

MINNA KOSKIMÄKI

Social and Healthcare Educators' Continuing Professional Development

A Comprehensive model

MINNA KOSKIMÄKI

Social and Healthcare Educators'
Continuing Professional Development
A Comprehensive model

ACADEMIC DISSERTATION
To be presented, with the permission of
the Faculty of Social Sciences
of Tampere University,
for public discussion at Tampere University
on 4 of February 2022, at 12 o'clock.

ACADEMIC DISSERTATION
Tampere University, Faculty of Social Sciences
Finland

<i>Responsible supervisor and Custos</i>	Docent Meeri Koivula Tampere University Finland	
<i>Supervisor</i>	Professor Marja Kaunonen Tampere University Finland	
<i>Pre-examiners</i>	Docent Satu Elo University of Oulu Finland	Docent Sini Eloranta University of Turku Finland
<i>Opponent</i>	Professor Hannele Turunen University of Eastern Finland Finland	

The originality of this thesis has been checked using the Turnitin OriginalityCheck service.

Copyright ©2022 author

Cover design: Roihu Inc.

ISBN 978-952-03-2271-7 (print)
ISBN 978-952-03-2272-4 (pdf)
ISSN 2489-9860 (print)
ISSN 2490-0028 (pdf)
<http://urn.fi/URN:ISBN:978-952-03-2272-4>

PunaMusta Oy – Yliopistopaino
Joensuu 2022

ACKNOWLEDGEMENTS

To complete the thesis had required commitment, motivation and willingness to learn and scientific, social and financial support.

I owe my deepest gratitude to my supervisors associate professor Meeri Koivula and professor Marja Kaunonen. Meeri Koivula offered me an exceptional possibility to work as a researcher in TerOpe-project and she has supported and guided me through this learning process. Meeri's sentence "The things tend to work out" has been comforting me when too many issues have been unclear. Marja Kaunonen has giving me supportive feedback and important encouragement during the process. I am very grateful for my supervisors that they have been patient, helpful and shared their deep knowledge and broad expertise with me.

I wish to thank my steering group principal lecturer Marja-Leena Lähteenmäki from Tampere University of Applied Sciences and professor Leena Salminen from University of Turku. Their expertise on this field has been invaluable and gave me new perspectives of the phenomenon. I want also to thank Marja-Leena and Leena for their warm attitude and encouragement throughout this project. I also wish to thank my pre-examiners docent Satu Elo and docent Sini Eloranta for their valuable work and suggestions related to synthesis of my work.

I also wish to show my warmest gratitude to all TerOpe-project partners Kristina Mikkonen, Maria Kääriäinen, Camilla Koskinen, Monika Koskinen, Leena Salminen, Iina Ryhtä, Imane Elonen, Terhi Saaranen, Marjorita Sormunen, Arja Piirainen, Tuulikki Sjögren, Hilikka Korpi, Tapio Ojala, Marja-Leena Lähteenmäki, Hanne Mäki-Hakola, Outi Wallin for their collegial support and giving insights to Finnish educational research. Especially I want to express my gratitude to professor Kristina Mikkonen for her help, support and inspiring attitude towards research. I have learned a lot from Kristina, how important the sharing and networking is in academic world.

The Nursing Science unit and my colleagues in Tampere University deserves my sincere gratitude. The atmosphere has been supportive and encouraging, especially I want to thank professor Päivi Åsted-Kurki, professor Eija Paavilainen and the group of doctoral students for their help, shared visions and peer support. I am very grateful for my "room-mate" professor Katja Joronen for her patience to my endless questions and I will always remember our coversations about the science, knowledge and life. I want to show my gratitude to Anna-Maija Koivisto and Heini Huhtala for their help in statistical problems and Saila Huuskonen for her help in knowledge search. I am deeply grateful for all the social and healthcare educators who participated in this research.

Without financial support the thesis project would have been very different. I wish to show my gratitude to Ministry of Culture and Education, for TerOpe-project researchers for their and especially Meeri Koivula's willingness to engage me to that project as a researcher. I am also very thankfull for Tampere University Foundation for their financial support.

Finally I want to express my gratefulness to my family. To my parents Liisa and Veikko and to my sister Mari and her doughter Roosa for their support during this process. I am deeply grateful to my loved husband Juha and our dearest children Niilo, Helmi, Kaappo, Nuutti and Lilli, who are the most important for me and who have given me the strength and willingness to do this work.

Minna Koskimäki

December 2021

Kangasala, Finland

ABSTRACT

Today's social and healthcare professionals work in a constantly changing environment. The ageing population, society's rapid technological development and the cultural diversity among today's social and healthcare clients' more complex problems are challenging professionals' competence in various ways. Social and healthcare organizations thus require highly professional workforces. The competence and continuous learning of today's social and healthcare educators have important effects on the education of future professionals.

The aim of this research was to develop a comprehensive model of continuing professional development among social and healthcare educators in three phases. The first phase's aim was to describe the social and healthcare educators' continuing professional development; the second phase's aim was to develop and validate the EduProDe- scale to evaluate educators' continuing professional development; and the third phase was to develop an empirical model of continuing professional development.

The research method was the mixed method. The data were gathered from focus group interviews of 35 educators and from a cross-sectional survey of 420 educators in 2018. The qualitative data were analyzed with inductive content analysis. The quantitative data were used for scale and model development. Scale development comprised four phases: defining the concept, item pool, expert review and psychometric testing. The modeling process comprised two phases: confirmatory factor analysis (CFA) and structural equation modelling (SEM).

The comprehensive model's results indicate that continuing professional development comprises two basic elements and six minor elements within the basic elements and illustrate how the minor elements are connected. The first basic element is educators' understanding of the benefits of continuing professional development and seeking support for it. The second basic element is based on a strong first element and means that educators will not only recognize learning needs in which the pedagogical needs are crucial, but they will also recognize their need to develop their clinical and challenging teaching situations competencies. The minor elements are described in the comprehensive model's

qualitative results, and educators can assess these elements with the newly developed EduProDe scale.

The results of this research will generally increase the knowledge and understanding about social and health care educators' continuing professional development. With this knowledge the educational organizations can create new opportunities for educators to develop their competencies and new possibilities to enhance educators' career path. The comprehensive model could be utilized to increase educator students' knowledge about continuous learning and as a tool to guide organizational recruitment. The model may also be useful in the design of shared continuing development programs, which are based on research evidence and are organized nationally through universities. The model could enhance joint education among social and healthcare students and finally integrate working practices in social and healthcare field.

TIIVISTELMÄ

Sosiaali- ja terveydenhuollon ammattilaiset työskentelevät tänä päivänä jatkuvasti muuttuvassa ympäristössä. Väestön ikääntyminen, yhteiskunnan nopea teknologinen kehittyminen ja sosiaali- ja terveydenhuollon asiakkaiden yhä monimutkaisemmat ongelmat haastavat monin tavoin ammattilaisten osaamisen. Sosiaali- ja terveydenhuollon organisaatiot edellyttävät ammattilaisilta korkeaa osaamista. Sosiaali- ja terveysalan opettajien osaamisella ja jatkuvalla oppimisella on suuri merkitys tulevaisuuden ammattilaisten koulutuksessa.

Tämän tutkimuksen tavoitteena oli kehittää kattava malli sosiaali- ja terveysalan opettajien jatkuvasta ammatillisesta kehitymisestä. Tutkimus koostui kolmesta vaiheesta ja ensimmäisen vaiheen tavoitteena oli kuvata sosiaali- ja terveysalan opettajien jatkuvaa ammatillista kehittymistä, toisen vaiheen tavoitteena oli kehittää ja validoida EduProDe- mittari jatkuvan ammatillisen kehittymisen arviointiin, kolmannessa vaiheessa tavoitteena oli kehittää empiirinen malli sosiaali- ja terveysalana opettajien ammatillisesta kehitymisestä.

Tutkimuksen metodologiana on monimenetelmätutkimus. Laadullinen aineisto kerättiin fokusryhmä haastatteluissa opettajilta (n=35) ja määrällinen poikkileikkaus-kyselyaineisto opettajilta (n=422) vuonna 2018. Laadullinen aineisto analysointiin induktiivisellä sisällön analyysillä ja määrällistä aineistoa käytettiin mittarin ja mallin kehittämiseen. Tutkimus eteni vaiheittain siten, että edellisen vaiheen tuloksia hyödynnettiin seuraavassa vaiheessa. Mittarin kehittäminen koostui neljästä vaiheesta: käsitteen määrittely, väittämien poolin muodostaminen, asiantuntijoiden arviointi ja psykometrinen testaus. Mallin kehittämiseen kuului kaksi vaihetta; hypoteettisen mallin arviointi konfirmatorisella faktorianalyysillä (CFA) ja rakenneyhtälömallinnuksella (EFA).

Kehitetyn kattavan mallin mukaan sosiaali- ja terveysalan opettajien ammatillinen kehittyminen koostuu kahdesta pääelementistä, jotka muodostuvat seuraavasti: Ensimmäisen pääelementin osana ovat opettajien kyky tunnistaa oppimisen hyödyt sekä etsiä tukea omalle kehittämiselleen, ensimmäinen pääelementti on yhteydessä toiseen pääelementtiin eli oppimistarpeiden tunnistamiseen ja opettajan yksilölliseen oppimiseen. Toinen pääelementti muodostuu pedagogisten oppimistarpeiden tunnistamisesta, joka on yhteydessä siihen, että opettajat voivat tunnistaa osaamisen kehittämisen tarpeen myös kliinisessä osaamisessa sekä opetuksen vaikeiden tilanteiden hallinnassa. Toisen pääelementin rakenteena on oppimistarpeiden tunnistaminen, joka ohjaa opettajaa etsimään oikeaa oppimisentapaa, mikä tässä mallissa on itseohjautuva opiskelu.

Saadut tulokset lisäävät ymmärrystä sosiaali- ja terveysalan opettajien jatkuvasta ammatillisesta kehittämisestä. Tämän tiedon avulla koulutusorganisaatiot voivat luoda opettajille uusia mahdollisuuksia kehittää uranaikaista osaamistaan. Kattavaa mallia voidaan hyödyntää sosiaali- sekä terveysalan opettajien koulutuksessa lisäämään opiskelijoiden tietoa ja osaamista jatkuvasta oppimisesta ja osaamisen kehittamisestä sekä koulutusorganisaatioissa uusien opettajien rekrytoinnissa. Mallin avulla voidaan myös suunnitella ja toteuttaa sosiaali- ja terveysalan opettajien sekä mahdollisesti myös muiden alojen opettajien yhteisiä yliopistotasoisia, tutkimukseen perustuvia täydennyskoulutusohjelmia. Mallin avulla suunnitellut täydennyskoulutusohjelmat voisivat tulevaisuudessa edistää sosiaali- ja terveysalan yhteistä opetusta ja käytännön työtä.

CONTENTS

1	INTRODUCTION	15
2	THEORETICAL BACKGROUD	18
	2.1 Educators' Continuing Professional Development.....	18
	2.1.1 Learning theories and continuing professional development	19
	2.1.2 Subject matter knowledge in nursing and social sciences educators' continuing professional development.....	21
	2.2 Literature review of educators' continuing professional development.....	22
	2.2.1 Educators' learning needs and prerequisites of successful learning	23
	2.2.2 Educators' learning approaches.....	25
	2.2.3 Utilization and reflective practices of continuing professional development	27
	2.3 Social and healthcare educators' continuing professional development	28
	2.3.1 Social and healthcare educators	28
	2.3.2 Social and healthcare educators' competencies and continuing professional development	29
	2.4 Summary of theoretical background.....	32
3	RESEARCH AIM AND RESEARCH QUESTIONS	34
4	IMPLEMENTATIONS OF THE RESEARCH	35
	4.1 Research design.....	35
	4.2 Qualitative data sources (Phase I).....	38

4.3	Quantitative data sources (Phase II-III)	38
4.4	Phase I: Qualitative descriptive research	39
4.5	Phase II: The development and validation of the EduProDe-scale	39
4.6	Phase III: The developing and testing an empirical model	41
4.7	Ethical considerations	43
5	RESULTS	44
5.1	Characteristic of participants	44
5.1.1	Qualitative research (Phase I)	44
5.1.2	Cross- sectional survey (Phase II and III)	44
5.2	Comprehensive model of social and healthcare educators’ continuing professional development	45
5.2.1	Phase I: Social and healthcare educators’ description of CPD	45
5.2.2	Phase II: The EduProDe-scale, self-assessment instrument for evaluation of educators’ CPD was psychometric tested reliable and valid	46
5.2.3	Phase III: The empirical model of social and healthcare educators’ CPD	46
5.3	Summary of results	48
6	DISCUSSION	50
6.1	Review of the results	50
6.2	Quality of the research	52
6.3	Implementations of the results	56
6.4	Suggestions for further research	57
7	CONCLUSIONS	58
	REFERENCES	60
	ATTACHMENTS	73
	PUBLICATIONS	77

List of Figures

Figure 1. Summary of theoretical background

Figure 2. The development process of a comprehensive model of social and healthcare educators' continuing professional development.

