AUTHOR(S)
Gonzalez, M. T., Bakken, L. N., Horntvedt, M.-E. T., Hofoss, D., & Salminen, L.

TITLE
Norwegian nurse educators' self-rating of competencies: a nationwide cross-sectional web-survey

YEAR
2024

DOI
10.1515/ijnes-2023-0040

CITATION
Gonzalez, M. T., Bakken, L. N., Horntvedt, M.-E. T., Hofoss, D., & Salminen, L. (2024). Norwegian nurse educators' self-rating of competencies: a nationwide cross-sectional web-survey. *International Journal of Nursing Education Scholarship, 21*(1). https://doi.org/10.1515/ijnes-2023-0040

VERSION
Accepted Manuscript

XXXX nurse educators' self-rating of core competencies: A nationwide cross-sectional web survey

Introduction

To ensure quality of care and patient safety, nurse education institutions are responsible for guaranteeing that graduate nurses have the necessary competence. This responsibility rests heavily on nurse educators and means that their competencies play a decisive role in the educational quality of nursing education (Salminen et al., 2021) as well as in supporting students' readiness for professional work (Gcawu et al., 2021; Järvinen et al., 2018). Nurse educators' competence is by nature multidimensional, has been described in different ways (Mikkonen et al., 2018), and varies according to discipline, nationality, and educational arrangement (Oprescu et al., 2017). Moreover, nurse educators are required to have several competencies, including being able to apply a diversity of pedagogical approaches in different learning contexts (Marriott et al., 2023; Simmonds et al., 2020). Other required competencies are being clinically up to date, providing supportive a learning environment and being an active publishing researcher (Satoh et al., 2020). Furthermore, they are expected to establish and cultivate collaborative partnerships, and initiate research or quality development projects either at their educational institution or in the clinical field (Cant et al., 2021).

Due to the rapidly changing health care landscape, nurse educators constantly face challenges that strongly influence their role and work, namely the complexity of health care needs, socio-demographic changes and academic, technological and digital demands (Berland et al., 2020; S. B. Keating & DeBoor, 2018; Ryhtä et al., 2020). These rapid changes, combined with the shortage of nurses available to mentor students in clinical placement, not only threaten patient security (Witczak et al., 2021) but also greatly affect educational quality in clinical placements and students' possibilities for developing clinical and professional competence (Mikkonen et al., 2022; Tehran et al., 2021).

The well-documented shortage of educated nurses worldwide, and the shortage of nurse educators (Jarosinski et al., 2022), is currently a major barrier to providing global society with a large enough number of competent nurses. Furthermore, comprehensive changes in health care entail that student nurses have often their clinical placement in community and outpatient settings where there is a shortages of nurses (World Health Organization, 2020) who can competently supervise and mentor students. Moreover, appropriate learning opportunities and quality supervision in clinical placement are often at stake (Pitkänen et al., 2018; Saukkoriipi et al., 2020). Related to these realities, nurse educators will have to make up for poor quality in students' placement studies, adding even more demands to their job. To provide society with highly competent nurses, addressing nurse educators' competencies, is highlighted (Mikkonen et al., 2018). For educational leaders and for nurse educators themselves, assessing nurse educators' competencies in different domains provides opportunities for uncovering, discussing and improving a variety of educational quality issues. This study addresses how XXXX nurse educators nationwide rate their core competencies.

Nurse educator competencies

There is currently no international agreement on what competencies are required for nurse educators (Silva et al., 2022). While there is international agreement on minimum professional qualifications for registered nurses (RN) and principles for nursing education, consensus on professional requirements for nurse educators and principles for educating nurse educators is lacking (Silva et al., 2022). However, it has explicitly been argued that nurse educators' competencies should be clearly defined (Mikkonen et al., 2020).

