three themes identified in this analysis: the competency, ability to form interpersonal relationships and desired personality traits of clinical nursing instructors. Future studies should be conducted to examine the strength of these themes related to the perceived effectiveness of education. A relational research study could be used to measure what impact having a competent instructor with the desired personality traits who can develop interpersonal relationships has on learning outcomes such as benchmark tests or National Council Licensure Examination-Registered Nurse (NCLEX) pass rates. Researchers also could compare the course evaluations of instructors who develop positive interpersonal relationships with students to those who do not. Additionally, a researcher could examine the effectiveness of operationalising these elements in nursing education, such as formally recruiting, training and evaluating instructors for these characteristics.

Another area for a future study could be comparing simulation to traditional clinical education. The simulation experience occurs in a planned and organised setting. In contrast, the unpredictable clinical setting highlights the importance of student flexibility. Using this

paper's three themes as a guide, research could investigate whether different characteristics are required to be an effective instructor in a simulation environment versus in a direct patient care setting.

8.2 | Needs of millennials

Additional research is needed to identify the most effective methods for teaching current and future nursing students. As previously mentioned, most of the research on clinical nursing education is outdated and no studies have addressed the needs of the millennial generation of nursing students. Instead, research on clinical simulation has increased greatly. Even though most current students are considered millennials (NLN, 2014), little is known about their preferences and the best ways to effectively teach them. Therefore, future studies should target the learning styles of millennials in clinical experiences. Additionally, comparative studies should address similarities and differences between effective instructor characteristics as perceived by the millennial generation compared to past generations.

8.3 | Effectiveness definition

Another gap in the literature is the lack of a conceptual analyses used to form an operational definition of effectiveness in regard to nursing clinical instructors. Mogan and Knox identified this need in 1985 with the development of the NCTEI. They concluded that the validity could not be established for the scale because there is not a single, accepted definition of effectiveness within clinical nursing education.

The two definitions of effectiveness in clinical nursing education found in the literature discuss goals or outcome measures (Gaberson & Oermann, 2007; Wong & Wong, 1987), but fail to identify which measures should be used. Outcome measures may be program-based or student-based. Program-based measures include benchmark testing for content areas or first-time NCLEX pass rates. For a clinical instructor, program-based content testing may not constitute a true measure of effectiveness, as students within the same clinical group may have different experiences. For example, in an obstetric clinical setting, one student may assist a labouring patient while another cares for a postpartum mother and newborn. Although both students' experiences may be discussed in a postconference setting, their learning outcomes are different. Therefore, student-based evaluations, such as course and/or instructor evaluations, may be more appropriate in clinical settings. Within the nursing literature, evaluations of clinical instructors involve both types of outcome measures. However, it is important to remember that nursing education is not limited to these outcome parameters.

Without a clear definition of effectiveness, instructors may not meet the needs of the students or the program. Other studies are needed to define and operationalise the concept of effectiveness in clinical nursing education. After formulating a research-based definition of effectiveness, new instruments need to be constructed and validity and reliability measures developed to objectively measure the concept of effectiveness.

8.4 | Nursing education

Nursing education may be in need of an overhaul. In 2003, the NLN released a position statement calling for nursing education reform. Tanner (2006) reported that few substantive changes in nursing education have occurred over the past 40 years. Benner, Sutphen, Leonard, and Day (2010) identified 26 recommendations for transforming nursing education. These recommendations include changes to the clinical setting such as broadening the clinical experience, preserving postconferences and developing pedagogies to keep students focused on patients' experiences (Benner et al., 2010). Research is needed in all of these areas including the role of the effective clinical instructor in making these changes.

9 | CONCLUSION

The analyses of the literature suggest the ability to develop interpersonal relationships is the most valued skill for clinical instructors. Overall, approachability emerged as the most important personality trait needed to be an effective clinical instructor. While further research in this area is needed, current clinical instructors can use the three themes uncovered in this analysis to acquire new or strengthen their existing skills.

The results of this literature review also indicate that much work is needed. The analysis of the results suggests several recommendations for nursing researchers: first, continue to research and document the importance of clinical instructors in clinical education, second, recognise that students of different ages and faculty members value different characteristics in a clinical instructor, third, consider researching the specific needs of millennial nursing students, fourth, view the results of this study as a springboard for new research to develop an evidence-based definition of effectiveness in clinical instruction and a reliable and valid instrument to measure it, fifth, conduct further studies of the three themes uncovered in this analysis: competency, the ability to develop interpersonal relationships and desired personality traits among clinical instructors and sixth, keep these themes in mind as nursing education reform moves forward. Such actions are imperative for nursing education programmes to prepare future nursing students.

