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Developing Mentorship In Clinical Practice: Psychometrics Properties Of The Mentors´ Competence Instrument

Dania Comparcini, Giancarlo Cicolini, Valentina Simonetti, Kristina Mikkonen, Maria Kääriäinen, Marco Tomietto
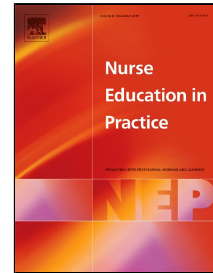
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- **Short informative title**

DEVELOPING MENTORSHIP IN CLINICAL PRACTICE: PSYCHOMETRICS PROPERTIES OF THE MENTORS´ COMPETENCE INSTRUMENT

- **Short running title**

MENTORS´COMPETENCE INSTRUMENT: PSYCHOMETRIC PROPERTIES

- **List of all authors**

Dania Comparcini[1], Giancarlo Cicolini[2], Valentina Simonetti[3], Kristina Mikkonen[4], Maria Kääriäinen[5], Marco Tomietto[6]

1. PhD, RN, Ward Manager, Azienda Ospedaliera-Universitaria "Ospedali Riuniti", Ancona, Italy;
2. PhD, MSN, RN, Nurse Director, ASL02Abruzzo, Italy; Department of Medicine and Science of Ageing, "G. D´Annunzio" University of Chieti, Italy.
3. PhD, RN, Nurse Teacher, "Politecnica delle Marche" University, Italy; ASUR Marche, Ascoli Piceno, Italy.
4. PhD, RN, Post-Doctoral Researcher, Research Unit of Nursing Science and Health Management, University of Oulu, Oulu, Finland; Orcid ID: 0000-0002-4355-3428; Scopus ID: 56373805200, Twitter @Kristinamikkon
5. PhD, RN, Professor, Research Unit of Nursing Science and Health Management, University of Oulu, Oulu, Finland; Consultant, Oulu University Hospital, Finland.
6. PhD, RN, Post-Doctoral Researcher, Research Unit of Nursing Science and Health Management, University of Oulu, Oulu, Finland; Azienda per l´Assistenza Sanitaria n.5 "Friuli Occidentale", Pordenone, Italy.

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- **Corresponding author:**

Dr. Marco TOMIETTO (Orcid ID: 0000-0002-3813-1490; Scopus ID 25823540700)

Research Unit of Nursing Science and Health Management

University of Oulu

PL 5000

FI-90014 University of Oulu, Finland

Ph. +39 3470028715

e-mail: marco.tomietto@oulu.fi

Twitter: @marco_tomietto

Abstract

Clinical placements are an important part of nursing education to developing nursing students´ competencies. In enhancing clinical learning, to focus on mentors´ competences is pivotal as they are the main role models and experts in guiding. This study is validated the Italian version of the Mentors´ Competence Instrument. A sampling frame of 648 mentors was involved. The final sample included 291 mentors (response rate 45%). Confirmatory Factor Analysis was performed. Fit indices were also calculated to evaluate validity. The scale demonstrated optimal fit indexes and its validity was confirmed by psychometrical testing. In detail, Root Mean Square Error of Approximation is 0.058, Standardized Root Mean Residual is 0.046, Comparative Fit Index is 0.893 and Tucker-Lewis Index 0.886. Cronbach´s alpha ranges from 0.77 to 0.95 among factors. This is the first validation of the scale performed in a different country from the original study. The performed psychometric testing showed that the scale is valid and reliable, as well as consistent with the theoretical structure reported for a different national context. This scale can be beneficial for comparing mentors´ competencies across different clinical learning environments and could be used to build a broader model of mentors´ competencies.

Highlights

- Clinical learning in nursing education is a hidden curriculum;
- Mentors competences are essential to foster nursing students´ clinical learning and professional competences;
- Valid and reliable scales are needed to address mentors´ competences development;
- Mentors Competence Instrument is valid and reliable;
- International comparison of mentors´ competences is essential to harmonize nursing education.

Keywords. Mentoring, competence, scale validation, clinical learning.