To promote excellence in nursing education and to ensure the educational quality of nurse educators, the World Health Organization (WHO) (2016) published a description of core competencies for nurse educators. Through a collaborative Delphi process, stakeholders identified eight core competence domains for nurse educators: theories and principles of adult learning; curriculum and implementation; clinical nursing practice; research and evidence; communication, collaboration and partnership; ethical principles and professionalism; monitoring and evaluation; and finally, management, leadership, and advocacy (WHO, 2016). While they provide a good framework for educating educators, these competence domains have been criticized for not having been empirically tested (Satoh et al., 2020).

In the United States, the National League for Nursing (NLN) recently provided what may be the best known description of nurse educators' core competencies (Keating et al., 2021). These competencies are facilitating learning; facilitating learner development and socialization; using assessment and evaluation strategies; participating in curriculum design and evaluation of program outcomes; pursuing continuous quality improvement in the academic nurse educator role; and engaging in scholarship, service, and leadership. Both the WHO's and NLN's list of competencies

highlight that these educator comptencies are in line with educators' tasks and responsibilities no matter the educational context (WHO, 2016).

Other researchers have also broadened the field of nurse educator competencies. Zlatanovic et al. (2017), having synthesized the empirical results of 25 studies in a systematic review, identified five broad themes that were considered educator competencies: academic, nursing, and pedagogical competencies; attitudes; management and digital technology. It has further been argued that nurse educators' competencies are better assessed as a more integrated situated competence (Zlatanovic et al., 2017). Moreover, in their meta-synthesis based on nine studies, Korpi et al. (2020) identified six main themes as important for nurse educators' competence and for their continuous development: self-development, supervising, interaction, researching, a subject on nurse educators' own profession, networking, and multiculturalism competencies. In aiming to clearly define nurse educators core competencies, Mikkonen et al. (2018) reported in a review of six quantitative studies that three core competence domains were highly rated by educators themselves, namely knowledge, skills and attitudes. In this review, educators' age, academic degree, healthcare experience, research activities, and the type of organization in which they worked were the factors that most influenced their competence (Mikkonen et al., 2018).

Measuring nurse educator competencies

Several instruments have been developed to measure health care educators' competencies. Most often, these instruments measure educators' competence in specific domains related to subjects or themes such as ethical, pedagogical, cultural and linguistic diversity competence (Mikkonen et al., 2018). Furthermore, some

generic instruments such as Evalution of Requirements of Nurse Teachers (ERNT) (Salminen, 2000; Salminen, Stolt, Koskinen, Katajisto, & Leino-Kilpi, 2013) or the Health and Social Care Educator's Competence (HeSoEduCo) instrument (Mikkonen et al., 2020) have been psychometrically tested. ERNT assesses nursing competence, pedagogical competence, evaluation skills, personality factors, and relationship with students, which correspond to most of the previously mentioned WHO core competencies for nurse educators. The ERNT instrument was used in a previous XXXX survey in which 348 nurse educators rated their own competencies (Johnsen et al., 2002). The reported results from this study were that nurse educators rated themselves higher in the domains of pedagogical and nursing competence than in those of evaluation skills, personality factors, and relationship with students. In contrast and interestingly, in a self-evaluation, Finnish nurse educators rated themselves highest on the ERNT domains "relationship with students" and lowest on "pedagogical competence," as reported by Salminen et al. (2013). However, in the same study, while nurse educators rated their nursing competence as high, nursing students were more critical when scoring their educators competencies using the same ERNT instrument. Interestingly, the largest differences between the educators' scores and the students' scores were on the nursing competence domain (Salminen et al., 2013). Other interesting results are reported by Ozga et al. (2021) on Polish students, who gave the highest score on the student-educator relationships domain.

Considering how educational quality in nursing depends heavily on nurse educators' competencies (Salminen et al., 2021; Järvinen et al., 2018), there has been calls for more research on these issues (Kuivila et al., 2020; Mikkonen et al., 2018; Salminen et al., 2021). Smith et al. (2023) recently reported that nurse educators have requested professional development possibilities related to professional competencies

and communication and collaboration, among other themes. Regularly and systematically investigating and assessing how nurse educators rate their own competencies has the potential to inform educational leaders about the domains in which educators need support or professional development. At a time when recruiting and keeping educators is challenging, providing support for competence development (Summers, 2017) and addressing educators' job satisfaction (Arian et al., 2018) and work-place culture (Masimula et al., 2023) should be prioritized. Thus, this study aimed to investigate how XXXX nurse educators rated their competencies, as well as how these competencies were associated with core background variables.

