Research article

Integrative nursing in Europe - A competency profile for nursing students validated in a Delphi-study

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ABSTRACT

Background: Integrative nursing is a framework for providing holistic care and includes complementary therapies and non-pharmacological interventions. There is no common European approach on how to educate healthcare professionals on complementary therapies and non-pharmacological interventions for symptom management. Nurses report a lack of formal education as the main barrier to applying integrative nursing.
Objectives: The aim of this study is to develop and validate integrative nursing learning outcomes in a competency profile for bachelor nursing students.
Methods: A two-round Delphi study was conducted with experts on integrative nursing and/or nurse education from eight European countries. The expert panelists rated their level of agreement with learning outcomes in relation to "*Knowledge, Skills, Responsibility and Autonomy*" on a nine-point Likert scale (1 = strongly disagree/9 = strongly agree) and were invited to add comments in an open text field. The Rand manual's description of levels of appropriateness was used, and experts' suggestions were analyzed thematically and used for reformulating or adding learning outcomes.
Results: In the first round, 19 out of 23 experts participated, versus 18 in the second round. In all, thirty-five learning outcomes within the three areas *Knowledge, Skills and Responsibility/Autonomy* were rated. After two Delphi rounds, twenty-four included learning outcomes were classified as appropriate, with median levels of appropriateness between 7 and 9; none had been classified as inappropriate. The learning outcomes include general knowledge about selected complementary therapies and non-pharmacological interventions, safety, national rules and regulations, communication and ethical skills and competencies for self-care actions and for applying simple evidence-based complementary therapies and non-pharmacological interventions in nursing practice.
Conclusions: The competency profile consist of validated competencies; the high degree of consensus from the expert panelists makes the learning outcomes relevant for structuring a teaching module for nursing students about integrative nursing.

1. Introduction

The use of complementary therapies in Europe is on the rise. This indicates that the population's health behavior is seeking more than conventional healthcare in relation to both health prevention and the management of chronic conditions (Fjær et al., 2020; Harris et al., 2012). A range of sociodemographic indictors such as age and income,

individual and country-level resources are predictors for use of complementary therapies (Fjær et al., 2020). Complementary therapies represent a variety of therapies and philosophies. Mainly complementary therapies have been used outside conventional healthcare, but in some countries certain treatments, such as acupuncture and mindfulness, have been adapted or adopted by conventional healthcare (Falkenberg et al., 2012). In conventional healthcare settings,

complementary therapies are also referred to as non-pharmacological interventions (Kia et al., 2021; Lewis et al., 2018). A literature review documented that European citizens are positive about complementary therapies but would like to be guided by healthcare professionals (Nissen et al., 2012). Across Europe, the EU-funded research project CAM-brella found extraordinary diversity in legalization and regulation affecting people that use complementary therapies (Wiesener et al., 2012). Currently, these perspectives are not part of healthcare education in Europe, and a strategic recommendation for the future (Fischer et al., 2014).

Integrative Nursing is a framework for providing whole-person care and can be practiced in all clinical settings to advance health and wellbeing. Principles of integrative nursing offer specific guidance and include the use of evidence-informed complementary therapies depending on need and context (Kreitzer, 2015; Kreitzer and Koithan, 2019). At the University of Minnesota, integrative nursing is offered as an educational topic at postgraduate level at the Center for Spirituality and Healing. Within Europe, integrative nursing is relatively unfamiliar but still consistent with a holistic and person-centred approach in nursing (Jong et al., 2019). However, some country-specific initiatives have been taken to include selected complementary therapies in conventional healthcare. For example, in Germany, the CanMEDS role competencies have been used to guide the training on complementary and integrative medicine in undergraduate medical education (Homberg et al., 2020). Similar initiatives for nurse education in Europe have not been found. A review of published literature (Gunnarsdottir et al., 2022) about educational programs of complementary therapies for nursing students found only two programs representing Europe; one from the United Kingdom (Rankin-Box, 1995) and one from Turkey (Toygar et al., 2020). A mapping study representing a purposeful sampling of fifteen European countries did not find a consistent approach to integrative nursing and complementary therapies within nurse education. Although taught at regular nursing educational institutes, the courses were not embedded in mainstream education (van der Heijden et al., 2022).