Figure 3. The hypothesized model of social and healthcare educators' professional development based on the previous research

Figure 4. The empirical model of social and healthcare educators' professional development. *** $p < 0.001$

Figure 5. The comprehensive model of social and healthcare educators' continuing professional development

List of Attachments

Appendix 1. Flow chart of research selection process

Appendix 2. Items of EduProDe- scale and supporting evidence

ABBREVIATIONS

CFA	Confirmatory factor analysis
CFI	Comparative Fit Index
CINAHL	A full-text database for nursing and allied health-journals
CPD	Continuing professional development
EFA	Exploratory factor analysis
ERIC	A database to provide extensive access to education- related literature
GDPR	General Data Protection Regulation
n	Number of participants
p	Probability
RMSEA	Root mean Square Error of Approximation
SEM	Structural equation modeling
SRMR	Standardized Root Mean Residual
TLI	Tucker-Lewis Index

ORIGINAL PUBLICATIONS

- Publication I Koskimäki M., Lähteenmäki M-L., Mikkonen K., Kääriäinen M., Koskinen C., Mäki-Hakola H., Sjögren T. & Koivula M. (2020). Continuing professional development among social- and healthcare educators. *Scandinavian Journal of Caring Science*, 1-10. doi: 10.1111/scs.12948
- Publication II Koskimäki M., Mikkonen K., Kääriäinen M., Lähteenmäki M-L., Kaunonen M., Salminen L. & Koivula M. (2020). Development and Testing of the Educators' Professional Development Scale (EduProDe) for the assessment of social and healthcare educators' continuing professional development. *Nurse Education Today*, 98, 1-6.
- Publication III Koskimäki M., Mikkonen K., Kääriäinen M., Lähteenmäki M-L., Kaunonen M., Salminen L., & Koivula M. (2021). An empirical model of social- and healthcare educators' continuing professional development in Finland. *Health & Social Care in the Community* 00, 1-9. <https://doi-org.libproxy.tuni.fi/10.1111/hsc.13473>

1 INTRODUCTION

The social and healthcare systems in developed countries currently face various changes: aging and culturally diverse populations, more technical interactions, more complex client needs and worldwide disruptions and threats. Social and healthcare institutions are expected to educate highly skilled professionals to meet the challenges of 21st century working life. The education sector is coming under pressure from different directions; that is, that the offered education should meet students' expectations and the requirements of social and healthcare organizations, both today and in the future (OECD 2012). Several factors are influencing the global educational environment. Higher education is internationalizing, the scope of education is broadening and student profiles are more diverse. Rapid changes in technology are also affecting education, which means that program contents and pedagogies might quickly become obsolete. Moreover, global health policy enhances efforts to reduce health inequalities and create more resilient communities (WHO 2013). Quality education's cornerstones are competent educators who are assumed <expected?> to tackle the challenges and to enhance their students' learning.

Academic social and healthcare educators are usually highly educated, hold a master's or doctoral degree and have at least two years of clinical experience at a global level (National League for Nursing 2019, Paul 2015, Lahtinen et al. 2014). Educators in Finland also hold a Master's degree in Health Sciences that must include 60 ECTS pedagogical education (Government Decree of the Universities of Applied Sciences 1129/2014). According to recent research, social and healthcare educators are required to have multiple competencies, e.g., clinical, pedagogical, ethical, innovation and management, collaboration, cultural and linguistic diversity and professional development (Mikkonen et al., 2019). Educators must constantly improve their competencies to have the ability to teach students and support their growth as skilled professionals.

Continuing professional development is a multifaceted learning process that should be ongoing and career long (Avalos, 2011). The educators' learning happens in both formal education and informal learning in everyday practice. The learning approaches vary from continuing education to different forms of collaboration to self-study. Continuing professional development is beneficial for educators by increasing their expertise and improving their work well-being. It is also beneficial for organizations, which means that competent educators are more effective (Dymoc & Tyler, 2018, Collin et al., 2012). The ultimate goal for educators' professional development is to embed their learning into practice to improve their students' engagement and learning (Huang Hoon 2016, Van der Berg et al. 2014).

There has been a national program (OKM 2016) led by the Ministry of Education and Culture of Finland in recent years called the Teacher Training Forum (Opettajankoulutus foorumi). This program aimed to reform teachers' and educators' basic job orientation and continuing education from early childhood education to the institutions of higher education and universities. One perspective for the reform was to improve teachers' and educators' professional development through a series of nationwide projects, which would seek results about research-based guidelines for planning and to implement professional development programs (OKM 2016). The purpose of the Teacher Training Forum was to gain knowledge and experience for a new education policy that would include continuing professional development programs in a more structured and systematic way and was intended to promote teachers' and educators' competence throughout their careers (Husu & Toom 2016). This research was part of a project (TerOpe- Osaavat opettajat yhdessä 2017) funded by the Teacher Training Forum and the Ministry of Education and Culture. The project was carried out in collaboration with the University of Oulu (coordination), the University of Jyväskylä, Åbo Akademi, the University of Eastern Finland, the University of Turku and Tampere University.

Educators' continuing professional development is broad and has been explored for a long time among educational researchers, yet there is still a lack of knowledge about this complex phenomenon (Korthagen 2017). The current knowledge is about specific situations, especially in the social and healthcare

professional education fields, and a more comprehensive perspective could gain new knowledge, including theoretical knowledge, which could increase the understanding about this complex phenomenon. This research also contributes to the current knowledge with a rather exceptional research framework in health science education research, meaning that the social and healthcare fields are explored together. Based on the new knowledge this research is providing, it is possible to develop guidelines to be used in political and educational decision-making processes.

2 THEORETICAL BACKGROUND

2.1 Educators' continuing professional development

Continuing professional development (CPD) is a multidimensional phenomenon in which the educators can be seen in the center as the learners, often in a social environment (Tannehill 2021). It is a learning process, from an educator's perspective, which requires involvement and an ability to recognize learning needs. The learning happens in specific school and educational environments, which can be supportive of or hindering to learning (Avalos 2011). CPD can be seen as a combination of formal and informal learning (Kennedy 2014). Formal learning consists of educational activities such as continuing education courses and programs, while informal learning often happens in different forms of collaboration, for example, when educators are jointly planning curricula or discussing evaluation criteria (Avalos 2011). However, Guskey (2002) states that goals should be set for informal learning; otherwise, there will be no expected outcomes. Kennedy (2010) argues that when informal learning is framed as formal learning, its benefits are possibly lost.

An ultimate goal for educators' continuing professional development from the students' perspective can be seen as beneficial for their learning (Nabhani 2010). Effective CPD will enhance educators' pedagogical and subject-matter knowledge (Tannehill 2021). When educators adapt and implement what they learned in what they teach, this will finally promote their students' learning for better outcomes (Sum et al. 2021, Nabhani 2010), which can be evaluated by the students', the educational organizations' and the government's viewpoints. However, the results of research about the impact of educators CPD on students' learning outcomes are somewhat contradictory. The educators' learning as they implement what they have learned into practice and assume that their students' have better learning outcomes as a result is complex and difficult to track (Fischer et al. 2018, Goodyear 2017). However, the importance of educators' CPD is acknowledged globally in the meaning of their students' measurable learning outcomes that will potentially

increase their states' competitiveness (OECD 2012). This may lead to prominent managerial-controlled professional development. Conversely, educators must have autonomy in their learning process to achieve proper progress (Sum et al. 2021, Kennedy 2014).

2.1.1 Learning theories and continuing professional development

Educators who are working and practicing in professional education are learners in terms of CPD, and their learning can be examined through learning theories. Learning theories, which describe adults' learning, present the adult learner in multiple ways. Jarvis (2004), who suggests that every adult is a learner, emphasizes the social nature of learning. When an adult is in new situations, learning occurs even with familiar experiences so that they are either gaining new knowledge or reinforcing earlier knowledge. It is important to understand that adult learners are part of a sociocultural framework, which should be taken into consideration when interpreting adult learning theories (Jarvis 2004).

According to Freire (1973), people in general are learners from a humanistic conception because they can reflect on their experiences. Freire (1973) immediately connects learning to social benefits when he states that learners should take their learning back to their environment or society once the learning has occurred in an effort to change it. Knowles (1978) enhances the experience by describing it as a "rich source of learning." Adult learners also have an orientation towards problem-based learning; that is, when adults define a problem, they are ready to learn. Knowles (1975) argues that adults are also self-directed learners, which means that they have the ability to decide and determine their own learning needs, explicitly express their learning achievements, select and carry out suitable learning strategies and, finally, assess their learning outcomes. Andragogy, the Knowles' theory of adult learning, has confronted critiques of its considerable variability of defining the concepts and therefore the difficulties in conducting trustworthy research concerning the andragogy theory (Rachal 2002). Other theorists have stated that characteristics of self-directed learners include exhibiting independence in learning, accepting responsibility for learning, and having a high level of curiosity, basic study skills and an ability to organize time effectively (Merriam et al. 2007). Both Knowles' and Merriam et. al.'s theories are argued to be rudimentary theories and to have a fairly frail pre-theoretical

foundation. The assumption is that the self-directed theories were mainly developed for the pragmatic purpose of inspiring learners to take responsibility for their own learning and to better achieve their learning goals (Mentz & Oosthuisen 2016).

The common suggestion about the adult learning process is that learning happens as problem solving (Mezirow 1991, Knowles 1978, Gagne 1977). The hierarchy of different learning types begins with signal learning, continues to stimulus-response learning and motor learning and finally, at the top of the hierarchy, are concept and rule learning and problem solving, the highest order of learning. Problem solving happens when previously learned rules are used to find an answer to a problematic situation (Gagne 1977). Adults have a readiness to learn in “life crises” and problem areas (Mezirow 1991, Knowles 1978). Adults note problems that are not in harmony with their experiences and start examining and assessing the problems, exploring options to find new ways of acting, building confidence, and utilizing knowledge to implement new activities or plans and, finally, experiment with a new role and integrate it into society (Mezirow 1991). This theory is relevant for informal learning that happens in social situations by reflection (Jarve 2004). The description is otherwise close to experiential learning principles, because the problem-centered orientation starts with adults experiencing the problems as an imbalance in reality constructs.

Rogers’ (1969) experiential theory of the adult learning process is based on humans being natural learners. Contrary to other theorists, Rogers (1969) states that when learning occurs, the social structure around learners should not be too oppressive and learners ought not to experience outside threats. This means that the socio-cultural environment influence on learning is considered differently than in Freire’s (1973) and Mezirow’s (1991) theories. In Roger’s (1969) experiential theory, the learner’s “self” possesses independence, creativity and self-reliance. Rogers (1969) already emphasized that an adult’s learning is self-directed and there is a need for self-development that Knowles (1978) acknowledged in his work. The one significant part of an adult’s learning and education is the learner’s maturation process (Mezirow 1991, Knowles 1978, Rogers 1969).

2.1.2 Subject-matter knowledge in nursing and social sciences educators' continuing professional development

When describing the educators as learners through learning theories, it is essential to highlight nursing science as the foundation of the subject-matter knowledge that healthcare educators are teaching. Nursing science produces and gathers the knowledge from the perspective of human beings and their needs for health and wellbeing (Grace & Zumstein- Shaha 2019). More precisely, that knowledge promotes both individual and population health through evidence-based practices for effective nursing, for redeveloping the healthcare system and for assessing health outcomes (Hauenstein & Clark 2020). The ongoing inquiry is also accumulating knowledge that benefits educators' teaching to promote students' competencies to serve human health needs (Grace & Zumstein- Shaha 2019) and possibly to transform the human health experience in the future (Jairath et al. 2018).

Nursing science is, similarly, the foundation of healthcare educators' subject-matter knowledge and social science is the basis when educating professionals in the social field. Social science is a body of knowledge that aims to understand human life from a broad historical perspective and the forms it takes in today's society. It draws on and also influences many academic disciplines. Modern societies are complex environments, thus social work professionals need to learn to see the world through different and appropriate theoretical lenses. Social science theories provide a versatile understanding for professionals to meet their clients' life situations (Thorpe 2017) by developing actions and interventions to address these situations (McGregor 2019) and are how professionals can contribute to a more socially and ecologically responsible society (Cox et al. 2021). These theories underpin several practices, e.g., humanistic, person-centered practices, in which professionals build genuine and empathetic relationships with clients that enable clients to identify opportunities in their lives to help them to carry out their social relationships in the community and society (Payne 2020).

It is characteristic of both the nursing and social sciences to have aimed to combine theory and research to benefit their clients' health and well-being (Palinkas et al. 2017). For the practicing professions, the knowledge developed via the nursing and social sciences views all phenomena from a distinctly unique perspective and provides guidance to the day-to-day practice. At its best, the practice then informs the nursing and social science researchers and educators of

its context and needs (Grace & Zumstein-Shaha 2019, Palinkas et al. 2017). The current social and healthcare needs are increasingly complex and diverse, e.g., clients with chronic illnesses, obesity with its comorbid conditions, and mental health disorders together with socioeconomic disparities.