Methods

Design

A cross-sectional web survey design (Polit & Beck, 2020) was applied for this XXXX nationwide cross-sectional study. This study is part of a larger study investigating nurse educators' competencies and use of pedagogical approaches related to clinical placement, and reports findings from data collected with the ERNT instrument.

Sample and research contexts

The target population was nurse educators employed at XXXX educational institutions with a bachelor's program in nursing. Inclusion criteria for nurse educators were working full or part time as a nurse educator and having supervised bachelor's students in clinical placement during the last three years. Exclusion criteria were just the opposite of the inclusion criteria. When recruiting participants for the study, we initially contacted the head of the institute, department, or faculty at the 13

nursing educational institutions in Norway to ask for their cooperation. Of these, 11 leaders agreed to cooperate.

The requirements for permanent appointment to an academic position at universities and university colleges for the bachelor's degree of nursing programs in Norway, are authorization as an RN, holding a relevant master's degree, and pedagogical competence of minimum 15 credits in the European Credit Transfer and Accumulation System (ECTS).

Data collection

Data were collected using a web link developed for this study; several constructed theme-based items and validated instruments, involving the ERNT instrument, were built up to form one complete web-based questionnaire. To develop and distribute the web link, we used a survey solution developed and hosted by the University of Oslo (nettskjema.no). The leaders forwarded the e-mail with study information and the web link to the nurse educators' e-mail addresses; the consent form and inclusion criteria were part of the questionnaire. The survey could be completed in 10–12 minutes, and leaders received two reminders.

In total, 163 nurse educators logged into the web link and responded to the questionnaire. Of these, seven had not supervised students during the last three years, and two delivered empty questionnaires. Thus, the final sample of responding informants was n=154 nurse educators. The nurse educators' mean working experience was 12.9 years (SD 9.2); 86.3% were permanently employed and 76.8% had formal supervision training. Altogether, 50.3% supervised students in municipal health care and 59.5 % supervised nursing students in hospitals, entailing that some

educators supervised in both contexts. Nurse educators' background variables are presented in **Table 1**.

Instrument

There are currently many instruments that assess nurse educators' competencies (Lemetti et al., 2022). The Tool for Evaluation of Requirements of Nurse Teachers (ERNT) (Salminen, 2000; Salminen et al., 2013) was used to operationalize and measure how nurse educators self-rated their competencies. ERNT is a relatively short instrument that is easy and quick to fill out and has been widely used. Due to changes in nursing education in the last decades, initiating a XXXX cross-sectional "twenty years after" the Johnsen et al. (2002) study using the same instrument for data collection was also an issue.

The ERNT instrument was developed from the Nursing Clinical Teacher Effectiveness Inventory (NCTEI) (Morgan & Knox, 1987). The instrument consists of five main nursing competence domains: nursing competence, pedagogical competence, evaluation skills, personality factors and relationship with students. In ERNT "Nursing competence" refers to the capability to practice nursing and to integrate theory and practice. "Pedagogical competence" involves encouraging students to search for new knowledge and develop their critical thinking, self-assessment, and decision-making skills. "Evaluation skills" involves evaluating students' different assignments and providing feedback. "Personality factors" include being consistent, admitting mistakes, being open-minded, and being flexible, and finally "Relationships with students" involves treating students equally, being honest with them, encouraging mutual respect and taking students seriously (Salminen, 2000; Salminen, Melender, & Leino-Kilpi, 2009; Salminen et al., 2013). Each competence

domain has four single items for a total of 20 single competence items, all of which are scored on a scale from 1 to 5 (1 = very poorly; 5 = very well). The ERNT has demonstrated Cronbach's alphas varying between 0.68-0.80 in a Finnish sample (n=342) (Salminen et al., 2011).