In Europe, nurse education follows the European Parliament's directive on harmonized requirements (Directive 2013/55/EU) ensuring that the complex needs of qualified care and treatment are met (European Parliament, 2013). Every member state furthermore has national curricula structuring the education for nurses. No formal education is given to nurse students on how to advise or practice complementary therapies and integrate non-pharmacological interventions in their clinical practice. A systematic review documents, that people who use healthcare services benefits from an open dialogue about complementary therapies (Stie et al., 2020) and that nurses' ask for more formal knowledge to initiate this communication (Hall et al., 2017). Thus, educational programs about integrative nursing and complementary therapies for nursing students are required. It is a global political strategy that education incorporates a competency-based approach to curricula aligned with health and health system needs (World Health Organization, 2021).

Supported by the European Commission (Erasmus+ 2019-1-NL01-KA203-060478), the Integrative Nursing Education Series (INES) project is a collaboration between representatives of five medical and academic institutions in four European countries. The overall objective of the project is to strengthen European nursing students' knowledge, skills and competencies regarding integrative nursing and safe use of evidence-based complementary therapies and non-pharmacological interventions. To this aim, educational modules for bachelor nursing students are being prepared. However, there was no competency profile and learning outcomes to guide content selection and evaluate the benefits of this education. The aim of this study was to develop a competency profile for bachelor nursing students on integrative nursing and evidence-based complementary therapies and non-pharmacological interventions by asking experts in the field to critically review and validate suggested learning outcomes.

2. Methods

2.1. Development of a competency profile for nursing students

A draft competency profile was developed through an iterative and creative process within the INES group, using the UN Sustainable Development Goals as an overall framework (Dossey et al., 2019). Previous findings from the INES study (Gunnarsdottir et al., 2022; van der Heijden et al., 2022) were also used in this process.

The general formulation of learning outcomes in nurse education follows the European Qualification Framework (EQF) level 6 (Council Recommendation, 2018), which implies that students must have as a goal advanced knowledge and skills as well as responsibility and autonomy in unpredictable situations. The EQF levels 4 to 6 were used to describe the INES competency profile for nursing students, as these correspond with responsibility for decision-making in stable to complex patient situations. Bloom's taxonomy (Bilon, 2019) served to take the hierarchical ordering of cognitive skills into account.

The definition and the six principles of Integrative Nursing described by Kreitzer (2015) and Kreitzer and Koithan (2019) served as a theoretical basis for the competency profile. Kreitzer and Koithan describe integrative nursing as meta-theoretical perspective including nursing history, values and theory, which aligns with the conceptual framework "The Fundamentals of Care" (Kitson et al., 2013). Both frameworks outline core competencies in nursing and help nurses to define and prioritize their activities. To emphasize that integrative nursing combines two or more paradigms of care and treatment modalities, we used the wordings "Integrative Nursing" and "Complementary and non-pharmacological therapies" in formulating the learning outcomes (Frisch and Rabinowitsch, 2019). We acknowledge that in some contexts, it will be more relevant to use the word interventions instead of therapies and suggest a pragmatic use when phrasing the combination.

The draft INES competency profile consisted of 22 suggested learning outcomes in relation to three major competencies group of "*Knowledge*", "*Skills*," and "*Responsibility and Autonomy*". *Skills* was further divided into *communication skills*, *practical skills*, *reflexive skills*, and *ethical skills*.

2.2. A Delphi study

A two-round Delphi study was conducted using a descriptive design applying the modified RAND-Delphi method. This method seeks to obtain consensus and allows the inclusion of experts from a variety of settings, without the need to meet face-to-face (Fitch, 2001).