10 | RELEVANCE TO CLINICAL PRACTICE

With the majority of nursing students consisting of the millennial generation, careful consideration must be given to meeting their needs. Continuing to teach the way the nursing instructors were taught, which can be strict and rigid, is no longer effective. Nursing instructors should thrive to maintain these three dominant themes while teaching in a clinical setting. Remaining competent while developing an interpersonal relationship and being approachable is necessary for effective clinical education. Future studies should

continue to evaluate the extent of the dominant themes especially considering the rise of the millennial student generation.

CONTRIBUTIONS

Study Design: AC; data collection: AC; manuscript preparation: AC.

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Appendix A: Review of studies rating competency as top characteristic

Name/Date	Study design	Sample	Research question/Purpose	Instrument/Method
Benor and Leviyof (1997)	Quantitative	123 nursing students from three different nursing schools in Israel	To study the students' perceptions of an effective clinical teacher in nursing	NCTEI
Fong and McCauley (1993)	Quantitative	384 undergraduates and 27 clinical instructors in a private university	To validate Clinical Teaching Evaluation	CTE
Gignac-Caille and Oermann (2001)	Quantitative	292 nursing students and 59 clinical nursing faculty from five randomly selected ADN programs in Michigan	To identify the perceptions of ADN students and faculty of characteristics of effective clinical teachers and determine whether there was a difference between the two groups	NCTEI
Hou et al. (2010)	Quantitative	218 participants from six universities: 33 full-time faculty, 81 clinical instructors, 17 nursing administrators and 87 undergraduate students	To validate the Clinical Nursing Faculty Competence Inventory (CNFCI)	CNFCI
Jowett and McMullan (2007)	Mixed method	131 prenursing students and 97 mentors in the United Kingdom	The aim was to evaluate the effectiveness of practice educator roles from the perspective of three main constituent groups: practice educators, mentors and students	A questionnaire with seven sections with 7–10 questions in each section and three open-ended questions
Khan et al. (2012)	Mixed method	74 nursing students	The aim was to identify nursing students' perceptions about effectiveness in improving knowledge, skills and attitudes	A questionnaire developed for this study
Lovic et al. (2014)	Quantitative	135 first-, second- and third-year undergraduate nursing students	The aim was to examine expectations of clinical faculty competencies	NCTEI
Nehring (1990)	Quantitative	63 BSN faculty and 121 BSN students in Ohio	To determine the characteristics of the "best" and "worst" clinical teachers as perceived by faculty and students	NCTEI

Appendix B: Review of studies rating interpersonal relationship as top characteristic

Name/Date	Study design	Sample	Research question/Purpose	Instrument/Method
Beitz and Wieland (2005)	Mixed method	198 BSN students in a major metropolitan area in north-eastern United States	The purpose was to examine full- and part-time basic BSN, LPN-BSN, and RN-BSN students' rating of effective clinical behaviours	NCTEI, an observation tool (ONTICS and ECTB)
Bergman and Gaitskill (1990)	Quantitative	134 nursing students (11 sophomores, 77 juniors, 46 seniors and 23 faculty members)	The purpose was to identify which characteristics of effective clinical teaching were deemed most important by nursing students and faculty	CTCI

(Continues)

TABLE (Continued)