1. Introduction

Clinical placements are an important part of nursing education, comprising between 33% to 55% of nursing curricula in Europe (Warne et al., 2010). As such, nursing curricula must take into account how pivotal the clinical learning environments is to developing nursing students´ competencies. In enhancing clinical learning, it is necessary to focus on mentors´ competences as they are the main role models and experts in guiding students to master their nursing professional identity and clinical competences.

The clinical learning environment is indispensable to developing a nursing student's professional identity and clinical competence, both of which students are expected to master during their education. Moreover, a successful mentor-student relationship enhances clinical learning (Mikkonen et al., 2017; Saarikoski et al., 2008).

2. Background and literature

Nursing education is considered as workplace-based due to the 50% of the curriculum takes place into the clinical settings (European Directive 2013/55/EU). Nursing students´ clinical competences are mainly developed during clinical practice in healthcare organizations. The clinical placements provide to students the opportunity to learn from professional role models, such as mentors, and to enhance their understanding of nursing care into an organizational context and into inter-professional teams (Tomietto, 2018).

The clinical learning environment is defined as a complex network in which students, mentors and teachers interact within a clinical context to achieve learning outcomes (Flott and Linden, 2016). In detail, four elements were identified in a clinical learning environment: the physical space, the psychosocial and interactions factors, the organizational culture, and the elements of the teaching-learning process (Flott and Linden, 2016). A clinical learning environment is more than an individual experience or a dyadic relationship between mentor and student; rather, it is the result of the interaction between individual characteristics, motivational factors, student satisfaction (Comparcini et al., 2016), clinical and pedagogical competencies, work-team attitudes, organizational culture, student proactivity and learning expectations of the educational relationship (Saarikoski, 2018; Tomietto, 2017; Tuomikoski et al., 2018a).

Different instruments and models have been developed to understand these interactions and how they are linked to the organizational environment in which clinical learning is embedded (Saarikoski, 2018; Tomietto et al., 2016). Research in this field has mainly focused on the student perspective to better understand the core elements of the clinical learning environment (Mikkonen et al., 2016). However, it is necessary to move a step further to recognize other interacting factors involved in clinical learning; for example, team work engagement in wards was demonstrated to positively impact a student's perception of the clinical learning environment (Tomietto et al., 2016). Collecting data from different sources is essential to building comprehensive models that can help researchers understand nursing education and clinical learning. Furthermore, researchers need to develop new instruments – or update existing tools – that are in line with the evolution of nursing education, i.e. the instruments must reflect the key competencies and changing organizational settings.

The mentor-student relationship was previously identified as a key factor in the clinical learning environment (Johansson et al., 2010; Mikkonen et al., 2017; Saarikoski and Leino-Kilpi, 2002); as such, it is useful to explore mentors´ competencies from their own point of view. Furthermore, mentors' competences are not clearly assessed and harmonized internationally and they vary across different organizational and educational settings (Dobrowolska et al., 2016). Clinical learning in healthcare education is considered a hidden curriculum, due to clinical competences depend on the clinical placements, the learning opportunities in the settings and the role models which the students meet throught their placements (Bandini et al., 2017). These role models are mainly provided by mentors. A mentor needs to master nursing knowledge, skills, and attitudes to effectively guide nursing students in their clinical learning (Mikkonen et al., 2018). The mentor supports the learning process with goal-orientation, reflection during mentoring, constructive feedback and continuous student-centered evaluation (Bos et al., 2015; McSharry et al., 2017). Moreover, the mentor needs to have relational competences in order to create an open environment in which share feedbacks, foster motivation and the students´ integration in the healthcare team (Tuomikoski et al., 2019). On the other side, the organizational setting needs to be supportive to the mentoring practices in the workplace.

Recently, the Mentors´ Competence Instrument (MCI) was developed and validated in the Finnish context (Tuomikoski et al., 2018b). The scale demonstrated good validity and reliability. Moreover, it adopts the perspective of the mentor and includes many new factors that are connected to clinical learning. In detail, MCI includes individual characteristics, motivational aspects, workplace interactions between mentors and students, as well as the competencies that are involved in setting

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mutual expectations of the mentor-student relationship. This instrument holds promise in providing a comprehensive view of clinical learning and adds new perspectives to earlier research.