Social science theories will help professionals not only to identify future, broader social processes in society and changes in them but also to highlight their capacity to reflect the role of their own ideas and actions in shaping their clients' life situations (Thorpe 2017). Priorities for future healthcare research are, e.g., to advance nursing science with knowledge of medication adherence, to make behavioral interventions to direct multiple health conditions, especially in primary care, and to understand and promote health literacy (Grady & Gough 2015). The social and healthcare scientists and educators have a unique opportunity to translate their learning about topics raised during the Covid-19 pandemic into educational contents that reflect the needs of a rapidly changing society. New evidence, such as complex clinical situations with increased intensive care utilization and high mortality rates, destabilized family situations through quarantining that affect family dynamics and support, emotionally and physically wounded people, legal and ethical questions about limited resources, morally distressing clinical situations and nurse burnout (Neha 2021, Rosa et al.2020), needs to be implemented into subject-matter teaching in social and healthcare education.

2.2 Literature review of educators' continuing professional development

The literature search was conducted to find published research in relation to educators' CPD. Key terms in this search were continuing professional development in combinations with educator/teacher/instructor/lecturer. Publications were searched from the following databases: Education Collection, Social Science Premium Collection, Education Research Complete, Teacher Reference Center, ERIC and CINAHL. The search was conducted in January 2021 with a time limit of 2010-2021.

The inclusion criteria were peer reviewed journals published between 2010-2021 in the Finnish and English languages. The research was required to be concerned with higher education, vocational education, post-compulsory education or upper secondary school contexts and educators' or teachers' continuing professional

development. These criteria were selected to confirm that the studies would report results from contexts similar to the current research. The context was defined by the students' age, meaning that it included educational institutions teaching students of an age similar to the educators in this research, that is, 16 years or older. The research frame could include both educators and students' viewpoints, because the educators' continuing professional development is a phenomenon that relates to both. All methodological approaches were approved. The exclusion criteria were publications older than 2010, some languages other than Finnish or English and research about educators from kindergarten, primary school, or lower secondary school. Studies in which the participants were teacher assistants or teacher-educators were also excluded.

The literature search's inclusion criteria resulted in 622 publications. When the titles and abstract were read and duplicate publications were removed, 429 publications remained. After reading the full text and using the just-mentioned exclusion criteria, 27 publications resulted from the search. Three publications were found through reference lists of selected publications. The quality of all selected publications was evaluated by the Joanna Briggs Institute's criteria (JBI 2014). The evaluation's results ranged from 5 to 8 with a maximum score of 10 for qualitative studies and from 1 to 3 with a maximum score of 3 for quantitative studies. No publications were rejected after evaluation. Appendix 1 presents a flow chart of the research selection process.

2.2.1 Educators' learning needs and prerequisites of successful learning

Various issues must be considered when defining educators' learning needs from educators' or organizational perspectives. The basis of assessing their learning needs includes the comprehensive education needed to be an educator, the context and length of time as an educator. This means that educators gained their pedagogical knowledge and experience from different educational institutions, which inevitably leads to differences in their backgrounds. In terms of context, the different educational institutions and stages where educators are working, such as vocational school or in higher education, determine different needs for CPD (Mansour 2014). This also means that novice educators' needs vary from experienced educators' needs (Kennedy & McKay 2011).

Novice educators must enhance their teaching strategies and subject-matter-specific knowledge, their ability to use information and communications technology, and their knowledge about behavior management and career progression (Jetha et al. 2016, Kennedy 2011). Novice educators would benefit not only from formal courses but also from informal learning, which means mentoring, observing, peer coaching and collaboration in pairs or small groups (Kennedy 2011). The educators' common needs for CPD are increasing their competence to meet students' special and diverse educational needs and their classroom management techniques (Aslan 2019, Husband 2015, Nabhani 2010). Furthermore, educators need to enhance their content knowledge, pedagogical and practical skills (Bett & Makeva 2020, Husband 2015, Seezink & Poell 2010). Educators from several countries have described their increased focus on student retention and how this is transforming their role from educators to social workers (Lloyd 2012).

For organizational purposes, learning needs can also be evaluated based on international or national teaching standards that are mainly built on a political foundation. The standards may use very general terms, with the result that subject-matter-specific knowledge and skills are missing (Witte 2016). Educators can compare competencies with their peers and identify their learning needs as well as set their goals for CPD, whereas the professional community has formulated the developmental benchmarks (Witte 2016). It is vital to recognize that there will not be one solution for successful learning and CPD, because educators are working in different contexts and have individual needs and interests (Tannehill 2021, Kennedy 2014, Mansour 2014). Educators' motivation, the prerequisite of successful learning, is also to recognize learning needs.

Motivation is crucial for educators' learning, which means that they are motivated to learn when they are aware and interpret their challenges according to their educational context (Mansour 2014). The three levels of motivation factors McMillan's research (2016) found from the viewpoints of educators who sought to engage in CPD were personal, school related and system wide. The personal motivation factors were personal interest, career advancement and improving one's teaching. The school-related factors were peers talking about courses they have attended, general support in school and related to a post of responsibility in school. This means that the educator who has at least one personal motivation factor and who is encouraged to participate in a CPD program by peers and

management is highly likely to succeed. The system-wide motivation factors were mandatory courses during working hours and courses organized by subject that were therefore highly relevant. The main system-wide factor was the mandatory courses, and it is explained that motivation is the best adjustment when educators have no choice whether to attend or not a CPD course (McMillan 2016).

Another research study shows reverse results in which the educators' motivation increased when attending continuing education programs was completely voluntary. Hargreaves (2013) found that educators who attended voluntarily were willing to take an active role in learning that enhanced their critical reflection during the learning process. According to the educators' own accounts of their learning, it is convincing that when educators are acting independently and taking initiative, this leads to their commitment to learn and, above all, their commitment to improve their teaching (McMillan 2016, Hargreaves 2013). Educators are willing to take the initiative when they consider their educational program to be distinguished, meaning that the program content is relevant to their interests and needs (Qablan 2015).

2.2.2 Educators' learning approaches

Just as the content of a continuing professional development program is important, so is its learning approach. Socially constructed professional knowledge through *collaboration* has emerged as one of the main learning approaches among educators (Bett & Makeva 2020, Mansour 2014, Forsberg 2012, Wieland 2011, Kennedy 2011). Socially constructed professional knowledge means that educators are sharing ideas and experiences with colleagues and working collaboratively to discuss practices and construct new knowledge from learned content, often in informal and unplanned ways (Mansour 2014, Kennedy 2011). When educators are learning new things and improving their knowledge, they might team up with their colleagues and reflect on their teaching practices. This happens when educators are creating a social network of professionals in which they share opinions and advice based on their previous experiences (Tabatabee-Yadzi 2021, Bett & Makeva 2020, Forsberg 2012). Internet-based networking through social media has created new opportunities for informal learning (Bett & Makeva 2020, Andersson & Köpsen 2019). This could mean that educators who are eager for collaborative activities are most likely educators who want to learn new things (Tabatabee-Yadzi 2021). The collaborative informal CPD that is associated with the social and emotional elements is crucial for early career educators. This means

that early-career educators should engage with their colleagues, for instance, observing each other's teaching or beginning a process of mentoring (Kennedy & McKay 2011). The learning communities are an example of more formal collaborative learning that has a problem-solving viewpoint. In a learning community, educators from different organizations have a common interest in solving problems and share knowledge and experiences during the process. The research of Van As (2018) showed that educators gained conceptual knowledge, procedural knowledge, and instructional methods through the learning community approach.

Another example of socially constructed professional knowledge is in Andersson and Köpsen's (2019) research from the vocational education context in which the educators' learning is described as "*knowledge brokering*." The brokers are students, workplace professionals and educators who are transferring their knowledge in a two-way process: occupational knowledge into the practice and workplace knowledge and practice into education. There are three levels in students' workplace learning in which knowledge brokering is possible. The first level is when the educator meets the student's supervisor during a short workplace visit, during which the educator usually has a slight opportunity to learn about the student's learning process and the alignment between the student's school education and workplace learning. The second level involves more extensive visits to the workplace, where the educator has an opportunity to see activities, explores current work-life practices and talk with the professionals working there. The primary purpose of these visits is to evaluate the students' learning and further intensify the educators' understanding of the learning process alignment between the school and the workplace. The final type of knowledge brokering happens when educators participate in their professional practice, which entails a substantial potential for learning and for updating their professional identity (Andersson & Köpsen 2019). The collaboration in different forms between workplace and education provides a variety of opportunities for educators to learn and to develop their nexus of identities. Andersson and Köpsen (2019) describe the vocational educator's knowledge and identity as dualistic; that is, their educational knowledge and identity and occupational knowledge and identity are related to their original profession.

Learning approaches can be described with top-down and bottom-up concepts. The top-down process includes *formal courses and workshops* whose topics are

predetermined, while the bottom-up approach involves more *informal learning* in which there is more space for reflective practices. The bottom-up approach enables educators to learn from students, receive feedback from students and utilize that feedback to improve their teaching. Educators also attend conferences, carry out research, and read professional publications to learn new things in the bottom-up approach (Wyatt & Ager 2017, Koivula et al. 2011). This description of learning approaches provides a perspective on formal (top-down), informal and self-directed (bottom-up) learning.

It is not self-evident which form educators appreciate most, and there are cultural differences that have an impact on an educators' decision. For example, German educators' learning usually occurs in isolated circumstances and short-term courses, while Swedish educators' learning usually occurs in groups and by attending longer university courses (Wieland 2011). Then again, educators who attended programs or courses considered that this education should be coherent and occur in schools where they would have an opportunity to collaborate with colleagues in an authentic environment (Qablan 2015, Mansour 2014). CPD programs that are implemented in schools usually have content that meets educators' needs and possibly provides commitment and everyday accomplishments (Tabatabaee- Yazdi 2018).

2.2.3 Utilization and reflective practices of continuing professional development

The final goal for educators' learning and professional development is that they can implement their learning into their everyday teaching practices. Educators emphasize reflective practices as fostering learning and continuing professional development (Mansour 2014). Previous research (Tosriadi 2018) has discovered practices that utilize reflection, such as a teaching journal, peer observation, video recording, student feedback and action research. The teaching journal practice means that educators are reading professional journals while reflecting on their own practices and possibly generating feedback for their teaching. Peer observation is another practice to conduct reflection when educators are observing each other's lessons that gives an opportunity to reflect on their own teaching. Educators also use student feedback to reflect on their practices, and feedback was a significant tool for them to understand their students' perceptions about teaching and learning. Video recording and conducting action research were

viewed less favourably among educators when compared to reading, peer observation and student feedback (Tosriadi 2018). Collaboration, such as sharing ideas and experiences with other educators, could support reflection and implementation (Mansour 2014). Overall, successful implementation is a multifaceted process, and success might be rather rare; after continuing education, only 6 % of participating educators indicated they utilized what they learned in their teaching practice; 64% did not utilize what they had learned (Qablan 2015).

2.3 Social and healthcare educators' continuing professional development

2.3.1 Social and healthcare educators

Social and healthcare educators in Finland are teaching in universities of applied sciences and in vocational schools. They are educating registered nurses, public health nurses, paramedics, midwives, physiotherapists, biomedical laboratory scientist, dental technicians, dental hygienists, opticians, auxiliary technicians, radiotherapists, naprapaths, osteopaths, rehabilitation counselors, occupational therapists, undergraduate students of social sciences in universities of applied sciences (Government decree of the Universities of Applied Sciences 1129/2014) and practical nurses in vocational schools (OKM, Regulation on Vocational Education Degree 680/2017).

The majority of educators in Finland hold a Master's degree in Health or Social Sciences, which includes 60 ECTS worth of pedagogical studies. In other countries academic educators usually hold a master's degree and are required on some occasions to have at least two years of clinical experience (National League for Nursing 2019, Paul 2015, Lahtinen et al. 2014, Agbim & Ozanne 2007). There are approximately 2500 social, health and rehabilitation educators in Finland who work in vocational schools and universities of applied sciences. About 56 000 students are studying in the social health and rehabilitation fields in 106 vocational schools (Opetushallinnon tilastopalvelu, Statistical Service of Finnish National Agency for Education 2018) and 21 universities of applied sciences (Tilastokeskus, Statistics Finland 2020).

2.3.2 Social and healthcare educators' competencies and continuing professional development

From a global perspective, the World Health Organization (WHO) has developed the Nurse Educator Core Competencies (WHO 2016) that are based on a recognition of the changes occurring in nurse education and practice both now and in the future. These proposed competencies include a knowledge of the theories and principles of adult learning, curriculum and implementation, nursing practice, research and evidence, communication, collaboration and partnership, ethical and legal principles, and professionalism, monitoring and evaluation and management, leadership, and advocacy (WHO 2016). The Australian Nurse Teacher's Society (ANTS 2010) and the National League for Nursing (NLN 2019) have defined and described the core competencies for academic nurse educators. These competencies include facilitating learning and learner development, communication, professional practice, using assessment strategies, participating in curriculum designing and evaluation, functioning as a change agent and leader in educational environments, pursuing continuous quality improvement in a nurse educator role and engaging in scholarship (NLN 2019).