The group of experts was composed through purposive sampling. Members of the INES group contacted people in their professional network around Europe who had expertise in the field. Twenty-three experts from 10 different European countries were personally invited by e-mail to take part in the two-round Delphi online survey. The term "experts" was defined by the following qualifications: nurse education, MSc degree, experience in nurse education, knowledge about integrative nursing, and experience of working with complementary therapies and non-pharmacological interventions. An introduction letter explained the background and development process for the INES competency profile, and clarified was what expected from them. The experts were anonymous to each other, thus eliminating the possible influence of dominant persons. To ensure a dynamic consensus process, having participated in the first Delphi round was a prerequisite for participation in the second round. The two Delphi rounds took place from March until May 2021, and each round lasted two weeks. A reminder letter was sent out after one week.

In the first round, each participant was sent a web link to an online questionnaire. The questionnaire was designed in SurveyXact (Ramboll, 2020) and consisted of three sections with the suggested learning outcomes in relation to "*Knowledge*", "*Skills*" and "*Responsibility and Autonomy*". The relevance of each learning outcome was to be rated on a nine-point Likert scale from 1 = strongly disagree to 9 = strongly

agree with appropriateness. The participants could add comments or suggestions for changes to each section in an open text field. They were instructed to think about nursing students in a bachelor program when rating the learning outcomes. According to European Credit Transfer System (ECTS), one year of full-time study corresponds to 60 points and the suggested competency profile equivalents the completion of a 5–10 ETCS course.

To strengthen construct and content validity, the questionnaire had been pilot-tested two times before it was distributed online; first by two members of the INES group and second by two members of the expert group. The language used was English and the participants were allowed to add comments in either English or their own language. Participants were invited to contact the research group if they had any language difficulties.

2.3. Analysis

In the analyses, we used the Rand Manual's descriptions of levels of appropriateness and the operational definitions of agreement and disagreement according to a panel size of more than 16 experts (Fitch, 2001). A median rating of 7–9 on the Likert scale with no more than four ratings outside the median was considered 'appropriate' without disagreement. Median values of 7–9 with more than four ratings outside the 3-point region, as well as median values between 4 and 6 were considered 'uncertain'. Median values between 1 and 3 were to be classified as 'inappropriate' (Fitch, 2001).

After the first round, the competency profile was adjusted according to the expert panel's ratings and suggestions. The research team analyzed and sorted thematically every comment and specific suggestions for changes. The results formed the basis for reformulating statements rated as uncertain and adding new statements that were missing. Learning outcomes classified as inappropriate or uncertain and with no suggestions for changes were excluded.

In the second Delphi round, the experts were asked to rate both new and changed statements using the same Likert scale.

2.4. Ethical considerations

All experts received information about the study and gave consent to use data anonymously as well as consent to use data including their professional details within the scope of the INES project. The project was approved by and registered at VIA University College (File nr. #273798) following the directions of the GDPR (General Data Protection Regulation), in accordance with data processing and storage (Radley-Gardner et al., 2016).

3. Results

3.1. Participants and overall results from the two rounds in the Delphi process

In the first round, 19 out of 23 invited experts completed the questionnaire (response rate 83 %). In the second round, 18 out of 19 participants from the first round responded (response rate 95 %). The panelists in both rounds represented eight European countries. Most were female and 42 % were assistant professor or associate professor with a nursing background, while 26 % were employed as registered nurses (Table 1).

The numbers of learning outcomes classified as appropriate or uncertain in both Delphi rounds, as well as the numbers of learning outcomes changed or added after the first round are shown in the flowchart in Fig. 1. Twenty-two learning outcomes were rated in the first round. Fifteen statements were classified as *appropriate* while seven statements (32 %) were classified uncertain. All uncertain items still had median values between 7 and 9, but with more than four ratings outside the median level. None of the learning outcome was rated inappropriate.

Table 1
Characteristic for participants in the two Delphi rounds.