The aim of this study is to validate and test the psychometric characteristics of the Italian version of the Mentors´ Competence Instrument (MCI). The validation aims to enhance international comparison of mentors´ competences among different educational systems.

3. Methods

3.1. Research design and participants

The study adopted a cross-sectional survey design. The study design was performed to achieve content validity and psychometrical testing. The study – which ran from September to December 2017 - involved 648 mentors of nursing students from five Italian hospitals, out of which 291 participants returned the filled questionnaires (response rate of 45%). Multivariate normality of the data was verified before performing the Confirmatory Factor Analysis (CFA) and psychometric testing (Tabachnick and Fidell, 2006). Questionnaires with more than 5% of the values missing - or recognized as multivariate outliers - were not taken into account (Graham, 2009; Tabachnick and Fidell, 2006), yielding a final sample of 261 participants.

The mean age of the participants was 42.3 years (SD ±9.28, median 43, min 23, max 59) and 74.7% (195/261) of the participants were female. The mean work experience among participants was 17.6 years (SD ±9.45, median 17, min 1, max 38). Regarding mentoring competence, 59% (154/261) of the participants had attended a specific training about mentorship, while 54.8% (143/261) had mentored at least one student per month in the last year. A majority of the mentors - 62.5% - had completed a university-level degree (Bachelor's or Master's degree), while the remaining mentors had received education at the regional school level.

3.2. Study tool

Data were collected using a paper-based questionnaire that was distributed among Registered Nurses from five hospitals who were involved in the mentoring of clinical placement nursing students. Data concerning background variables and demographic characteristics were collected. Participants returned the questionnaire in a blinded envelope.

3.2.1. Mentors´ Competence Instrument (MCI).

The instrument included 63 items that were rated on a four-point Likert scale ranging from one (totally disagree) to four (totally agree). Previous research employing an Exploratory Factor Analysis (EFA) approach identified that these items could be grouped into 10 factors: student-centered evaluation (10 items); goal-oriented mentoring (9 items); mentoring practices in the workplace (6 items); reflection during mentoring (6 items); mentor´s characteristics (7 items); supporting the student´s learning process (8 items); mentor´s motivation (5 items); identifying the student´s level of competence (4 items); constructive feedback (4 items); and mentoring practices between student and mentor (4 items). The Cronbach´s alpha values of the factors in the previous validation study ranged from 0.76 to 0.90 (Tuomikoski et al., 2018b).

3.3. Validation process and data analyses

3.3.1. Content validity

A forward and backward translation of the instrument was performed to achieve content validity: the MCI was translated into Italian by an expert panel of 4 researchers in nursing education, and content validity was evaluated in the local context. The expert panel agreed to delete the item "I am familiar with the tasks and responsibilities of the mentor" because it was deemed to be too similar to "I am familiar with the tasks and responsibilities of the person in charge of mentoring students". The expert panel agreed on the final Italian translation of the scale.

The translated version was blindly back-translated into English by an English language expert. To ensure content validity, the original English and back-translated versions were submitted to one of the scale´s authors (KM) to compare the outcome with the original Finnish version of the MCI. The author´s evaluation ensured content validity in the translated version (Maneesriwongul and Dixon, 2004; White and Elander, 1992).

3.3.2. Preliminary analyses

Confirmatory Factor Analysis was performed to validate the MCI. Preliminary analyses were performed to ensure multivariate normality, which is a prerequisite of a reliable CFA (Kline, 2010). Missing data were assessed to ensure that they were Missing Completely at Random (MCAR)

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(Graham, 2009; Little, 1988); in this study, Little´s MCAR test was non-significant (p=0.392, chi-square=377.835), verifying the complete randomness of the missing data. Questionnaires with more than 5% missing data were then listwise deleted (Graham, 2009). Multivariate outliers were assessed by calculating Mahalanobis distances and their p-value in the chi-square distribution, considering 63 degrees of freedom. After the listwise deletion of missing data and multivariate outliers, multivariate normality was tested using Mardia´s kurtosis index, i.e. multivariate normality is verified when Mardia´s kurtosis is lower than the critical value v*(v+2) (v=number of items) (Lombardi and Pastore, 2012; Tabachnick and Fidell, 2006). In this study, Mardia´s kurtosis was 3887.734 while the critical value was 4035; hence, multivariate normality was verified.