In preparation for this study, ERNT was forward translated from English into XXXX by an authorized translator. Face validity of this translation was performed by establishing a discussion group of colleagues not being involved in the study. Their validity evaluations were thereafter discussed until consensus with the researchers being nurse educators. Some minor changes were made on the XXXX version of ERNT based on these discussions. To validate these minor changes, the XXXX ERNT version was back translated by an authorized translator. Permission to use the ERNT was obtained from the developer of the instrument.

Please insert Table 1 here

Table 1
Nurse educators' background variables

Statistical analysis

Educators' self-ratings were described univariately by ERNT mean scores (on items and domains), standard deviations and percentages. Differences in ERNT mean scores related to age group, academic degree group and supervision experience group were tested by one-way ANOVAs, Bonferroni-corrected for multiple comparisons as more than two groups were compared on each of the three explanatory variables. The multivariable associations between nurse educators' self-ratings and age, education and supervision experience were analyzed by multiple linear regression.

Ethical considerations

The study was performed in accordance with the ethical principles of the World Medical Association's Declaration of Helsinki (2013) and registered and approved by the XXXX …, nr….. Educators who filled out and submitted their responses to the questionnaire through the web link were considered to have consented to participate in the study. To ensure anonymity, we avoided indirect using identifiable information like exact age and left out exact academic degree and educational institution.

Results

Nurse educators' self-ratings of their competencies

The nurse educators rated their competence as good on all competence domains and single competence items, and ERNT total mean score was 4.62 (SD 0.28) (**Table 2**). For the competence domains, "Relationship with students" had the highest score, whereas the second highest score was "Nursing competence." "Personality factors" received the lowest score, followed by "Pedagogical competence" and "Evaluation skills."

The single competence item on which the educators rated themselves highest was "Encouraging students to integrate theory and practice," followed by "Taking students seriously." The two lowest rated single competences were "Being consistent" and "Making active use of the literature and research in the field."

Please insert Table 2 here

Table 2
ERNT total mean score, ERNT mean domain scores and ERNT mean scores on single items

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Bivariate associations between nurse educators' self-rated competencies and individual background variables

The bivariate relationships between nurse educator self-rated competencies and the background variables of age, academic degree, and supervision experience were studied by one-way analysis of variance (ANOVA), corrected for multiple group comparisons (**Table 3**).

A one-way ANOVA analysis of differences in ERNT total mean scores of the four age groups, Bonferroni-corrected for multiple comparisons, showed that no age group mean was significantly different from any other age group mean.

A one-way ANOVA analysis of the ERNT total mean scores of the three supervision experience groups, Bonferroni-corrected for multiple comparisons, showed that no group mean was significantly different from any other group mean.

A one-way ANOVA analysis of the ERNT total mean scores of the three academic degree groups, Bonferroni-corrected for multiple comparisons, showed that the mean score of nurse educators not holding a master's degree was significantly lower ($p = .023$) than the average score of nurse educators holding a master's degree (assistant professor/lecturer competence), and significantly lower ($p = .012$) than the average score for nurse educators with a PhD or similar (associate professor or professor competence).

Please insert Table 3 here

Table 3
Nurse educators' ERNT total mean scores by age group, by academic degree, and by supervision experience group

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Multivariate associations between nurse educators' self-rated competencies and individual background variables

The multivariate associations of the dependent variable nurse educator self-rated competencies (ERNT total mean score) and the predictor variables nurse educator age, academic degree and supervision experience (background variables) were studied using multiple regression analysis (**Table 4**).

When controlling for the other predictors (age and supervision experience) in the model, the ERNT total mean score was significantly related to academic degree. Responders not holding a master's degree scored themselves significantly lower than those holding a master's degree. There was no significant difference between those holding a master's degree and those holding a PhD. When controlling for academic degree and supervision experience, no age group scored themselves significantly higher than did the reference group 40 years or younger. When controlling for age and academic degree, length of supervision experience was not significantly related to the ERNT total mean score.