Participants	Round 1 N = 19	Round 2 N = 18
Gender N (%)		
Female	16 (84 %)	15 (83 %)
Male	3 (16 %)	3 (16 %)
Professional background N (%)		
Registered nurse/trainer	5 (26 %)	4 (22 %)
Master degree/lecturer	4 (21 %)	4 (21 %)
Assistant or associate professor	8 (42 %)	8 (42 %)
Other[a]	2 (11 %)	2 (11 %)
Country N (%)		
Sweden	4 (21 %)	4 (21 %)
Netherlands	4 (21 %)	4 (21 %)
Denmark	3 (16 %)	3 (16 %)
Iceland	3 (16 %)	2 (11 %)
Germany	2 (11 %)	2 (11 %)
Spain	1 (5 %)	1 (5 %)
Finland	1 (5 %)	1 (5 %)
Norway	1 (5 %)	1 (5 %)

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Based on the panelists' comments in the first round, five learning outcomes were added, and 'uncertain items' were reformulated. For instance, regarding "*Knowledge*", two statements emphasizing general knowledge and possible interactions when patients use complementary therapies were added. Two uncertain learning outcomes were reformulated. The statement "*Analyze knowledge from integrative nurses' narratives*" was changed to start with the wording "*Interpret knowledge from case stories about nurses use of complementary and non-pharmacological therapies*" (Table 3, item 7). Concerning "*Skills*", two learning outcomes were reformulated and five were added, for example about communications skills (Table 4, items 2 and 3). Under "*Responsibility and Autonomy*", four out of six learning outcomes were rated appropriate in the first round. Based on the panelists' comments, the statement regarding possibilities to consult a specialist (Table 5, item 5) was reformulated.

Three of the learning outcomes rated as uncertain in the first round were excluded (see Table 2). One of these was "*Practice simple complementary techniques such as massage, relaxation and breathing exercises*", because the panelists consistently raised concerns about practicing concrete skills in a time-limited module. Regarding "*Discuss the caring-healing potential that integrative nursing offers*", comments suggested this to be a competency for an expert nurse and not a nurse student.

In the second round, the panelists rated all reformulated and added statements. In all, this concerned four statements about "Knowledge", seven about "Skills", and two about "Responsibility and Autonomy" (see flowchart Fig. 1). Of the thirteen learning outcomes, ten were rated appropriate and three were rated uncertain and excluded (see Table 2). This implied that some additionally proposed learning outcomes were not validated as appropriate by the entire panel, for example "*applying a risk-benefit analysis*" (Table 2, item 5). The level of appropriateness remained uncertain for one of the reformulated learning outcomes after the first round and this was therefore excluded; "*Interpret personal experiences with complementary and non-pharmacological therapies*" (Table 2, item 2).

3.2. Validated learning outcomes for a student competency profile

The overall results of the panelists' ratings and the appropriateness of the learning outcomes from both Delphi rounds are presented in Tables 3–5.