3.3.3. Psychometric testing: reliability and validity

Cronbach's alpha values were calculated to measure instrument reliability. Values over 0.90 are considered excellent, values between 0.70 and 0.90 are classified as good, while values between 0.60 and 0.70 are acceptable. Values under 0.60 are generally considered non-acceptable (DeVellis, 2011; Sartori and Pasini, 2007). To identify the contribution of each item to the overall internal consistency, alpha values were calculated following the one-by-one deletion of items from each factor; an item should be deleted if the scale's reliability increases over 0.10 (Ferketich, 1991). Corrected item-to-total correlations were calculated and considered acceptable if they were over 0.30 (DeVellis, 2011).

Instrument validity was tested through CFA applying the Maximum Likelihood (ML) approach and by calculating various fit indices. The CFA was based on the EFA performed by Tuomikoski et al. (2018). Fit indices were considered acceptable if RMSEA (Root Mean Square Error of Approximation) and SRMR (Standardized Root Mean Residual) are < 0.08 and CFI (Comparative Fit Index) and TLI (Tucker-Lewis Index) are > 0.90 (Byrne, 2009; Kline, 2010). The Coefficient of Determination (CD) – which is an estimation of the explained variance (R^2) in CFA or Structural Equation Modelling approaches – was calculated to estimate the overall capacity of the model to explain what it was designed to measure (Kline, 2010).

Descriptive statistics were performed to describe scale items and the sample.

4. Ethical considerations

A privacy policy was required according to national and European laws (GDPR, 2018). Data confidentiality, which was in line with the Personal Data Act (523/1999), was ensured in the data collection and data analysis phases. The original paper version questionnaires were stored by researchers and the electronic data were saved in a protected folder, accessible only by the principal investigator. Participants received an information letter that included details about the study as well

as information about how participant data would be handled. The submission of a completed questionnaire was considered consent to participate in the study. Permission to use the MCI was requested and granted by the authors of the scale (MK, KM). Due to the descriptive aims of the study and the type of data collected, no ethical permission was necessary. Administrative permission to collect data was granted by the hospitals involved in the study.

5. Findings

The psychometric testing demonstrated that the scale is reliable and valid. For example, the calculated Cronbach´s alpha values – which ranged from 0.77 to 0.95 among factors - confirmed good/excellent reliability (DeVellis, 2011). Skewness and kurtosis were mainly in the range of 1 and -1, which indicates normal distribution of the answers around the mean value. Within each factor, the one-by-one deletion of items never led to a more than 0.10 increase in Cronbach's alpha, and the item-to-total correlations were all over 0.30. Following these analyses, three items showed weaker, yet acceptable, results. For example, item 2.4 "I gradually decrease my involvement in mentoring as the student´s skill increase" had an item-to-total correlation of 0.35 and the factor´s alpha value increased by 0.06 after item deletion. Similarly, item 5.9 "I contact the mentoring teacher only when problems arise with the student" showed an item-to-total correlation of 0.38 and increased the alpha value by 0.02 upon deletion. Furthermore, item 7.10 "I keep in touch regularly with the mentoring teacher responsible for the student´s clinical practice" had an item-to-total correlation of 0.41 and increased the alpha value by 0.01 upon deletion. Table 1 reports detailed descriptive statistics and reliability indexes for the items. The various fit indices also demonstrate the validity of the scale, i.e. chi-square=3339.826 (p<0.001), RMSEA=0.058, SRMR=0.046, CFI=0.893, TLI=0.886 (for more information, see Table 2).