Some researchers (Mikkonen et al. 2019, Mikkonen et al. 2018, Zlatanovic et al. 2017, Salminen et al. 2013) have also studied nurse educators' competencies. According to Zlatanovic et al. (2017) and Salminen et al. (2013), the nurse educators' core competencies are academic, nursing, pedagogical and evaluative. Nurse educators are also required to have a suitable personality and attitude as well as competence in building relationships with students. They also need to have management and digital technology skills (Mikkonen et al. 2019, Zlatanovic et al. 2017, Salminen et al. 2013). In systematic review studies, Mikkonen et al. (2019) and Mikkonen et al. (2018) emphasized evidence-based knowledge and educators' ability to connect theory into practice; therefore, subject-matter competence is also required. Educators must also have competence in ethics, innovation and development, collaboration, cultural diversity, and continuous professional development (Mikkonen et al. 2019).

Social and healthcare educators' competencies have been studied in Mikkonen et al.'s research (2021) in which they identified eight core competencies: evidence-based practice, digital collaborative learning, student-centered pedagogy, collaboration and societal, leadership and management, cultural and linguistic diversity, mentoring students in professional competence development, and

subject and curriculum. Cultural competence includes language and linguistics, different learning styles, integrating multicultural students, cultural knowledge and sensitivity, collaboration, self-awareness, openness, respecting and caring (Ruwang et al 2020). These competencies could promote transcultural education and lead to culturally sensitive teaching as well as culturally developed ethical attitudes (Ruwang et al. 2020). Ethical competence means humane views of students as unique individuals with individual learning needs and styles, meeting students tactfully and educators feeling joy about students learning and valuing themselves and their colleagues. Ethical competence also means that educators understand themselves as role models for their students (Koskinen et al. 2020). The educators' ethical competence is crucial to students learning and developing ethical thinking and furthering their personal growth.

The nurse educators' and the social and healthcare educators' roles and competencies are multidimensional; most crucial competencies are pedagogical competence and subject-matter competence (Mikkonen et al. 2018), because an educator's main role is to promote students' learning and professional growth (Bono Neri 2019). Continuing professional development is essential for educators to maintain their multiple competencies in different areas.

Continuing professional development has been studied from different viewpoints among nurse educators. The previous research focused on formal learning, or continuing education. Those studies' aim was to evaluate the continuing education symposium experiences, evaluate issues learned after professional education conferences or courses and implementation of new knowledge into practice (Erlandsson et al. 2019, Ignatavius et al. 2016, Dickerson et al. 2014). The results show that educators were able to implement their learning into their educational practices (Ignatavius et al. 2016), and they valued the experience of continuing education (Dickerson et al. 2014). Midwifery educators evaluated their capabilities and engagement more highly in teaching after their one-year course (Erlandsson et al. 2019). The educators also experienced continuing education beneficial for finding an affinity with their work processes, and sharing the experiences enhanced their learning (Tanzi & Viana 2012). Nurse educators in Finland actively participate in continuing education, and the most-needed competence areas were subject-matter competence and competence related to developing projects (Vilen & Salminen 2016). The most necessary needs for professional development in Australia were in teaching and, more precisely, in assessment, information

technology skills and technical knowledge (Oprescu et al. 2017). The novice educators also needed formal pedagogical education that included student assessment techniques and learning processes as well as curriculum development (Summers 2017).

There is also research concerning the assessment of continuing professional development. In McAllister's and Flynn's research (2016), nurse educators' capabilities were assessed to more accurately denote the role of the nurse educator. The Capabilities of Nurse Educators (CONE) questionnaire enables the educators to self-assess their capabilities and identify their professional development needs. The subsets of the CONE questionnaire are teaching knowledge and practice, drawing from nursing knowledge, teaching relationships, leadership, research orientation and research action (McAllister & Flynn 2016).

There are also several models developed concerning interdisciplinary education and continuing learning where the social or healthcare field is active. In Hyung's (2019) educational framework, nursing students and engineering students are learning together and producing new technology intervention ideas to focus on real-world problems in the healthcare system. The instructors in this course are either engineering or nursing faculty, or it could be carried out with co-teaching (Hyung 2019). Another interdisciplinary model was developed for health and social care professionals when they are working with older people. The model describes different roles for professionals, and it may be utilized in curriculum planning and continuing education (Dijkman et al. 2017). The model consists of six roles: professional, communicator, collaborator, organizer, health and welfare advocate and scholar. These specific competencies are required when health and social care professionals are dealing with the particular problems of an ageing population (Dijkman et al. 2019). A model that can be used in curriculum planning is Khalili's interprofessional identity model (2013). According to this model, the successful interprofessional collaboration requires patient-client-family-community-centered goals and interprofessional communication. Interprofessional communication is primarily based on dual identity in professional contexts. This means that in addition to their existing identity, professionals should build an interprofessional identity. Haruta's (2018) framework for healthcare professionals is related to Khalili's framework; their purpose is to describe the precondition for interprofessional work. In Haruta's (2018) framework, professionals can share goals to improve healthcare services for clients. This perspective on

interprofessional communication is based on the respect for different professionals as well as for their shared knowledge and values (Haruta 2018), while Graebe (2019) suggests that suitable competence frameworks could be utilized when designing a continuing education program for healthcare professionals. When education is competence based, the framework could be an instrument to evaluate educational outcomes. Altogether, one perspective of the social and healthcare educators' CPD could be interprofessional when they are learning together.

2.4 Summary of theoretical background

Continuing professional development is a continuous learning process for educators that includes both formal and informal learning. It is necessary to explore some learning theories and theorists' views about adult learners to understand adult learning. The theoretical basis can be seen in adult learning as well as in self-directed and experiential learning theories. Through these theories it is possible to understand the value of different learning approaches, such as problem solving and earlier learning experiences, that learning often occurs in social situations, and that reflection is highly important when educators are implementing their learning in practice. Theorists also emphasize the self-directedness of adult learners, meaning that learners recognize their learning needs and that learning occurs informally when learners are collaboratively seeking solutions for problematic situations.

Another theoretical approach in social and healthcare educators' CPD is nursing science and theories that are especially guiding this research context for healthcare educators' subject-matter competence development. Nursing science promotes evidence-based nursing through professional education that is research based. When this is carried out at its best, it denotes that nurse scientists, educators and professionals from clinical organizations are collaborating and identifying new needs for research and utilizing the existing knowledge in education and practice.

The ultimate goal of educators' continuing professional development is the students' learning and growth. This means broad competence areas in the social and healthcare fields for educators to achieve in so they can promote student professionalism in the best possible way. Social and healthcare educators are highly educated, and they should master both subject-matter content and

pedagogical knowledge. They must have evaluation and curriculum planning skills in addition to being competent educators, and they should be competent in collaborative working and leadership as well as in ethical thinking and creativity. These competency areas can be considered rather idealistic, but they certainly provide a perspective for understanding the complex demands on social and healthcare educators.

Previous research has explored continuing professional development from many different perspectives. The field of educational science has especially conducted a large number of studies in the context of comprehensive schools and the upper secondary school levels. Fewer studies have been conducted on vocational education, which is the topic of this research. The social and healthcare fields have special attributes to be considered. It is an education which goal is to educate professionals in a particular field that has unique requirements.

Educators' continuing professional development is not widely explored in the healthcare field. It is studied from educators' experiences of continuing educational events and from measuring healthcare educators' learning needs. The previous researchers have also developed models to describe or explain interprofessional learning, working and communication. A need still exists for a more holistic understanding of educators' continuing professional development, especially in social and healthcare contexts. Continuing professional development is a multifaceted process; therefore, it is necessary to explore it from an extensive viewpoint. There is still a little knowledge about social and healthcare educators' continuing professional development in Finland; even the future prospect in society is combined with multiprotection welfare services and integrated care for clients.

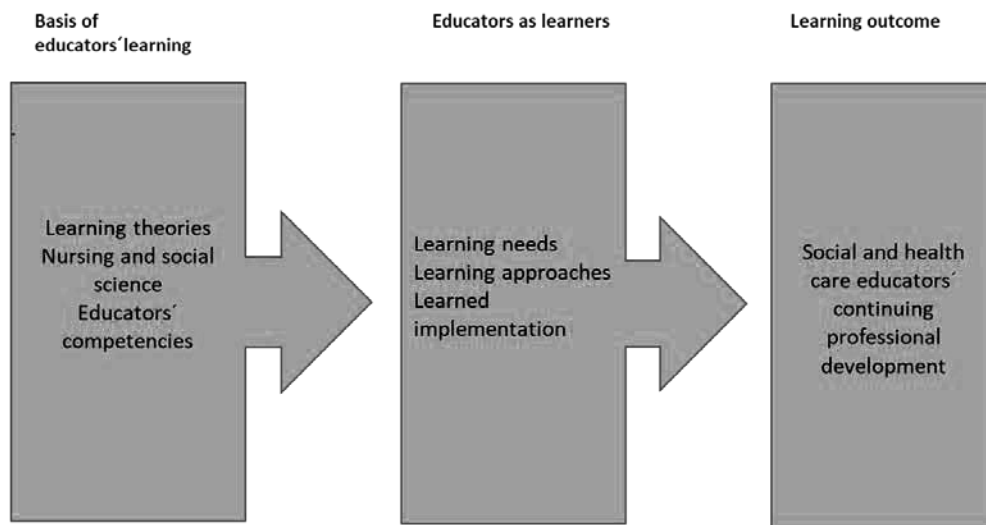


Figure 1. Summary of theoretical background

Alternative text: The picture presents three boxes from left to right the names of the boxes are: First box: Learning theories, Nursing and social science, Educators competencies, second box: Learning needs, Learning approaches, Learned implementation, third box: Social and healthcare educators continuing professional development. On top of first box is text Basis of educators' learning, on top of second box is text Educators as learners, on top of third box is text Learning outcome. The arrow is from first box to second box and from second box to third box.

3 RESEARCH AIM AND RESEARCH QUESTIONS

The main purpose of this research was to develop a comprehensive model of educators' continuing professional development in a social and healthcare context. The research consisted of three phases. The first phase's aim was to explore social and healthcare educators' perceptions about continuing professional development. The second phase's aim was to develop and validate a new scale (EduProDe) on the basis of the previous phase and to evaluate the importance and necessity of different elements in continuing professional development for educators. The final phase's aim was to develop an empirical

model on the basis of the previous phases of social and healthcare educators' continuing professional development.

The research questions in the different phases were:

Phase I

How do social and healthcare educators describe continuing professional development? (Publication I)

Phase II

What is the face and content validity of the EduProDe scale? (Publication II)

What is the construct validity and reliability of the EduProDe scale? (Publication II)

Phase III

What is the structure of social and healthcare educators' continuing professional development and how consistent is the hypothesized structure with the empirical data? (Publication III)

What are the relationships between the concepts in continuing professional development? (Publication III)

Summary of thesis

What is the kind of comprehensive model of social and healthcare educators continuing professional development?

4 IMPLEMENTATIONS OF THE RESEARCH

4.1 Research design

The research design used the mixed method that included the (1) qualitative descriptive research and (2) cross-sectional research whose aims were to answer

the research questions and develop a deep understanding of the phenomenon from the educators' perspectives (Guetterman 2015, Venkatesh et al. 2013)). The mixed methods approach affords the researcher the possibility to achieve the research objectives, which require more than one viewpoint (McNabb 2021). As a research method, mixed methods focuses on gathering, analyzing and mixing both qualitative and quantitative data; its main purpose is to combine the approaches to provide a better understanding of research phenomena than either approach can do alone (Cresswell & Plano Clark 2007). The one strength of the mixed methods approach is that it has the ability to address exploratory and confirmatory research aims simultaneously and within the same research inquiry (Teddlie & Tashakkori 2009). As just stated, the mixed method approach has the ability to provide a stronger inference than a single method. For example, the interviews allowed the researcher to gain deep insights from rich narratives, and the cross-sectional survey brought breadth to the research by helping the researcher to gather data from different aspects of the phenomenon from many participants. Together, these two data collection approaches helped the researcher make better and more accurate inferences, called meta-inferences.

Meta-inferences represent an integrative view of the results from the qualitative and quantitative components of mixed methods research that are considered an essential part of mixed methods research (Teddlie & Tashakkori 2009). Furthermore, the mixed methods approach provides an opportunity for divergent and/or complementary views, which means that the researcher may find different conclusions from the quantitative and qualitative components. Complementary findings offer a holistic view of the phenomena and insights into connections among its elements (Venkatesh et al. 2013). The purpose of mixed methods research is developmental when the questions for one phase emerge from the inferences of a previous one, which indicates that this is a sequential mixed methods design. More precisely, the developmental, sequential mixed methods research design is conducted, e.g., when qualitative research is used to develop constructs and hypotheses and when quantitative research is conducted to test the hypotheses. The goal for a sequential research design is to leverage the findings from the first phase to inform the second phase and to add richness to the overall research (Venkatesh et al. 2013). If there is no strong theoretical foundation for the research question, the suggestion is to conduct a qualitative phase first to develop the theoretical perspective inductively, followed by a quantitative phase to validate the theory (Venkatesh et al. 2009).