Name/Date	Study design	Sample	Research question/Purpose	Instrument/Method
Croxon and Maginnis (2009)	Mixed method	20 second-year undergraduate nursing students enrolled in BSN courses in 2006	To compare a group model to a preceptor model to facilitate students' learning in a clinical setting	Interview based with a Likert questionnaire and open-ended questions
Dunn and Burnett (1995)	Quantitative	423 participants (90% were students and 10% were faculty)	To develop and validate the Clinical Learning Environment Scale	Clinical Learning Environment Scale
Gillespie (2002)	Qualitative	Eight undergraduate nursing students	The aim was to describe undergraduate nursing students' experiences of connection with the teacher and the effects of student learning	Unstructured interviews and focus groups
Kootnz et al. (2010)	Qualitative	10 nursing students (3 male and 7 female)	The purpose was to explore student nurses' perceptions of their Clinical Learning Environment	Semistructured interviews
Kube (2010)	Quantitative	240 BSN students in three Midwestern states	The purpose was to explore the relationship of the use of clinical teaching behaviours of nursing faculty and students' perceptions of those behaviours' influence on learning	NCTEI
Lee et al. (2002)	Quantitative	104 second-year students, 30 third-year students and 17 clinical educators	The aim was to explore the perceived characteristics of effective clinical educators as rated by students and educators and the significant differences and commonalities between the two perceptions	NCTEI
Pierson (2003)	Qualitative	4 nurse educators and 8 nursing students from two educational agencies	The study investigated the process of learning nurses' work in the practice environment	Face-to-face interviews
Poorman et al. (2008)	Qualitative	30 nurse educators' narratives of times when they worked with academically at-risk students	The aim was to examine how teacher help and hinder students who are struggling academically	Narratives
Ralph et al. (2008)	Qualitative	546 postpracticum students (engineering, nursing and education)	The aim was to obtain students views regarding the effectiveness of practicum programmes	Two essay questions—What was positive and negative of your practicum
Tang, Chou, and Chiang (2005)	Quantitative	214 students from two nursing schools in Taiwan	The purpose was to understand which of the four categories: professional competence, interpersonal relationship, personality characteristics and teaching ability were the main contributor to effectiveness among clinical nursing faculty	A constructed 50 question five-point Likert questionnaire
Shelton (2003)	Quantitative	458 ADN students from nine accredited schools in Pennsylvania and New York	The purpose was to explore the relationship between nursing students and perceived faculty support and student retention	Perceived Faculty Support Scale

Appendix C: Review of research identifying desired personality traits

Name/Date	Study design	Sample	Research question/Purpose	Instrument/Method	Identified trait
Beitz and Wieland (2005)	Mixed method	198 BSN students in a major metropolitan area in north-eastern United States	The purpose was to examine full- and part-time basic BSN, LPN-BSN, and RN-BSN students' rating of effective clinical behaviours	NCTEI, an observation tool (ONTICS and ECTB)	Supportive, helpful, approachable, respectful and caring, always enthusiastic and encouraging, open to suggestions, good communicators and made students feel confident
Clark (2013)	Mixed method	10 faculty who had been instructing for two or less years at three different nursing schools	The aim was to explore socialisation process from staff nurse-to-clinical faculty to determine what characteristics faculty perceive as vital and what role strain faculty experience	Focus groups and NCTEI survey, audit trails and member checks	Four-way tie between statements "is a good role model," "enjoys teaching," "takes responsibility for own actions" and "gives students positive reinforcement for good contributions, observations or performance"
Croxon and Maginnis (2009)	Mixed method	20 second-year undergraduate nursing students enrolled in BSN courses in 2006	To compare a group model to a preceptor model to facilitate students' learning in a clinical setting	Interview based with a Likert questionnaire and open-ended questions	Friendly and approachable
Kube (2010)	Quantitative	240 BSN students in three Midwestern states	The purpose was to explore the relationship of the use of clinical teaching behaviours of nursing faculty and students' perceptions of those behaviours' influence on learning	NCTEI	Approachability
Nehring (1990)	Quantitative	63 BSN faculty and 121 BSN students in Ohio	To determine the characteristics of the "best" and "worst" clinical teachers as perceived by faculty and students	NCTEI	Approachable, self-confident and enjoyed nursing and teaching
Reghuram and Preetha (2014)	Quantitative	170 nursing students in Trivandrum	Aimed on students' perception of effective clinical teacher characteristics	Instrument consisted of Socio-personal performance, SemiStructured questionnaire and Rauen's clinical instructor characteristic ranking scale	Honesty towards students
Rowbotham and Owen (2015)	Quantitative	236 tradition nursing students at a Midwestern USA university	Examined the relationship between perceived effectiveness and self-efficacy	NCETI and Student Self-Efficacy (SSE) questionnaire	Corrects without belittling, communicates expectations, observes frequently, suggest ways to improve

(Continues)

Appendix C (Continued)

Name/Date	Study design	Sample	Research question/Purpose	Instrument/Method	Identified trait
Salsali (2005)	Mixed method	143 educators, 40 undergraduate students and 30 graduate students	The purpose was to report perceptions of nursing educators and student in Iran with actual to preferred evaluation methods	A researcher developed questionnaire	Respect for students' abilities and experiences
Shelton (2003)	Quantitative	458 ADN students from nine accredited schools in Pennsylvania and New York.	The purpose was to explore the relationship between nursing students and perceived faculty support and student retention	Perceived Faculty Support Scale	Approachable, demonstrated mutual respect, corrected student without belittling and genuine
Viverais-Dresler and Kutschke (2001)	Mixed method	56 BSN students	RN students' perceptions of the importance they attach to certain clinical behaviours	A developed tool	Approachable, fair, open honest and has mutual respect