6. Discussion

The MCI is a valid and reliable scale for assessing mentors´ competence at guiding nursing students´ clinical learning in the Italian context. The performed analyses confirm the validity of the factors detected in a previous study (Tuomikoski et al., 2018b). This is the first Confirmatory Factor Analysis that has been performed on this scale, and this psychometric approach further contributes to confirming the scale´s validity on an international level. The items which showed low reliability scores in this study were identical to those that had low factor loadings in research by Tuomikoski et al. (2018); more specifically, items 2.4, 5.9 and 7.10 had factor loadings of 0.579, 0.372 and 0.407, respectively. All of these loadings were the lowest in the factors that the items belong to. In this

study, only one item from the original scale was removed in the content validity phase ("I am familiar with the tasks and responsibilities of the mentor"). Our findings confirmed the main theoretical and psychometric structure of the scale. The weakness of the three items detected in the reliability assessment did not affect the scale´s validity, which is further supported by adequate fit values. The explained variance of the model was also optimal, and confirms that the scale reliably represents mentors´ competencies in guiding clinical practice nursing students.

The Italian translation of this scale brings a new instrument for assessing factors connected with the clinical learning environment (Flott and Linden, 2016). Until now, research in this field has mainly been concerned with students´ perceptions of the learning experience even though the clinical learning environment involves many factors that define the complex network and, subsequently, create the learning outcomes (Saarikoski, 2017). Therefore, the assessment of mentors' competencies presented here can contribute knowledge about an important element in effective student-mentor relationships (Oikarainen et al., 2018; Saarikoski and Strandell-Laine, 2017). Previous research has already identified the supervisory relationship as a crucial factor in the creation of a positive clinical learning environment (Mikkonen et al., 2017; Saarikoski et al., 2008; Tomietto et al., 2012); however, there has been a lack of research into how a mentors' self-assessments of their competence contribute to the supervisory relationship.

The MCI addresses new challenges in clinical learning environment research in various ways. First of all, this instrument focuses on the mentor's perspective and explores five distinct areas of mentorship. Furthermore, the instrument provides a comprehensive view of how factors specific to the mentor (mentors´ characteristics and motivation of the mentor), student (identifying the student´s level of competence), organizational environment (mentoring practices in the workplace and mentoring practices between student and mentor), and learning (supporting the student´s learning process, constructive feedback and supporting the student´s learning process) contribute to the clinical learning experience. All of these factors interact to define the mutual expectations of the mentor-student relationship, and work to bridge the learning contract between the two parties (goal-oriented mentoring and student-centered evaluation).

In this way, the MCI has the potential to influence new conceptual models related to the clinical learning environment and help design educational interventions aimed at enhancing mentors´ competencies. These contributions could develop nursing education and enhance the clinical learning experience. This study introduced a new scale that is relevant in the scope of Italian nursing

education. This can be considered a strength as the presented scale, when applied correctly, can improve the clinical learning environment research and the educational practice. Moreover, health care organizations and universities are presented with a new scale that they can use to improve mentors' competencies by designing tailor-made educational interventions.

6.1. Limitations

The presented research included quite a small sample; hence, a wider sample could give a more accurate representation of the reality of nursing education in Italy. Furthermore, it is important to consider that mentorship models may differ across health care organizations and universities when interpreting the results. National collaboration on this topic could help further validate this scale and develop a common framework for mentorship in Italian nursing education.

6.2. Implications

This validation study dictates that further research is necessary to developing a solid mentorship model and nursing education in the clinical learning environment. The availability of a valid and reliable scale is the first step to developing a model and determining how to advance nursing education. Future research could also address the interaction of organizational variables embedded in the clinical learning environment (e.g. inter-professional collaboration), which may affect student experiences and mentors´ competencies. For this reason, further research could integrate data from a wide array of sources (students, mentors, work team, ward managers) into a comprehensive model that explains how individual variables, along with the interactions between mentors, students, work team and more general organizational practices, influence the clinical learning experience of students.

7. Conclusions

The presented research shows that the Mentors´ Competence Instrument is valid and reliable, and holds great potential as a tool in designing new perspectives in nursing education. Moreover, as it focuses on the mentor's perspective, it could prove useful to planning educational interventions aimed at building clinical mentoring competence. Clinical learning represents a substantial part of nursing students´ education, and learning in the clinical setting is predominantly guided by mentors. Because the MCI supports the assessment and development of mentors' competencies, it can be extended to improving the clinical learning environment.