The first phase, the qualitative research, explored the educators' perceptions and descriptions about continuing professional development. The aim of the qualitative descriptive research was to explore the complex phenomenon (Sandelowski & Barroso 2002) and to enable an in-depth understanding of continuing professional development (Streubert Speziale & Carpenter, 2007). Quantitative research formed the second and third phases. The aim of the quantitative research was to give a theoretical perspective to the phenomenon, to establish latent constructions in continuing professional development (Schumacker & Lomax 2004). In the second phase, the results from the first phase – the categories and subcategories together with previous studies -- formed the items for the new EduProDe scale. The items were modified according to the experts' comments, and the psychometric testing for the final scale was carried out in the cross-sectional research, resulting in factors that were different elements of continuing professional development. In the third phase, the connections between the factors from the EduProDe scale were defined according to the researcher's understanding about the phenomenon and the previous literature: the hypothesis of the concepts' connections were formed and tested statistically. Figure 2 illustrates the research design.

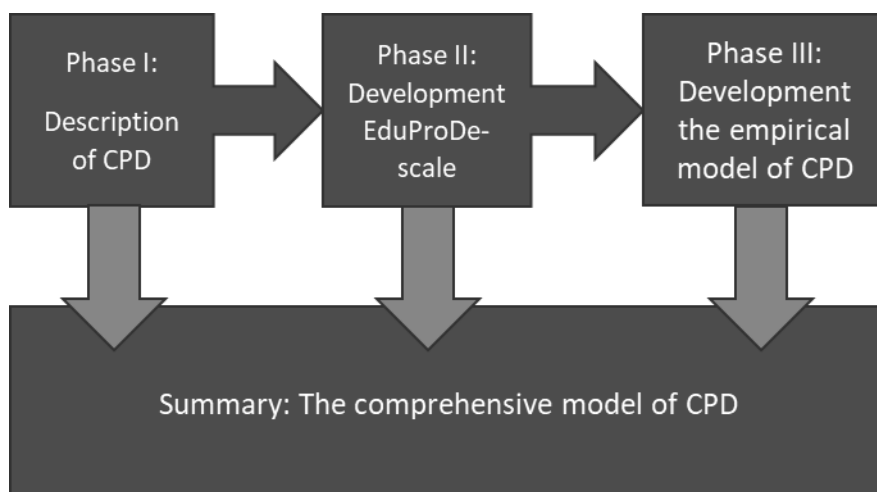


Figure 2. The development process of a comprehensive model of social and healthcare educators' continuing professional development.

Alternative text: There are three boxes beside each other. The first box is named Phase I Description of CPD, the second box is Phase II Development EduProDe-scale and the third box is Phase III Development of the empirical model of CPD. The arrows are going from first box to second and from second box to third. On the bottom of the figure is a big box under all these smaller three boxes, its name is summary, the comprehensive model of CPD.

4.2 Qualitative data sources (Phase I)

The qualitative data were gathered with multiprofessional focus group interviews, because the aim of the research was to explore educators' experiences about the phenomenon from both social and healthcare educators' perspectives (Vaismoradi et al. 2013). The focus group approach was chosen to enhance the interactions between the groups, which means giving the participants the possibility of reacting to others' opinions and sharing experiences, resulting in rich data. The focus group interviews are suitable for learning participants to discuss the phenomenon, which can assist with designing and constructing new research tools, such as questionnaires. They are usually used at the beginning of a mixed method research design (Stewart et al. 2007). The semistructured guideline themes were the meaning of continuing education and continuing professional development.

Purposeful sampling was used when educators from six universities of applied sciences and two vocational schools were invited to participate. Purposeful sampling is widely used when the intention is to find good informants (Redmond & Curtis 2009). In this research educators who had ten or more years teaching experience were invited from different regions of Finland and from different educational organizations to acquire comprehensive data. The experienced educators were approached via email by contact persons. Thirty-five educators altogether wanted to participate and all were interviewed (Publication I).

4.3 Quantitative data sources (Phase II- III)

The quantitative data were collected in cross sectional research. Participants from 21 universities of applied sciences and seven vocational schools were invited to participate in the research. The required number of participants in the second phase was at least 10 participants per item (DeVon et al. 2007) and 19 participants per variable included, which was adequate for scale validation. In the third phase, the SEM analysis, the sample size should have been 200–400, preferably over 400 participants when the observed variables are not normally distributed (Lei & Wu

2007). All social and healthcare educators from all the universities of applied sciences and the randomly chosen vocational schools in Finland were invited, because there was no exact information available about the total amount of educators. Data were collected between October–December 2018 via a Webropol survey. The invitation link was sent to each institution's contact person, who forwarded the information letter and link to the educators. The only inclusion criterion for participation was a working position in one of the selected educational institutions. In total 2330 educators were invited to participate in the research, and 422 voluntarily participated, denoting an 18% response rate (Publications II and III).

4.4 Phase I: Analysis of qualitative descriptive research

The data from the group interviews were analyzed with inductive content analysis. Inductive content analysis is suitable for the descriptive approach in multifaceted phenomena with limited existing research (Vaismoradi et al. 2013, Hsieh & Shannon 2005). The analysis started with the preparation phase, and it was decided in the analysis unit to use a word or words that related to continuing education or professional development. It was decided in this phase to analyze the manifest data. The researchers next read the transcribed text several times to immerse themselves in the data to obtain the sense of whole. The organizing phase consisted of the open codes collection under potential subcategories, comparing the coding's clusters together and grouping subcategories under higher order headings (Elo & Kyngäs 2008) (Publication I).

4.5 Phase II: Quantitative research, the development and validation of the EduProDe-scale

The scale development process had four steps: defining continuing professional development; creating an item pool; an expert review of the item pool; and psychometric testing of the EduProDe scale (DeVellis 2017).

The first step, definition of continuing professional development, was based on the literature review and the qualitative study's results. The literature review (DeVellis 2017) was conducted in the Applied Social Sciences Index (ASSIA), Cinahl, Eric, Medline, and Social Service Abstracts databases. The review's results (Oprescu et al. 2017, Kovalchuk et al. 2017, Kangasoja 2017, Vilen & Salminen 2016, Ignatavicius & Chung 2016, Dickerson et al. 2014, Tanji & Viena 2012, Ferreira et al. 2012, Westfall-Rudd 2011, Holopainen 2007) and qualitative research results

(Publication I) comprised the theoretical basis of the new scale. Appendix 2 presents the evidence for each item according to the literature review and the qualitative study.

The second step was creating an item pool. The initial item pool was created based on the qualitative research results; it comprised 104 items that were divided into five continuing professional development subscales: needs, forms, benefits, barriers, and leadership. The measurement format was determined by the four-point Likert scale (DeVellis 2017).

The third step was experts' reviewing the item pool. Four external experts from universities of applied sciences who were familiar with the phenomenon rated the items according to relevance and clarity using a four-point Likert- scale (DeVon 2007) and gave recommendations for reformatting the items. The first expert review resulted in 54 items being rejected, meaning that 50 items remained (Polit et. al 2007). The second appraisal was conducted by experts from university, and they rated the items using the same scale as the experts in the first appraisal. The content validity index for the items was calculated and those experts gave recommendations to reform the items (Polit et. al 2007). After their ' appraisal, the scale comprised 41 items and eight subscales: educators' needs for pedagogical development; their need to develop clinical expertise; their need to manage challenging teaching situations in teaching; different forms of continuing education; educators' self-directed learning; benefits in professional development; barriers for continuing education; and leadership in educators' competence development.

The fourth step was psychometric testing for the new scale. Construct validity was tested with exploratory factor analysis (EFA), and reliability was evaluated based on the Cronbach's alpha coefficient (Dixon 2005). The meaning of EFA was to identify the items that could be grouped together to indicate any latent variables and to recognize poorly performing items (Dixon 2005). The EFA also provided information about the number of latent variables (DeVellis 2017). The results from the explorative factor analysis with Principal Axis Factor and Varimax rotation identified six factors when the loading cut off was set to 0.30. The factors comprised 22 items in six subscales: educators' needs for pedagogical development, educators' needs to manage challenging teaching situations, leadership in educators' competence development, educators' self-directed

learning, educators' needs to develop subject-matter competence, and the benefits of professional development. (Publication II)

4.6 Phase III: Quantitative research, developing and testing an empirical model

Structural Equation Modeling (SEM) analysis has the potential to establish relationships between the latent constructs and therefore to give a theoretical perspective of the studied phenomenon (Schumacker & Lomax 2004). SEM includes a confirmatory approach to the model structure that is based on a causal pattern. The aim of SEM is to determine whether the hypothesized model is consistent with the data collected for this research (Lei & Wu 2007). SEM analysis goes through the steps of model specification, data collection, model estimation and model evaluation (Lei & Wu 2007).

This firm model is based on theory, which is based on the literature and knowledge in the field. In the model specification, a hypothesis was set whose aim was to recognize the causes and effects among the variables the theory specified. The model specification was based on the previous phases, I and II, that resulted from the concepts, and the connections between the concepts were based on a previous theory (Lei & Wu 2007). Figure 1 presents the concepts of the empirical model of continuing professional development and the relationships between the concepts.

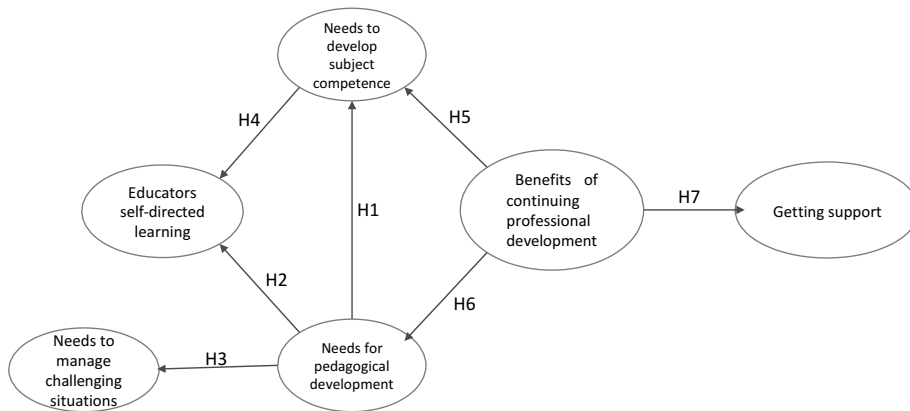


Figure 3. The hypothesized model of social and healthcare educators' professional development based on the previous research

Alternative text: The figure shows hypotheses the arrows between different concepts as explained in the text below. Arrow means positively related. For example H1 needs for pedagogical development points an arrow to needs to develop subject competence etc.

The hypotheses were as follows:

H1. Needs for pedagogical development are positively related to needs for subject-matter development.

H2. Needs for pedagogical development are positively related to educators' self-directed learning.

H3. Needs for pedagogical development are positively related to needs to manage challenging teaching situations.

H4. Needs to develop subject-matter competence are positively related to educators' self-directed learning.

H5. The benefits of continuing professional development are positively related to needs for subject-matter development.

H6. The benefits of continuing professional development are positively related to needs for pedagogical development

H7. The benefits of continuing professional development are positively related to receiving support.

The model estimation was conducted with confirmatory factor analysis (CFA). CFA is essential in model estimation when using structural equation modeling and testing whether the measured variables accurately reflect the hypothesized model (Jackson et. al 2009). The identified indicators of latent variables and relationships between the variables were confirmed. Figure 2 presents the six latent variables.

The decision about rejecting or retaining the hypothesized model had to be made during the model evaluation. More precisely, the overall model fit evaluation is about how well the hypothesized model fits into the data. There are a variety of goodness-of-fit indices that attempt to adjust for the effect of sample and model size. There are two classes of fit indices: incremental and absolute. The general recommendation is to consider multiple indices when evaluating the hypothesized model's fit. Incremental fit indices Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) and absolute fit indices Root Mean Square Error of Approximation (RMSEA) and Standardized Root Mean Residual (SRMR) were used with recommended cut-off values (Lei & Wu 2007). The hypothesized model was retained with one exception: Hypothesis 2, "Needs for pedagogical development are positively related to educators' self-directed learning" was confirmed "Needs for pedagogical development are negatively related to educators' self-directed learning" (Publication III).