Regarding *Knowledge* (Table 3), seven statements were judged appropriate, characterizing general and specific knowledge of selected complementary and non-pharmacological therapies, knowledge of safety, national rules and regulations and a patient perspective. According to Bloom's taxonomy, the learning outcomes reflect
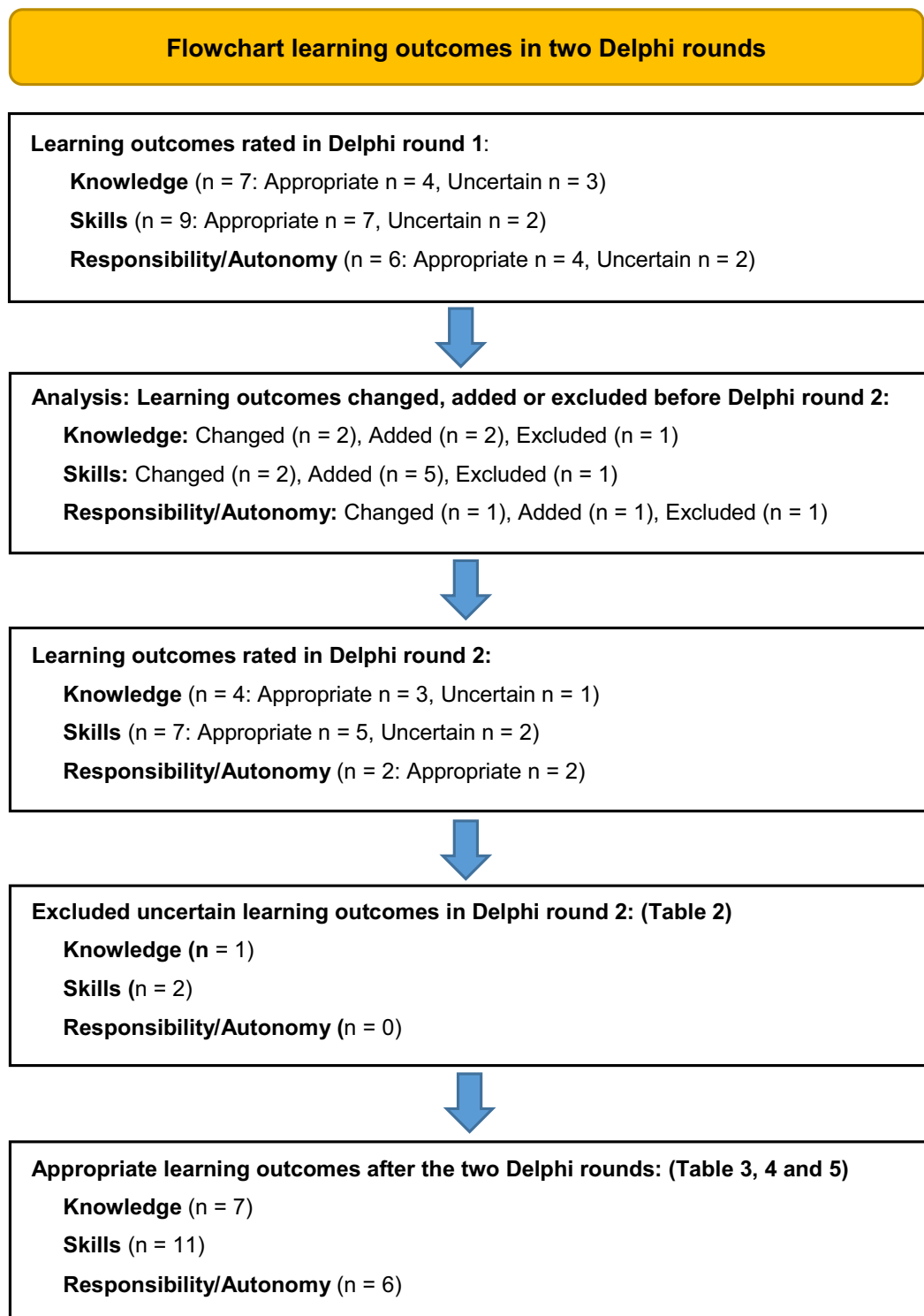
Flowchart learning outcomes in two Delphi rounds

Learning outcomes rated in Delphi round 1:

Knowledge (n = 7: Appropriate n = 4, Uncertain n = 3)

Skills (n = 9: Appropriate n = 7, Uncertain n = 2)

Responsibility/Autonomy (n = 6: Appropriate n = 4, Uncertain n = 2)

Analysis: Learning outcomes changed, added or excluded before Delphi round 2:

Knowledge: Changed (n = 2), Added (n = 2), Excluded (n = 1)

Skills: Changed (n = 2), Added (n = 5), Excluded (n = 1)

Responsibility/Autonomy: Changed (n = 1), Added (n = 1), Excluded (n = 1)

Learning outcomes rated in Delphi round 2:

Knowledge (n = 4: Appropriate n = 3, Uncertain n = 1)

Skills (n = 7: Appropriate n = 5, Uncertain n = 2)

Responsibility/Autonomy (n = 2: Appropriate n = 2)

Excluded uncertain learning outcomes in Delphi round 2: (Table 2)

Knowledge (n = 1)

Skills (n = 2)

Responsibility/Autonomy (n = 0)

Appropriate learning outcomes after the two Delphi rounds: (Table 3, 4 and 5)

Knowledge (n = 7)

Skills (n = 11)

Responsibility/Autonomy (n = 6)

Fig. 1. Flowchart of the Delphi process.

understanding and applying knowledge.

Skills were stratified in *communication skills*, *practical skills*, *reflexive skills* and *ethical skills*. All outcomes concerning communication and ethical skills were rated appropriate with median levels between 8 and 9 (Table 4). In their comments, the panelists considered communication skills very important. Only one practical skill was rated appropriate for the student competency profile. The panelists' comments gave the overall argument that on bachelor level "*it is more realistic to learn about than to learn how*". Three reflexive skills were included, aiming at giving

the students competencies in analyzing evidence for frequently used complementary therapies and analyzing specific patient's situations according to different health approaches. The reflexive skills have a higher taxonomy level than the other learning outcomes, and students' learning conditions based on the academic year of their education must be taken into consideration. The ethical skills reflect learning outcomes that are parallel to learning outcomes from the students' formal nurse education, labelled as "*basic knowledge*" by the panelists.

In all, six statements in respect to the learning outcome *Responsibility*

Table 2
Excluded learning outcomes after two Delphi rounds.

	Learning outcome	Excluded in round
Knowledge	1) Analyze goals and values of integrative nursing and compare to selected nursing theories	1
	2) Interpret personal experiences with complementary and non-pharmacological therapies	2
Skills	3) Practice simple complementary techniques; e.g., massage, relaxation and breathing exercises	1
	4) Apply two (simple) theory-based integrative nursing interventions	2
	5) Apply a risk-benefit analysis in relation to the integration of specific complementary and non-pharmacological therapies into the patient's treatment plan	2
Responsibility and Autonomy	6) Discuss the caring-healing potential that integrative nursing offers	1

Table 3
Appropriate learning outcomes for nursing students: Knowledge.

Learning outcomes	Median level (7–9)
1. Understand selected complementary and non-pharmacological therapies and its evidence and safety	9
2. Apply general knowledge of complementary therapies and integrative nursing	9
3. Understand possible interactions when patients are using complementary therapies	8
4. Understand barriers and facilitators for implementing integrative nursing in own context/country	7
5. Apply the national regulations and rules relevant for the implementation of selected therapies	9
6. Understand patients' use of complementary and non-pharmacological therapies and related arguments and experiences with complementary and non-pharmacological therapies	8
7. Interpret knowledge from case stories about nurses use of complementary and non-pharmacological therapies	7.5

Table 4
Appropriate learning outcomes for nursing students: Skills.

Learning outcomes	Median level (7–9)
Communication	
1. Establish an open and curious approach to patients in relation to their needs and preferences about complementary and non-pharmacological therapies	9
2. Provide general information to patients and colleagues about relevant complementary and non-pharmacological therapies	8
3. Establish a confident, open and professional dialogue with patients about complementary and non-pharmacological therapies	9
4. Guide patients in seeking trustworthy information about common complementary and non-pharmacological therapies	8
5. Give adequate information about complementary and non-pharmacological therapies in relation to the specific patient's needs	8.5
Practical	
6. Select the least invasive nursing intervention when meeting patients' basic needs	7
Reflexive	
7. Analyze individual and specific patient situations according to different health approaches	8
8. Recognize patients' autonomy and wishes in relation to complementary and non-pharmacological therapies	9
9. Analyze evidence for frequently used complementary and non-pharmacological therapies	7
Ethical	
10. Establish a trustful and caring relationship with patients	9
11. Show ethical wisdom in specific patient situations	9

Table 5
Appropriate learning outcomes for nursing students: Responsibility and Autonomy.