Please insert Supplementary material_Table 4 here

Table 4
Nurse educators' ERNT total mean score by age group, competence, and supervision experience

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Discussion

Nurse educators self-rating of competencies

The results of this XXXX study show that nurse educators rated themselves highly on the competence domains, with "Relationships with students" receiving the highest

rating. These results deviate from an earlier XXXX cross-sectional study (Johnsen et al., 2002) looking at the same population more than twenty years ago in which "Nursing competence" and "Pedagogical competence" were the highest rated domains. Considering that today's nurse educators have considerably higher academic qualifications than in the study from 2002, it is interesting that they rated themselves highest on "Relationships with students." However, considered together with findings reported in the Finnish study by Salminen et al. (2013) and the Polish study by Ozga et al. (2021) where students rated the student-educator relationships highest, our findings are interesting and underline how educators emphasize the importance of this reciprocal relationship. In our study, the single competence item "Taking students seriously" was the second highest rated of all the ERNT items, possibly highlighting the influence of student-centered perspectives in XXXX nursing education. This result is also supported by Simmonds et al.'s (2020) finding that educators strive to provide students with a safe, welcoming and inclusive learning environment.

The nurse educators' score on the "Nursing competence" domain appeared to be the second highest, which is in line with the findings from the earlier XXXX study (Johnsen et al., 2002). In our study, the single item "Encouraging students to integrate theory and practice" was the highest rated of all ERNT items. This result concurs with the finding reported in a systematic review by Mikkonen et al. (2018) that educators strongly emphasized evidence-based knowledge when supporting students integrating theory and practice in their placements. Mikkonen et al. (2018) also reported that educators with the highest academic degrees focused most on evidence-based knowledge and underlined the importance of future nurses' competence in searching for updated research-based knowledge relevant for the clinical field (Mikkonen et al., 2018). The results of our study suggest that educators prioritize this important issue

and that they apply pedagogical approaches to support students bridging theory and practice, as is also recommended by Satoh et al. (2020).

Interestingly, the competence domain with the lowest self-rating was "Personality factors". This domain, which includes being consistent, admitting mistakes, and being open minded and flexible, also received the lowest rating in an earlier Nordic study by Salminen et al. (2013). Within this domain, the single competence item "Being consistent" was the lowest rated item of all ERNT items across competence domains in our study. This result is both interesting and alarming and might reflect how educators may feel alone in challenging situations with students, for example when assessing students at risk of failing. Being consistent can be quite challenging when powerful students activate fellow students, establish subgroups, and bring their case to educational leaders or, in the worst case, threaten legal action. Likewise, disagreements with the clinical RN supervisor concerning educational and assessment situations might affect educators' consistency.

The competence domain "Pedagogical competence" appeared to be the second lowest, in contrast to reported results from the previous XXXX study by Johnsen et al. (2002), in which that domain was rated highest. A possible factor leading to this difference is that the time an educator has at their disposal for each nursing student in clinical placement has been radically diminished, creating a considerable burden for educators (Jarosinski et al., 2022). The difference might also be explained by the educational changes in XXXX nursing education the past twenty years in XXXX. These changes entail a considerable increase in workload with less time available for any pedagogical task, and a constant pressure on educators to prior research and publications. While pedagogical competence previously was the most

highly valued and the core competence for educators, competence in research and publications has taken over that role.

When comparing the results with those of Ozga et al. (2021), who reported that postgraduate training students scored their educators lowest on *Pedagogical competence*, the difference in scores can most likely be explained by differences in educational culture, training and the educators' backgrounds, as discussed by Silva et al. (2022).

Nurse educators' competencies associated with nurse educators' background variables

The results illustrated that neither educators' age nor their supervision experience was associated with the self-rated ERNT total mean scores. These results deviate from those of Johnsen et al. (2002) for the same population, who reported that on the domain *Relationship with students*, educators with longest educator experience rated themselves significantly higher than those with shorter educator experience.

In our study, only the background variable academic degree was significantly associated with higher ERNT total mean scores. Educators not holding a master's degree scored scored themselves significantly lower than those holding a master's degree. There was none significant difference between those holding a master's degree and those holding a PhD.