4.7 Ethical considerations

The research followed the guidelines of the Finnish Research Ethics Advisory Board on Good Scientific Practice (TENK 2012) and was given an ethical statement from the University of Jyväskylä Ethical Permission Board in December 2017. The research is part of a national research project (TerOpe), so the ethical permission was requested from the University of Jyväskylä, although this research is carried out at Tampere University. The research permission was also requested and received from all the universities of applied sciences and the vocational schools where the interviews were conducted and the survey links were sent. Educators were invited to the interviews and to participate in the survey through contact person and had the possibility to refuse after reading the information letter about the research. Informed consent with a signature was gathered from the interviewed educators before their interview; and answering the questionnaire was interpreted as informed consent by the survey participants. The interview transcripts and background information were anonymized. Both the interview and survey data will be stored in secured storage in accordance with GDPR (2016) and

the Personal Data Act (1050/2018). Furthermore, the national research data were stored according to the research agreement, meaning that the qualitative data will be stored for ten years in a secure folder at the University of Jyväskylä and the survey data will be stored for 50 years in a secure folder at the University of Oulu.

5 RESULTS

5.1 Characteristic of the participants

5.1.1 Characteristics of the participants in the qualitative research (Phase I)

In the qualitative research, 28 (80%) of the 35 participants were from the universities of applied sciences and 7 participants (20%) were from the vocational schools from geographically different parts of Finland. Of the educators' teaching fields, 69% were from the healthcare field (including nursing, rehabilitation, radiography and bioanalytics), 22% from the social work or combined social and healthcare field, and 9% did not identify their teaching field. The of participant age was 56 years (range 39-66 years) and the mean of working experience was 21 years (range 9-38 years). The majority of the participants (25 or 71%) had a Master's Degree in health, administration, education or social sciences.

5.1.2 Characteristics of the participants in the quantitative research (Phase II and Phase III)

In the quantitative research, 422 participants 70% (n= 281) were teaching in the healthcare field (including rehabilitation), 21% (n=83) taught in the social work field and 10% (n=40) taught in the combined social, healthcare and rehabilitation field. The educators' average age was 51 years (SD=8.7) and their average work experience was 14 years (SD=9.0), which varied from 1 to 45 years. Most educators had a Master's Degree in health science (70%, n=284), with 21% (n= 83) holding a doctoral degree. Nearly all educators (95%, n= 402) had completed 60 ECTS pedagogical studies.

5.2 Comprehensive model of social and healthcare educators' continuing professional development

5.2.1 Phase I: Social and healthcare educators' descriptions of CPD

The experienced educators from the universities of applied sciences and vocational schools described their participation in professional development in various ways and also had diverse opinions about continuing education's contribution to their CPD. The results presented in three main categories: "Educators' approaches for developing professional competence," "Educators' continuing professional development needs" and "Barriers in continuing education."

"Educators' approaches for developing professional competence" demonstrated that informal learning, which means learning as part of daily work, is central for CPD. The most common route for learning was collaboration in different forms: Educators participated in working life, they participated in different professional events, e.g., congresses that benefitted their subject-matter knowledge, they collaborated with working life and on multiple projects. Educators also developed their competence also by participating in international exchange programs. In addition to collaborative learning, educators were learning by self-study, e.g., studying during work time and free time and following current issues related to their own field and society in general.

Educators' learning needs in continuing education reflect the most current issues in social and healthcare education. Educators expect high quality and extensive professional development. More precisely, from the educators' viewpoints, high-quality professional development is planned and relevant when their individual goals for learning are taken into consideration, which would give them the most benefit. Then barriers can be turned into possibilities, which means that the planned continuing education referred to time and financial resources as well as to the content of education and how the implementation of learning is planned. They also needed adequate support from their superiors. Extensive professional development means that educators had various learning needs in terms of CPD; they needed to increase their subject-matter and pedagogical competencies as well as digital and cultural competencies. They also needed to gain knowledge of how to manage challenging teaching situations (Publication I).

5.2.2 Phase II: The psychometric testing of the EduProDe-scale

The second phase aimed to develop and test the new self-assessment instrument to measure educators' views about different elements of CPD. The evidence proved that the EduProDe-scale was reliable and valid. The scale comprises 22 items that formulate six distinct elements of educators' CPD.

The first factor, "educators' needs for pedagogical development," covers the learning needs for versatile teaching methods, pedagogically relevant technology use, student-centered teaching, student evaluation, simulation teaching, work-oriented teaching and how to carry out teaching-related development projects. In the second factor, "educators' needs to manage challenging teaching situations," the educators may assess their skills to solve conflict situations in teaching and their competence to deal with students' studying problems and to guide culturally diverse students. The third factor, "leadership of educators' competence development," includes three items about how the organization supports the educators in CPD: personal development plan, discussions with a superior about personal development and organizational atmosphere. The fourth factor, "educators' self-directed learning," also includes three items that measure educators' development of language skills, international collaboration, and conference participation in terms of CPD. The fifth factor, "educators' needs to develop subject-matter competence," assesses educators' needs to update subject-matter competence by working in a clinical environment, collaborating with the clinical environment's projects, and networking to improve subject-matter knowledge. The final factor, "benefits from professional development," comprises three items by which educators can assess the benefits: improved teaching skills, enhanced work well-being and excellent clinical skills for updating their subject-matter knowledge (Publication II).

5.2.3 Phase III: The empirical model of social and healthcare educators' CPD

The third phase aimed to develop and test an empirical model based on the previous phases. All but one of the presented hypotheses were confirmed. Hypothesis H2 was the exception. This hypothesis expected the connection between "needs for pedagogical development" and "educators' self-directed learning" to be positive but it turned out to be negative. All the connections between the concepts were significant ($p < .001$), and the hypothesized model was confirmed.

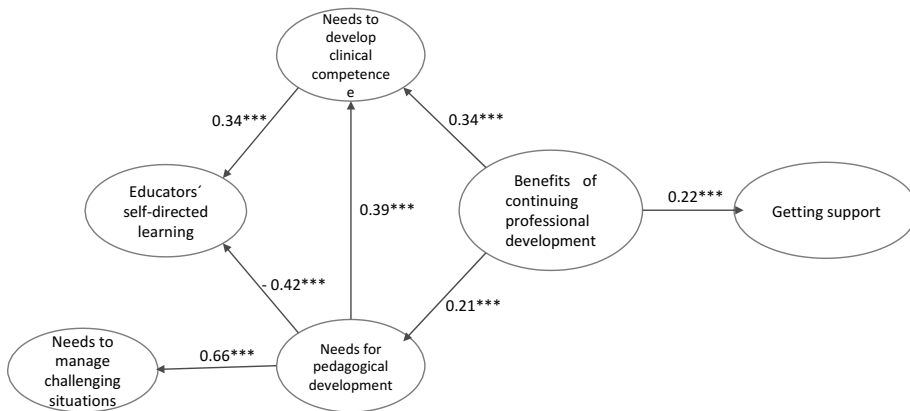


Figure 4. The empirical model of social and healthcare educators' continuing professional development *** $p < 0.001$

Alternative text: The figure is showing the correlations, arrows, between the concepts. All correlations p-values are smaller than 0.001. Needs for pedagogical development has positive correlation 0.39 to needs to develop clinical competence and positive correlation 0.66 to needs to manage challenging situations. Needs for pedagogical development has negative correlation to educators' self-directed learning 0.42. Needs to develop clinical competence has positive correlation 0.34 to educators' self-directed learning. Benefits of continuing professional development has positive correlations to needs to develop clinical competence 0.34 and to needs for pedagogical development 0.21 and to getting support 0.22.

The model indicates that when educators understand and are searching for the benefits of CPD, they tend to seek support from their superiors. When they understand the benefits of learning, they will recognize their learning needs, or more precisely, their pedagogical and subject-matter competence needs. Recognizing their pedagogical development needs will lead educators to also recognize their need to manage challenging teaching situations. When educators recognize their learning needs, that will lead them to consider the self-directed learning approach that supports their learning in terms of subject-matter competence but does not support their pedagogical development. Figure 4 presents the empirical model (Publication III).

5.3 Summary of results

In summary, the results can be stated that the first basic element of the model (the blue area in Figure 5) of social and healthcare educators' continuing professional development (CPD) is their ability to recognize its crucial benefits and seek and gain support from both their superior and their colleagues. The sound basis of CPD nourishes educators' ability to recognize their various learning needs, which is the second basic element (the yellow area in Figure 5), that is, to develop their competencies, in which pedagogical needs are the cornerstones. Recognizing their pedagogical needs, educators will also recognize their need to enhance their competence with challenging teaching situations and their need to develop their clinical competence. When educators recognize these various needs, they will utilize different learning approaches to gain knowledge and develop their competencies. Figure 5 presents the summary of results.

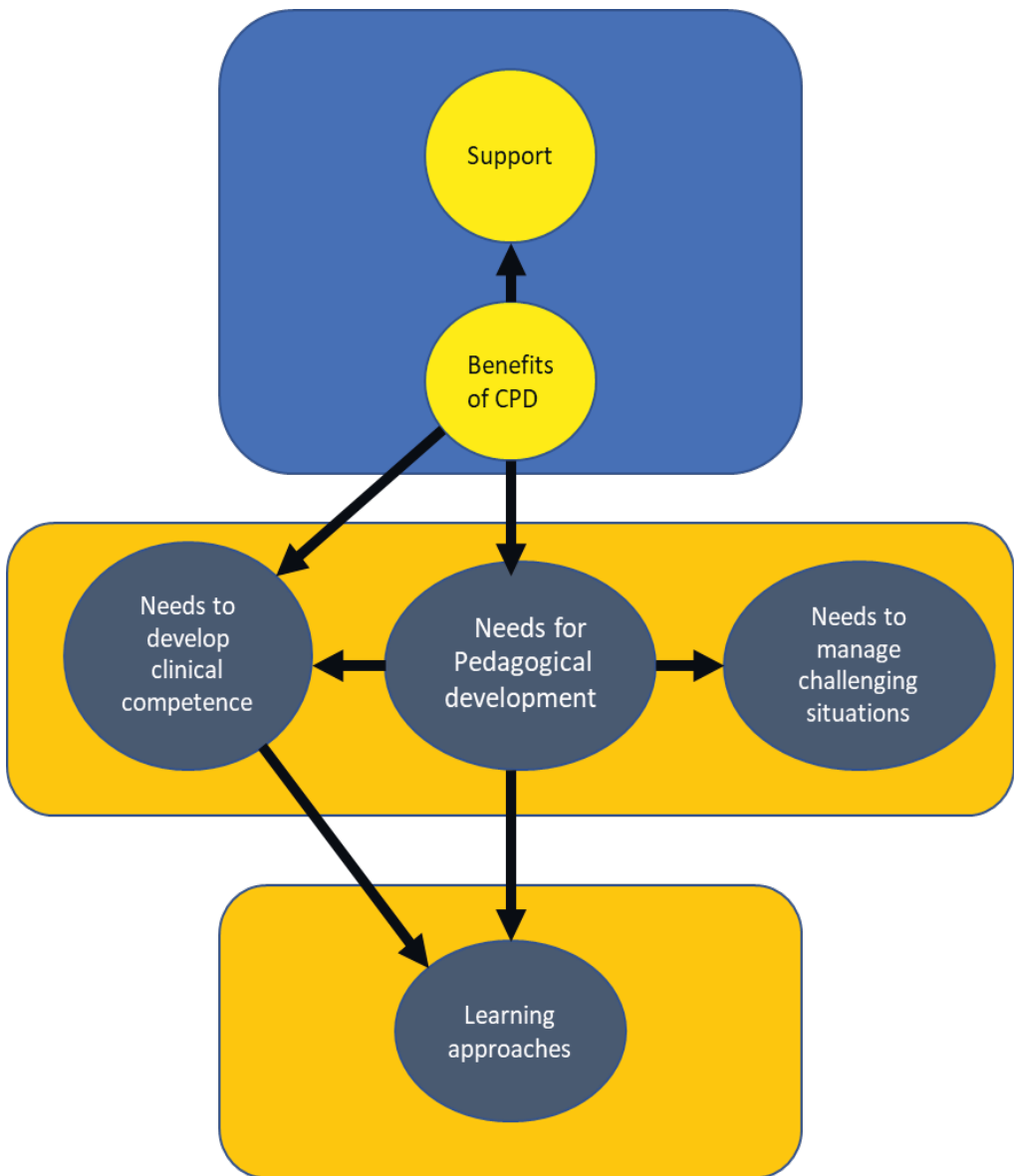


Figure 5. The comprehensive model of social and healthcare educators' continuing professional development

Alternative text: Two yellow circles, support and benefits of CPD, are on the blue area. Three circles needs to develop clinical competence, need for pedagogical development and needs to manage challenging situations are on the yellow area. Another yellow area is the circle of learning approaches. The arrows are pointing from benefits of CPD to support, needs to develop clinical competence and needs

for pedagogical development. Arrows pointing from needs for pedagogical development are pointing to needs to develop clinical competence, needs to manage challenging situations and learning approaches. The arrow is pointing from needs to develop clinical competence to learning approaches. The arrow is pointing from needs for pedagogical development to learning approaches

6 DISCUSSION

6.1 Review of the results

Social and healthcare educators' motivation and need for support

Recognizing the benefits of continuing professional development (CPD) and seeking the support for professional learning and growth together create a basis for effective CPD and one can distinguish the construct in the model (blue area in Figure 3.). The benefits that educators expect and seek from professional development form one part of a sound basis for CPD. Herzberg's two-factor theory (1959) describes motivation as an internal engine founded on the recognition of achievement, satisfaction of achievement and personal growth (Bassett-Jones & Lloyd, 2005). The autonomous motivation is also associated with self-endorsement, because educators identify the professional development's values and have integrated the values into their sense of self (Deci & Ryan 2008). The motivation was evaluated on the basis of educators' statements concerning the realization of the benefits of professional development, such as improved teaching and increased well-being. Motivated educators are engaged learners who experience autonomy (Tjin A Tsoi et al. 2018).