Learning outcomes	Median level (7–9)
1. Use a holistic and integrative approach in relation to basic nursing and clinical decision-making in non-complex patient situations	8
2. Evaluate and apply simple evidence-based complementary and non-pharmacological therapies in relief of symptoms such as anxiety, pain and nausea within the context of a nursing care plan	9
3. Evaluate and apply simple evidence-based complementary and non-pharmacological therapies for wellbeing and relaxation	9
4. Recognize own self-care practices in work and life situations	8
5. Analyze when patient situations are complex and if possible refer patients to a specialist in integrative nursing or consult a relevant healthcare professional	9
6. Demonstrate autonomy in continuous personal work with own limits, self-reflectivity and professional curiosity	8

and *Autonomy* were rated appropriate. Table 5 shows the overall results after both Delphi rounds. All learning outcomes had a high level of appropriateness with median ratings between 8 and 9. The learning outcomes include nursing students' responsibility and autonomy to evaluate and apply simple evidence-based complementary and non-pharmacological therapies, to analyze when situations are complex, and if possible, refer to a specialist. Furthermore, competencies to recognize self-care and work with self-reflexivity were included and recognized as very important in the panelists' comments.

In general, the panelists gave enthusiastic comments regarding the feasibility for a European student profile for integrative nursing; e.g., by declaring, "*I strongly support the statements*". Some experts stated that all learning outcomes were relevant but had to be assessed in relation to available and contextual resources: "*All items are highly recommended to become competencies. A distinction in different levels of relevance makes only sense if resources such as time and workload are limited*".

4. Discussion

In this study, the INES group created a competency profile of 24 learning outcomes about integrative nursing and safe use of evidence-based complementary therapies and non-pharmacological interventions, validated by a panel of experts through a two-round Delphi study. It is acknowledged that the Delphi method is appropriate to use for seeking consensus about development in various areas (Fink-Hafner et al., 2019). The same method has been successfully used for validating

competency profiles in other areas of nursing, such as spiritual care (Attard et al., 2014), community nursing (Bagnasco et al., 2022), and caring for people with disabilities (Kronk et al., 2020).

Following the European Qualification Framework (EQF), the competency profile is structured by knowledge, skills, responsibility, and autonomy. Another option could have been the seven CanMEDS roles (Homberg et al., 2020). The choice of EQF ensures that the suggested learning outcomes can be added to the existing nursing curricula and immediately serve to develop education for nursing students about integrative nursing and safe use of evidence-based complementary therapies and non-pharmacological interventions.

Several of the validated learning outcomes include general knowledge about complementary and non-pharmacological therapies relevant for nursing, in line with a literature review on educational content and

methods regarding integrative nursing (Gunnarsdottir et al., 2022). Students should be able to understand and apply general knowledge and at the same time, they should be aware of safety issues, national regulations and rules, and any other possible barriers in their own context and country. This awareness is important due to the variety of legal status and regulation of complementary therapies in European countries (Wiesener et al., 2012). Research indicates that incorporating integrative medicine in medical training has increased the safe use of integrative approaches in conventional health care (Burton et al., 2015).

The INES competency profile emphasizes the importance for nurses and students to be able to communicate and discuss this subject with both clients and colleagues. The lack of competencies in relation to complementary therapies and non-pharmacological interventions has been found as a reason for nurses' reluctance to communicate (Chang et al., 2019). Previous studies found that clinical nurses would like to have more knowledge about this subject to facilitate an open dialogue (Hall et al., 2017; Stie et al., 2020). Another study found that users of complementary therapies frequently neglect to disclose this to their healthcare providers because they were not asked (Foley et al., 2019). Therefore, communication skills and skills for evaluating trustworthy information are important to ensure safe and effective patient care (Nissen et al., 2012). The ability to understand user perspectives in relation to complementary therapies are also an essential part of the student profile. Cultural diversity in modern society requires nursing students to work with different health paradigms and non-western approaches to health (Gunnarsdottir et al., 2022).