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Conflict of interest

Authors have no conflict of interests to declare related to this manuscript and research.

Author contributions

Criteria	Author Initials
Made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data;	MT, KM, MK, DC, GC
Involved in drafting the manuscript or revising it critically for important intellectual content;	VS, MT, DC, KM
Given final approval of the version to be published. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content;	GC, MT, DC, KM, MK, VS
Agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.	GC, MT, DC, KM, MK, VS

Highlights

- Clinical learning in nursing education is a hidden curriculum;
- Mentors competences are essential to foster nursing students´ clinical learning and professional competences;
- Valid and reliable scales are needed to address mentors´ competences development;
- **Mentors' Competence** Instrument is valid and reliable in the Italian context;
- International comparison of mentors´ competences in nursing education is essential to build an empirically-founded, universal view of clinical learning.

Factor	Item	mean (±SD)	median	min	max	skewness	kurtosis	Cronbach alpha if item deleted	Item to total correlation
MENTORING PRACTICES IN WORKPLACE	A.1. I am well-acquainted with the quality requirements and criteria relating to clinical practice and learning at work in social and health care.	3.13 (±0.79)	3	1	4	-0.76	0.33	0.91	0.79
(α=0.92)	A.2. I am well-acquainted with the mentoring process of students in clinical practice within my organization.	3.10 (±0.85)	3	1	4	-0.72	-0.12	0.91	0.81
	A.3. I am aware of generally agreed practices for student mentoring within my organization.	2.98 (±0.88)	3	1	4	-0.51	-0.49	0.90	0.83
	A.4. I follow generally agreed practices during student mentoring.	3.08 (±0.86)	3	1	4	-0.70	-0.15	0.91	0.76
	A.5. I am familiar with the tasks and responsibilities of the person in charge of mentoring students.	3.18 (±0.83)	3	1	4	-0.79	-0.01	0.90	0.82
MENTORING PRACTICES BETWEEN THE STUDENT, TEACHER AND MENTOR	B.1. I go through the workplace rules while orienting the student to the workplace.	3.21 (±0.79)	3	1	4	-0.71	-0.56	0.86	0.65
	B.2. I go through the responsibilities and roles of the student and the mentor, so that the student is familiar with what can and cannot be done independently.	3.33 (±0.75)	3	1	4	-0.94	-0.06	0.80	0.80
(α=0.87)	B.3. I agree upon common rules of action during clinical practice with the student, and on how the accomplishment of these will be observed.	3.42 (±0.71)	4	1	4	-1.20	0.47	0.83	0.72
	B.4. I discuss problematic issues with the student whenever necessary and remind him/her of generally agreed practices.	3.39 (±0.75)	4	1	4	-1.22	1.42	0.84	0.72
MENTOR CHARACTERISITCS	1.1. It is easy for students to approach me.	3.35 (±0.69)	3	1	4	-0.88	1.32	0.91	0.73
(α=0.92)	1.2. I am empathetic towards students during mentoring.	3.37 (±0.70)	3	1	4	-0.92	0.66	0.90	0.81