The other part of the sound basis for CPD is formed from the support educators are seeking and receiving before and during the learning process, according to the new model that recognizes that the benefits of CPD will lead educators to seek support. At its best, the support enhances educators' motivation, and the

educational program accommodates educators' needs to feel competent and autonomous. The program support includes the program facilitators' support and the program content contributing to the educators' volitional will to engage in learning that offers them choice, encouragement and constructive feedback. Furthermore, when educators are able to strengthen their existing relationships and expand their professional community, these relationships provide additional support for them and enhances their growth and development (Power & Goodnough 2019). When educators are learning informally, the organizational culture about teaching and communication has a strong impact on the support they receive; the positive influence is collegial support and the negative is impeding the implementation of the learned issues into practice (Englund et al. 2018, Kynd et al. 2016,)

Educators' learning

According to the new comprehensive model, another crucial structure is "Educators' learning," which introduces the educators' learning design and sees educators as learners. In the model the educators' learning consists of different learning needs and learning approaches (yellow area in Figure 3.). The learners' agency constitutes the learner's capacity to act upon, regulate and enrich their learning experiences in the sociocultural context of the educational environment (Reeve & Tseng 2011). Furthermore, the learner's agency refers to the individual perspective of learning, that is, the ability to act intentionally towards individual goals and to personalize one's own learning (Reeve & Tseng 2011). The learners' agency also refers to the social context in learning, which is the interplay between the learner's autonomous learning behavior and the social context's resources, opportunities and constraints (Biesta et al. 2015). In Chaaban et al.'s (2021) research, the factors that influenced a learner's agency were motivation, self-regulated learning and social-cultural support. These factors were rather similar to this model's constructs, although the participants in Chaaban et al.'s. (2021) research were teacher students from elementary and secondary schools, and the participants in this research were educators from professional education with various work experience.

The educators' agency may raise tensions in educational organizations. The educators in this research recognized their learning needs. but sometimes they experienced barriers to participate in continuing education. Louws et al. (2020) similarly describe that educators' professional development and agency might be hindered when educators try to negotiate their "space" with other stakeholders, such as colleagues and management. Leaders of educational organizations might interpret and act on the agency tensions in different ways, e.g., by discussing responses to the situations from various perspectives. The researchers recommended supporting the dialogue about educators' professional agency as well as discussing mutual roles and expectations when designing professional development for an individual educator or to the organization level (Louws et al. 2020).

The acknowledgement of a gap in one's competence base and the sense of a need to acquire new knowledge to address this gap fosters professional development (Saroyan & Trigwell 2015). Another condition to enhance professional development is to highlight the personal and intentional choices instead of departmental or institutional aims (Van Schalkwyk et al. 2015), which resulted also in this research. One way to take the personal choices into consideration is to incorporate the personal development plan in the competence development strategy to give the control of professional development to educators, a result that was in line with Hoekstra and Crocker's (2015) research. However, even the educator's personal agency is important for CPD, and Desimone (2011) defines the coherence as one of the critical features of professional development. Desimone's findings mean that effective professional development is achieved not only by recognizing educators' needs but also by understanding that educators' learning should be consistent with educational organization strategy and the state's reforms and policies (Desimone 2011).

6.2 Quality of the research

Accurate criteria for which both the qualitative and the quantitative components of the research can be validated are required to ensure the quality of mixed methods research (Venkatesh et al. 2013, Giddings & Grant 2009). It is also necessary to provide an assessment of how the integrated results have been

conducted from both the qualitative and the quantitative phases and the quality of integration, i.e., the inference quality (Venkatesh et al. 2013).

Trustworthiness of qualitative research

According to Creswell and Plano Clark (2007), there are several strategies to follow when ensuring the trustworthiness of qualitative research in mixed methods research. The first strategy to assess the trustworthiness of the qualitative research is the clear articulation of the research question. The qualitative research question in this research focused on describing the characteristic of continuing professional development and this guided the data collection and analysis; thus, the question was formed as clearly as possible.

The second strategy is triangulation; in qualitative research, three investigators were analyzing the data, which can be considered as investigator triangulation. Each investigator analyzed the data separately and the conclusions were shared and discussed in the team until a mutual understanding was found. This procedure can be considered to increase the trustworthiness.

The third strategy is to provide auditability for the reader to follow the researcher's decision making through the data gathering and analysis. The data gathering and analysis procedure is described as thoroughly as possible in the publications. Member checking as one of the strategies of trustworthiness is missing in this study and might reduce the trustworthiness of the research. The relevance of the study has been enhanced with writing sufficient detail about the participants and the context in which the data were gathered. The relevance might also be improved with purposeful sampling to ensure that the participants came from range of representative settings, such as different educational organizations, from universities of applied sciences and vocational schools and from different parts of Finland (Creswell & Plano Clark 2007).

Rigour of quantitative research

In mixed methods quantitative research, the aim of rigor is to establish that the findings are generalizable. The measurement and the design validity must be evaluated to achieve this (Giddings & Grant 2007). The goal of measurement validity is to ensure that the EduProDe scale consistently and reliably measures different elements of educators' continuing professional development. The validation process was conducted in Phase II, and the scale was found to be reliable and valid in the social and healthcare educators' sample.

The design validity consists of the internal and external validity (Andrew & Halcomb 2007). The internal validity relates to researchers' possibilities to draw cause and effect inferences from the sample to the population. This research explored in Phase III only the positive and negative connections between the key concepts. External validity is the extent to which the results can be applied to other groups or situations. For example, the Hawthorne effect should be considered to improve the external validity (McCambridge et al. 2014).

It is possible that the sample was biased in this quantitative research; only the educators who were interested in professional development answered the questionnaire, or the questionnaire did not reach the educators properly, because the time when it was delivered was partly an autumn break in organizations. We tried to avoid a low number of participants by sending the link to the questionnaire three times. The Hawthorne effect is also possible. When educators were assessing their professional development needs and their perceptions about different CPD elements, it is possible that the data consisted of tailored answers reflecting the educators' willingness to be "good" educators. The Hawthorne effect might be reduced with the form of claims that participants answered with the 4-point Likert scale. The claims were formed as needs or perceptions instead of forming the claims as how competent the educators evaluated themselves (McCambridge et al. 2014). However, the issues regarding the sample should be considered when evaluating the results' generalizability.

The results can be considered to generalize among social and healthcare educators in universities of applied sciences and vocational schools in Finland. It is recommended that the results be generalized to fields other than social and

healthcare, to other educational contexts, and to international contexts with great consideration.

Inference quality

There are two aspects of inference quality: design quality and explanation quality. Design quality assesses the research design and analytic adequacy in the qualitative and quantitative phases (Teddlie & Tashakkori 2009). The preceding scrutiny describes the limitations and strengths of qualitative and quantitative research through generally the accepted validation principles of mixed methods research. The explanation quality has three key elements: integrative efficacy, integrative correspondence and inference transferability (Venkatesh et al. 2013). Integrative efficacy refers to the quality of infusion and blending the results from all phases in mixed methods research. The results blending was guided by the developed model; thus, not all the qualitative result from Phase I and the quantitative results from Phase II were not infused into the final results. The justification for this was that the final aim of the research was to develop a comprehensive model; therefore, the model was the starting point for the inference. Integrative correspondence refers to the research's initial purpose to conduct mixed methods research. The mixed methods approach was purposefully employed to achieve the overarching aim of the research. Inference transferability refers to the fact that meta-inference is generalizable to other contexts. The mixed methods research method was selected because the aim of the research was to gain specific and deep knowledge about the phenomenon, especially from the social and healthcare educational contexts. The generalizability of the meta-inference aligns with the rigor of quantitative research (Teddlie & Tashakkori 2009).

6.3 Implementation of the results

The research produced knowledge about CPD that confirmed the vast amount of knowledge the education science scholars have found during the decade-long research work. However, this research contributed to the social and healthcare field with rather novel knowledge, especially from both the social and the healthcare educators' perspectives, and it gained knowledge about the social and healthcare field contexts.

The knowledge resulting from the research may be utilized to gain a general understanding of the educators' working environment and the perspective of CPD in that. The general knowledge will benefit the educators, managers, academic educators who educate the educators and policy makers. With the EduProDe scale, it is possible to use to the educators' personal development plans to guide the conversations between the educators and manager. The scale can also be used when recruiting new personnel to guide their continuous learning competencies evaluation.

The comprehensive model of social and healthcare educators' continuing professional development is a good tool for planning the course for student educators about CPD and the requirements of educators in universities of applied sciences and vocational schools. Altogether the new model will provide both the social and the healthcare fields a novel way to understand educators' CPD, that is, to take a more educator-centered approach in planning and conducting learning and to notice educators' motivation by enhancing the benefits of CPD and by creating a collaborative climate to enhance reflection and to promote the implementation of new, learned issues.

The practical suggestion is to create a national professional development program that is developed and carried out in collaboration with universities where the social and health sciences are taught. The program would consist of several courses, be continuous and based on knowledge from research. The program's

educators could be social and health science researchers and current experts. Participants could be educators from the social and healthcare fields and educator students as well. The themes of program could be created, e.g., from educators' development discussions with their superiors in which the individual educators' goals relate to educators' team and organizational goals. Part of the program themes could be permanent and some of themes could follow current topics, and participants would receive credits from completing the courses.

6.4 Suggestions for further research

Educators' learning and competence development should be studied further in Finland and internationally to ensure the availability of highly qualified professional in the future. Another reason for further studies is clients' complex situations and more integrated care, which requires multiprofessional collaboration. One key for enhancing multiprofessional collaboration is new knowledge in this area, which means further research by professionals on organizational leaders' and students' perspectives about organization atmosphere, the elements that support the collaboration, and how a supportive atmosphere can be enhanced. All the methodological selections in which the researchers are involved with participants are recommended to be able to understand the organizational atmosphere.

This research explored CPD among social and healthcare educators, so the data were gathered from educators. The primary goal for educators' CPD is to enhance student learning, thus future studies should employ research and methods to track possible and ongoing changes in students' knowledge, attitudes, and beliefs during or after educators' CPD programs. As become students qualified as social and healthcare professionals and the field faces increasing challenges to retain professionals, it is also important to seek solutions to this problem through social and healthcare education research. It would be interesting to research the issues to improve in education what would support the young professionals' decisions to stay in the field from the students' perspective. These themes could be investigated with a mixed methods design in which both scales or registered data

together with qualitative data gathering would give more comprehensive results than a single method.

7 CONCLUSIONS

The following conclusions are presented based on this research:

1. Educators described continuing education as a key element of their continuing professional development (CPD). They experienced new pedagogical and subject-matter knowledge as beneficial; however, the poor coordination of continuing education in organizations appeared as a barrier in some cases. Educators wished for more support for their learning and for implementing their learning into their practice. Educators described current needs for CPD as pedagogical, challenging teaching situations and clinical knowledge.
2. The Edu-Pro-De scale was found to be a valid instrument when measuring benefits and essential support from superiors, learning needs and approaches to social and healthcare educators in terms of CPD.
3. The empirical model of social and healthcare educators provides theoretical knowledge about core elements in CPD and the connections between the elements. The model presented that when educators recognize the benefits of CPD, this will have a positive effect on seeking support and recognizing the pedagogical and clinical learning needs.

Recognizing the pedagogical learning needs will lead the educators to recognize different learning approaches and the need to learn to manage challenging situations.

4. The comprehensive model presents new knowledge about social and healthcare educators' CPD in a Finnish social and healthcare context. The model describes the core elements of CPD from the educators' perspective and illustrates the connections between the elements. With the EduProDe scale, it is possible to measure the core elements among different educator groups and in different countries.