Only one of the learning outcomes refers to practical skills, which is to select the least invasive nursing intervention when meeting patients' basic needs. The INES mapping pilot study (van der Heijden et al., 2022) found that all top five interventions taught in courses were non-invasive mind-body interventions. In the present study, the panelists advised that the practical skills taught in a course for nursing students should be kept simple, referring to complementary therapies and non-pharmacological interventions that can be applied after short instruction.

Student nurses self-care and self-reflection are important parts of the learning outcomes in the validated competency profile and were acknowledged by the expert panelists in comments. Given the high burnout rates amongst healthcare professionals (Khatatbeh et al., 2022) and the documented benefit from stress-reducing interventions for nurses in palliative care (Dijxhoorn et al., 2021), teaching nursing students about self-care would greatly benefit the future healthcare system.

Some of the validated learning outcomes do not differ from generally accepted values and competencies in nursing, such as ethical skills and a holistic perspective. Considering this, the question might be raised what in fact integrative nursing adds to the nursing profession. Richards and Borglin argue that missed nursing care (any aspect of nursing care that is omitted or delayed) and nursing care of low quality must be taken very seriously by society and the profession itself (Richards and Borglin, 2019). A suggested way forward is for the nursing profession to re-value and re-orientate the practice of nursing care. The specific knowledge, skills and responsibilities within the suggested learning outcomes might guide this way forward by integrating relevant complementary therapies and non-pharmacological interventions and emphasizing the therapeutic value of the nurse-patient encounter.

4.1. Strengths and limitations

The systematic development of learning outcomes in the competency profile is a strength of the study. As recommended (Fink-Hafner et al., 2019), the Delphi survey included both quantitative and qualitative questions. Before its actual use, the questionnaire was pilot tested, after which we made some adjustments. In both Delphi rounds the response rate was high (up to 83 %), and we received meaningful and understandable answers, which strengthened the validity of the results. After the second round, we identified a high level of agreement to the suggested content, and an additional third round would not have made

further progress.

The study invited experts from ten European countries, and experts from only two countries did not respond. The experts from eight different European countries with various experiences from nursing practice and academics were good representatives; however, the validation process is limited by the lacks of representatives from e.g., countries in Eastern Europe.

The survey was conducted in English, and this could be considered a limitation as the countries represented in the panel do not have English as their official language. We made it possible to give comments in the native language, and few of the experts used this option. Information bias may have been introduced during the translation process.

5. Conclusion

The INES competency profile consists of 24 learnings outcomes structured by the EQF, with 7 learning outcomes in relation to Knowledge, 11 regarding Skills and 6 about Responsibility and Autonomy. The competency profile, validated by an expert panelist with a high degree of consensus using a two-round Delphi process, can guide and structure a teaching module for nursing students in Europe about integrative nursing and relevant complementary therapies and non-pharmacological interventions. This study shows the significance of learning outcomes aiming at giving nursing students general and specific knowledge regarding safe use of selected complementary therapies and non-pharmacological interventions, comprehensive communication skills and responsibility and autonomy in relation to self-care actions and the use of an integrative, holistic approach in clinical decision-making.

CRediT authorship contribution statement

First author (AL) responsible for conceptualisation, methodology, formal analysis and writing original manuscript. Second author (TG) responsible for conceptualisation, methodology, formal analysis and reviewing/editing original manuscript. Third author (MB), fourth (MH) and fifth author (TF) responsible for conceptualisation, methodology, validating analysis, reviewing/editing original manuscript and project administration. Sixth author (MD) responsible for conceptualisation, methodology, validating analysis, reviewing/editing original manuscript and project administration. Last author (DWD) responsible for methodology, formal analysis and writing original manuscript.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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