	1.3. I am flexible during the mentoring of students.	3.32 (±0.68)	3	1	4	-0.79	0.63	0.91	0.71
	1.4. I am patient during the mentoring of students.	3.35 (±0.71)	3	1	4	-0.95	0.76	0.90	0.78
	1.5. I am supportive of students.	3.51 (±0.65)	4	1	4	-1.31	1.90	0.90	0.81
	1.6. I value the student as a member of the health care team.	3.47 (±0.68)	4	1	4	-1.29	1.75	0.90	0.75
	1.7. As a mentor, I am fair to all students.	3.45 (±0.71)	4	1	4	-1.29	1.63	0.92	0.67
IDENTIFYING INDIVIDUAL NEEDS OF STUDENTS FOR MENTORING (α=0.77)	2.1. I encourage the student to complete and try out work tasks independently.	3.41 (±0.67)	4	1	4	-0.94	0.74	0.63	0.65
	2.2. I guide the student in performing a certain concrete work task.	3.43 (±0.70)	4	1	4	-1.02	0.56	0.63	0.65
	2.3. As the student´s skills improve, I increase the level of difficulty of the tasks that the student is to perform.	3.28 (±0.76)	3	1	4	-0.84	0.27	0.65	0.59
	2.4. I gradually decrease my involvement in mentoring as the student's skills increase.	2.73 (±0.98)	3	1	4	-0.31	-0.91	0.82	0.35
MOTIVATION OF THE MENTOR (α=0.88)	3.1. Positive experiences in mentoring students increase my confidence regarding my ability to work as a mentor.	3.39 (±0.69)	3	1	4	-0.97	0.79	0.84	0.74
	3.2. Encouragement from colleagues regarding the mentoring of students increases my enthusiasm to mentor students.	3.15 (±0.82)	3	1	4	-0.71	-0.11	0.87	0.61
	3.3. Constructive feedback regarding my mentoring of students increases my motivation to mentor students.	3.39 (±0.70)	3	1	4	-0.97	0.68	0.83	0.77
	3.4. I want to learn and develop as a mentor.	3.46 (±0.68)	4	1	4	-1.10	0.84	0.84	0.75

		Mean (±SD)	Median	Min	Max				
	3.5. I am interested in mentoring students.	3.34 (±0.80)	4	1	4	-1.06	0.46	0.86	0.67
SUPPORTING THE LEARNING PROCESS OF THE STUDENT (α=0.92)	4.1. I stimulate the student's interest in work tasks by explaining their background and significance in the whole work process.	3.43 (±0.69)	4	1	4	-1.09	0.99	0.91	0.75
	4.2. I clarify what I see as important during the clinical practice to the student.	3.45 (±0.68)	4	1	4	-1.07	0.85	0.91	0.71
	4.3. I recognize my own style of learning (for example an active participant, a practical implementer, a logical thinker, a reflecting observer).	3.30 (±0.69)	3	1	4	-0.75	0.47	0.92	0.70
	4.4. I ensure that the student has understood things correctly.	3.13 (±0.70)	3	1	4	-0.53	0.27	0.92	0.68
	4.5. I guide the student in distinguishing between what is essential and what are minor details in order to develop the student`s professional knowledge (for example what is most important in this situation?).	3.32 (±0.69)	3	1	4	-0.81	0.52	0.91	0.80
	4.6. I ask the student to justify his or her thoughts/actions (for example for what reason did you do it this way, or tell me how you did it).	3.28 (±0.74)	3	1	4	-0.74	0.04	0.91	0.80
	4.7. As a mentor, I justify why I do things a certain way and explain what knowledge / experience my decisions are based on.	3.39 (±0.71)	4	1	4	-1.06	0.98	0.91	0.78
	4.8. When a student makes a mistake, I reflect upon what could be done to minimize errors.	3.36 (±0.75)	4	1	4	-0.85	-0.14	0.92	0.71
GOAL-ORIENTATION IN MENTORING (α=0.93)	5.1. I guide students in setting the goals that they want to achieve during the clinical practice.	3.20 (±0.82)	3	1	4	-0.77	-0.07	0.91	0.81
	5.2. I find out if the student's learning goals are consistent with the goals of the programme curriculum for student development	3.13 (±0.81)	3	1	4	-0.54	-0.52	0.92	0.78