Our results thereby contrast the results reported in a review by Mikkonen et al. (2018) where educators' age, academic degree, healthcare experience, research activities, and the type of organization in which they worked, were the factors that most influenced their competence as educators. On the other hand, our results are in line with those reported in a Japanese study (Satoh et al., 2020). There are, however,

some differences in the SDs between the XXXX and the Japanese samples, and thus they are not directly comparable. Despite not addressing educators' competence domains exactly, a South Korean study by Shin et al. (2021) reported that the background variables age, experience and academic degree were all significantly associated with clinical teaching efficacy, which is considered an interesting result in this research field.

Moreover, it is reasonable that higher academic nursing education might entail more confidence in one's own competence and explain why academic degree was significantly associated with the ERNT total mean score.

Limitations and strengths

One weakness of this study is that we were not able to report the response rate, as it was not possible to identify the total number of educators invited by their leader to participate. Another weakness is that there was a ceiling effect with the ERNT scores as most educators gave themselves high scores and ERNT does not discriminate between scores at the upper end of the scale. Group differences in scores on scales on which most respondents score themselves quite high, tend to be found not statistically significant. Moreover, self-reported data may lead to inaccurate findings as individuals tend to not respond correctly, consequently threatening the reliability of study findings (Althubaiti, 2016). Further adding to study limitations is the absence of any verifiable and more objective or neutral ratings. However, a recent study found that the validity of self-reported competence scores was positively associated with level of education (Vo et al., 2022), which is interesting related to our sample. It is also considered a limitation that certain categories have a small number of participants, such as 'Educator not holding a master', which accounts for only 6.6% of

the total. Small changes in the number in these categories might have affected. the accuracy and the interpretation of the results.

A strength of this study is that it was a nationwide survey, and although we are not able to report the response rate, the sample size was good (N=154) and we considered it acceptable for the performed statistical analyses. The sample size is large enough to allow for generalization. It is considered a strength that ERNT is an instrument developed in a Nordic context, and thus should be culturally suitable for XXXX nurse educators.

Conclusion

The findings in this study revealed that XXXX nurse educators rated their competencies quite highly in all ERNT domains, in particular in the domain of relationships with students – and that the single item "Integrating theory and practice" was the highest rated of all single ERNT items. These findings may suggest that nurse educators consider themselves highly competent when it comes to issues related to students and how to support them in integrating theory and clinical practice issues. The results further revealed that nurse educators self-rated competencies were significantly associated with level of academic degree.

In general, the findings are supported by recently published research within this field but deviate from findings on the same population twenty years ago.

Recommendations for educational practice and research

Based on the findings, leaders in nursing educational institutions are recommended to establish a mentoring and support team for both inexperienced and experienced

educators. In particular, it is important to provide organized mentoring for unexperienced and young educators.

Furthermore, and due to the comprehensive challenges educators face in their work, the results of this study invite educational institutions and nurse educators themselves to rate their competencies on a regular basis. Educational institutions could provide an easily completed instrument to help educators assess their level within the core competence domains. Such an assessment might support each educator's professional development in many ways. Novice educators may get an idea of how they rate themselves, bring their assessments to their employee interview, or monitor their own improvement. Currently, there are number of instruments for self-evaluation, so each institution should probably choose the instrument best suited to its needs (Lemetti et al., 2022). Moreover, instruments bringing in a more objective item than that of self-evaluation should be considered (Salminen et al., 2021).

Recommendations for further research

Based on our findings, qualitative studies are needed to explore in depth why educators rate themselves low on the competence domains "Pedagogical competence" and "Evaluation skills." Furthermore, qualitative studies aiming to better understand what characterizes nurse educators' struggles with being consistent with students and why they rate themselves low on "Making active use of the literature and research in the field" would be valuable. Moreover, research aiming to extend the ERNT instrument with competence domains addressing technological and digital competence, as well as research and publishing competence.

Funding sources

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration of Conflicting Interest

The author(s) declare no potential conflicts of competing interest with respect to the research, authorship, and/or publication of this article.

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