		Mean (±SD)							
	during clinical practice.								
	5.3. I find out if the student's learning goals are concrete enough so that in practical situations the student knows what his or her goals are and how to attain them.	3.17 (±0.80)	3	1	4	-0.59	-0.45	0.91	0.82
	5.4. I find out whether or not the student's learning goals correspond with the learning opportunities provided at the place where the clinical practice is completed.	3.17 (±0.79)	3	1	4	-0.64	-0.26	0.91	0.81
	5.5. I clarify to the student what is expected of him or her in order to reach the set goals.	3.26 (±0.77)	3	1	4	-0.79	0.06	0.92	0.79
	5.6. I provide feedback to the student on the goals that he/she has set.	3.24 (±0.78)	3	1	4	-0.79	0.11	0.91	0.81
	5.7. I encourage the student to follow the fulfillment of his or her goals independently.	3.28 (±0.79)	3	1	4	-0.87	0.17	0.92	0.78
	5.8. I go through the goals and the fulfillment of these together with the student (for example in a mentoring session at the end of the clinical practice).	3.24 (±0.80)	3	1	4	-0.78	-0.08	0.91	0.80
	5.9. I contact the mentoring teacher only when problems arise with the student.	2.90 (±1.01)	3	1	4	-0.55	-0.97	0.95	0.38
REFLECTION DURING MENTORING (α=0.93)	6.1. During the reflection time, I aim to encourage reciprocal feedback with the student.	3.23 (±0.75)	3	1	4	-0.63	-0.26	0.93	0.75
	6.2. I try to create a safe atmosphere during the reflection time.	3.40 (±0.73)	4	1	4	-0.96	0.12	0.92	0.82
	6.3. I encourage the student to share his or her experiences.	3.38 (±0.72)	4	1	4	-0.90	0.18	0.91	0.84
	6.4. I relate empathetically to the student's experiences.	3.36 (±0.74)	4	1	4	-0.92	0.22	0.92	0.80
	6.5. I am aware that the student`s experiences are unique	3.43	4	1	4	-1.09	1.07	0.92	0.80

Category	Item	Mean (±SD)							
	and significant for his/her learning.	(±0.68)							
	6.6. I believe that discussion on the student's experiences improves his/her learning.	3.44 (±0.67)	4	1	4	-1.10	1.08	0.92	0.80
STUDENT-CENTERED EVALUATION (α=0.95)	7.1. I encourage the student to remember his/her experiences as they happened and to evaluate them.	3.30 (±0.71)	3	1	4	-0.70	-0.01	0.93	0.80
	7.2. During the evaluation, I guide the student in dealing with possible negative feelings.	3.22 (±0.76)	3	1	4	-0.61	-0.37	0.93	0.79
	7.3. I ask the student to critically and holistically reflect upon why things happened the way they did.	3.00 (±0.71)	3	1	4	-0.68	-0.05	0.93	0.78
	7.4. I encourage the student to evaluate the situation from many perspectives / to find alternative explanations for events.	3.31 (±0.70)	3	1	4	-0.71	0.09	0.93	0.83
	7.5 I emphasize that the evaluation of one's own learning can bring forth new thoughts, feelings and performances that the student may not have previously been aware of.	3.34 (±0.74)	3	1	4	-0.87	0.13	0.93	0.79
	7.6. I guide the student to question what is regarded as self-evident.	3.33 (±0.74)	3	1	4	-0.89	0.38	0.93	0.81
	7.7. I support the student in evaluating his or her own activities.	3.34 (±0.73)	3	1	4	-0.86	0.22	0.93	0.84
	7.8. I encourage students to actively deal with their experiences during the entire clinical practice.	3.36 (±0.71)	3	1	4	-0.83	0.13	0.93	0.85
	7.9. I reflect upon which activities could be developed and how together with the student.	3.28 (±0.74)	3	1	4	-0.79	0.19	0.93	0.82
	7.10. I keep in touch regularly with the mentoring teacher responsible for the student´s clinical practice.	2.52 (±1.09)	3	1	4	-0.03	-1.29	0.96	0.41

CONSTRUCTIVE FEEDBACK (α=0.86)	8.1. At the end of the clinical practice, I give a positive final evaluation of the student's performance.	3.05 (±0.76)	3	1	4	-0.51	-0.03	0.88	0.54
	8.2. I provide feedback immediately following a certain activity.	3.12 (±0.77)	3	1	4	-0.46	-0.48	0.80	0.73
	8.3. I provide feedback for the future and development of the student.	3.30 (±0.76)	3	1	4	-0.82	0.05	0.78	0.78
	8.4. I provide feedback so that the student can change their practices.	3.22 (±0.73)	3	1	4	-0.60	-0.15	0.79	0.76

Table 1. Items´ descriptive statistics and factors´ reliability

Chi-square	p	RMSEA	SRMR	CFI	TLI	CD
3339.826	<0.001	0.058	0.046	0.893	0.886	1.000

Table 2. CFA fit indexes