REFERENCES

- Agbim K. & Ozanne E. (2007). Social Work Educators in a Changing Higher Education Context: Looking Back and Looking Forward 1982–2005, *Australian Social Work*, 60:1, 68-82.
- Andersson P. & Köpsén S. (2019). VET Teachers between School and Working Life: Boundary Processes Enabling Continuing Professional Development. *Journal of Education & Work*, 32(6/7), 537-551.
- Andrew S. & Halcomb E. (2007). Mixed Methods Research is an Effective Method of Enquiry for Community Health Research. *Contemporary Nurse: A Journal for Australian Nursing profession* 23(2), 145-153.
- ANTS. Australian Nurse Teacher's Society (2010). Australian Nurse Teacher Professional Practice Standards. Available at: https://www.ants.org.au/ants/pluginfile.php/2208/mod_resource/content/11/ANTS_revised_PPS_8apr10b.pdf
- Aslan F., Sahin N. & Emiroglu O. (2019). Turkish nurse educators knowledge regarding LGBT health and their level of homophobia: A descriptive cross-sectional study. *Nurse Education Today* 76, 216-221.
- Avalos B. (2011). Teacher professional development in teaching and teacher education over ten years. *Teaching and Teacher Education*, 27, 10–20.
- Basset-Jones N. & Lloyd G. (2005). Does Hertzberg's motivation theory have staying power? *Journal of Management Development* 24(19), 929-943.
- Bett H. & Makeva L. (2020). Can Facebook groups enhance continuing professional development of teachers? Lessons from Kenya. *Asia-Pacific Journal of Teacher Education* 48(2), 132-146.
- Biesta G., Priestley M. & Robinson S. (2015). The role of beliefs in teacher agency. *Teachers and Teaching, Theory and Practise* 21(6), 624-640.
- Bono-Neri F. (2019). Pedagogical nursing practice: redefining nursing practice for the academic nurse educator. *Nurse Education in Practice* 37, 105-108.
- Chaaban Y., Qadhi S. & Du X. (2021) Student teachers' agency in the transition to emergency online learning. *Research in Post-Compulsory Education* 26(2), 231-255.

- Collin K., Van der Heijden B. & Lewis P. (2012) Continuing professional development. *International Journal of Training and Development*, 16(3), 155-163.
- Cox D., Cleak H., Bhathal A. & Brobhy L. (2021). Theoretical frameworks in social work education: a scoping review. *Social Work Education*, 40(1), 18-43.
- Creswell J. & Plano Clark V. (2007). *Designing and Conducting a Mixed Methods Research*. Thousand Oaks, Sage, California, USA.
- Deci E. & Ryan R. (2008). Facilitating optimal motivation and psychological well-being across life's domains. *Canadian Psychology/Psychologie canadienne*, 49(1), 14–23.
- Desimone, L. (2011). A primer on effective professional development. *Phi Delta Kappan*, 92(6), 68–71.
- DeVellis R. (2017). *Scale development theory and applications* (4th ed.). Thousand Oaks: Sage Publications.
- DeVon H., Block M., Moyle-Wright P. & Ernst D. (2007). A psychometric toolbox for testing validity and reliability. *Journal of Nursing Scholarship*, 39(2), 155–164.
- Dickerson P., Decker S. & Scanlon, N. (2014). Developing an Interprofessional Continuing Education Symposium for Health Care Educators in Qatar. *The Journal of Continuing Education in Nursing*, 45, 545-551.
- Dijkman B., Reehuis L. & Roodpoll P. (2017). Competencies for working with older people: The development and verification of the European core competence framework for health and social care professionals working with older people. *Educational Gerontology*, 43(10), 483-497.
- Dixon J. (2005). Exploratory Factor Analysis. In B. Munro (Ed.), *Statistical methods for health care research* (pp. 321–325). Lippincott Williams & Wilkins, Philadelphia, USA.
- Dymoc D. & Tyler, M. (2018). Towards a more systematic approach to continuing professional development in vocational education and training. *Studies in Continuing Education*, 40(2), 198-211.
- Elo S. & Kyngäs H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62, 107-115.
- Englund C., Olofsson A. & Price L. (2018). The influence of sociocultural and structural contexts in academic change and development in higher education. *Higher Education* 76, 1051-1069.

- Erlandsson K., Byrskog U., Osman F., Pedersen C., Hatakka M. & Klingberg-Allvin M. (2019). Evaluating a model for the capacity building of midwifery educators in Bangladesh through blended, web-based master's program. *Global Health Action* 12, 1-10.
- Ferreira R., Pereira M. & Xavier S. (2012). The training and development of skills in teacher. *Journal of Nursing UFPE On Line*, 6(9), 2298–2306.
- Fischer C., Fishman B., Dede C., Eisenkraft A., Frumin K., Foster B., Lawrenz F., Jurist Levy A. & McCoy A. Investigating relationships between school context, teacher professional development, teaching practices, and student achievement in response to a nationwide science reform. *Teaching and Teacher education* 72, 107-121.
- Forsberg E. & Wieland W. (2012). Knowledge sources and autonomy: German and Swedish teachers' continuing professional development of assessment knowledge. *Professional Development in Education*, 38(5), 741-758.
- Freire P. (1973). *Education for Critical Consciousness*. Sheed and Ward, London, UK.
- Gagne R. (1977). *The Conditions of Learning*. Holt, Rinehalt and Winston, New York, USA.
- GDPR. (2016). Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April, 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). Available at: <https://eur-lex.europa.eu/eli/reg/2016/679/oj>
- Giddings L. & Grant B. (2009). From Rigour to Trustworthiness: Validating Mixed Methods. In book Andrew S. & Halcomb E. (2009). *Mixed Methods Research for Nursing and Health Sciences*. John Wiley & Sons, Incorporated.
- Goodyear, V. (2017). Sustained Professional Development on Cooperative Learning: Impact on Six Teachers' Practices and Students' Learning, Research. *Quarterly for Exercise and Sport*, 88 (1), 83-94.
- Government decree of the Universities of Applied Sciences 1129/2014. (2014). Available at <https://www.finlex.fi/fi/laki/alkup/2014/20141129?search%5Btype%5D=pika&search%5Bpika%5D=asetus%20ammattikorkeakoulusta#Pidp450128512>

- Grace P. & Zumstein-Shaha M. (2020). Using Ockham's razor to redefine "nursing science." *Nursing Philosophy* 21, 1-8.
- Grady P. & Gough L. (2015). Nursing Science: Claiming the Future. *Journal of Nursing Scholarship* 47(6), 512-521.
- Graebe J. (2019). Continuing Professional Development: Utilizing Competence Based Education and the American Nurses Credentialing Center Outcome-based Continuing Education Model. *The Journal of Continuing Education in Nursing* 50(3), 100-102.
- Guetterman T., Fetters M. & Cresswell J. (2015). Integrating quantitative and Qualitative Results in Health Science Mixed Methods Research Through Joint Displays. *Annals of Family Medicine* 13 (6).
- Guskey T. (2002) Professional Development and Teacher Change. *Teachers and Teaching*, 8 (3), 381-391.
- Hargreaves E., Berry R., Lai Y, Leung P., Scott D. & Stobart G. (2013). Teachers' experiences of autonomy in Continuing Professional Development: Teacher Learning communities in London and Hong Kong. *Teacher Development*, 17(1), 19-34.
- Haruta J., Yoshida K., Goto M., Yoshimoto H., Ichikawa S., Mori Y., Yoshimi K. & Otsuka M. (2018). Development an interprofessional competency framework for collaborative practice in Japan. *Journal of Interprofessional Care* 32(4), 436-443.
- Hauenstein E. & Clark R. (2020). Psychiatric nursing science: Current status and future prospect. *Archives of Psychiatric Nursing* 34, 355-362.
- Herzberg F., Mausner B. & Snyderman B. (1959). *The Motivation to Work*. New York: Wiley.
- Hoekstra A. & Crocker J. (2015). Design, implementation and evaluation of an ePortfolio approach to support faculty development in vocational education. *Journal of Studies in Educational Evaluation* 46, 61-73.
- Holopainen A., Hakulinen-Viitanen T. & Tossavainen K. (2007). Nurse teacherhood: Systematic descriptive review and content analysis. *International Journal of Nursing Studies* 44(4), 611-623.
- Hsieh H. & Shannon S. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15, 1277-1288.

- Huang Hoon, C. (2016). Fostering community, building trust, and navigating risks in academic development [Editorial]. *International Journal of Academic Development*, 21(3), 163-165
- Husband G. (2015). The impact of lecturers' initial teacher training on continuing professional needs for teaching and learning in post-compulsory education. *Research in Post-Compulsory Education* 20(2), 227-244.
- Husu J. & Toom A. (2016). Opettajat ja opettajankoulutus- suuntia tulevaan. Selvitys ajankohtaisesta opettaja- ja opettajankoulutustutkimuksesta opettajankoulutuksen kehittämissuunnitelman laatimisen tueksi. Opetus- ja kulttuuriministeriön julkaisuja 2016, 33. Available at: <https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/75552/okm33.pdf?sequence=1&isAllowed=y>
- Hyung N. (2019). A conceptual framework for interdisciplinary education in engineering and nursing health informatics. *Nurse Education Today* 74, 91-93.
- Ignatavicius, D. & Chung, C.E. (2016). Professional Development for Nursing Faculty: Assessing Transfer of Learning into Practice. *Teaching and Learning in Nursing*, 11, 138-142.
- Jackson D., Gillaspay J. & Purc-Stephenson R. (2009). Reporting Practises in Confirmatory Factor Analysis: An Overview and Some Recommendations. *Psychological Methods* 14(1), 6-23.
- Jairath N., Peden-McAlpine C., Sullivan M., Vessey J. & Henly S. (2018). Theory and Theorizing in Nursing Science. *Nursing Research*, 67(2), 188-195.
- Jarvis P. (2004). *Adult education and lifelong learning*. Routledge Falmer, London, UK.
- Jetha F., Boschma G. & Clauson M. (2016). Professional development needs of novice clinical teachers: A rapid evidence assessment. *International Journal of Nursing Education Scholarship* 13(1), 1–10.
- JB1. (2014). Joanna Briggs Institutes Reviewers' Manual 2014, ed. University of Adelaide, The Joanna Briggs Institute, Adelaide, Australia.
- Kangasoja M. (2017). *Osaava-ohjelman hyviä käytänteitä; Opetustoiminnan henkilöstön osaamisen kehittämisen toimintamalleista ja niiden mahdollisuuksista*. Opetus- ja Kulttuuriministeriön julkaisuja 2017:45.

- Kennedy, A. (2011). Collaborative continuing professional development (CPD) for teachers in Scotland: Aspirations, opportunities and barriers. *European Journal of Teacher Education*, 34(1), 25-41.
- Kennedy, A. (2014) Understanding continuing professional development: the need for theory to impact on policy and practice. *Professional Development in Education*, 40 (5), 688-697.
- Kennedy A. & McKay J. (2011). Beyond induction: the continuing professional development needs of early-career teachers in Scotland. *Professional Development in Education*, 37(4), 551-569.
- Khalili H., Orchard C., Spence Laschinger H. & Farah R. (2013). An interprofessional socialization framework for developing an interprofessional identity among health professions students. *Journal of Interprofessional Care* 27(6), 448-453.
- Knowles, M. (1975). *Self-directed learning. A guide for learners and teachers*. Prentice Hall/Cambridge, New Jersey, UK.
- Knowles, M. (1978). *The Adult Learner: The neglected Species*. Gulf Publishing Company, Houston, USA.
- Koivula, M., Tarkka, M-L., Simonen, M., Katajisto, J. & Salminen, L. (2011). Research utilization among nursing teachers in Finland: A national survey. *Nurse Education Today*, 31, 24-30.
- Koskinen C., Koskinen M., Koivula M., Korpi H., Koskimäki M., Lähteenmäki M-L., Mikkonen K., Saaranen T., Salminen L, Sjögren T., Sormunen M., Wallin O. & Kääriäinen M. (2020). Health and social care educators' ethical competence. *Nursing Ethics* 27(4), 1115-1126.
- Kovalchuck V. & Vorotnykova I. (2017). E-Coaching, E-Mentoring for Life-Long Professional Development of Teachers within the System of Post-Graduation Pedagogical Education. *The Turkish Online Journal of Distance Education TODJE* 18(3), 214-227.
- Kynd E., Gijbels D., Grosemans I. & Donche V. (2016). Teachers' Everyday Professional Development: Mapping Informal Activities, Antecedents, and Learning Outcomes. *Review of Educational Research*, 86(4), 1111-1150.
- Lahtinen P., Leino-Kilpi H. & Salminen P. (2014). Nursing Education in the European higher education area- variations in the implementation. *Nurse Education Today* 34(6), 1040-1047.

- Lei P-W & Wu Q. (2007). Introduction to Structural equation Modeling: Issues and Practical Considerations. *Educational Measurement, Issues and Practise*, 26(3), 33-43.
- Lloyd C. & Payne J. (2012). Raising the quality of vocational teachers: continuing professional development in England, Wales and Norway. *Research Papers in Education*, 27(1), 1-18.
- Louws M., Zwart R., Zuiker I., Meijer P., Oolbekkink- Marchand H., Schaap H. & van der Want A. (2020). Exploring school leaders' dilemmas in response to tensions related to teacher professional agency. *Professional Development in Education* 46(4), 691-710.
- Mansour N., EL-Deghaidy H., Alshamrani S. & Aldahmash A. (2014). Rethinking the Theory and Practice of Continuing Professional Development: Scienc Teachers' Perspectives. *Research in Science Education* 44, 949-973.
- McAllister M. & Flynn T. (2016). The Capabilities of Nurse Educators (CONE) questionnaire: Development and evaluation. *Nurse Education Today* 39, 122-127.
- McCambridge J., Witton J. & Elbourne D. (2014). Systematic review of the Hawthorne effect: new concepts are needed to study research participation effects. *Journal of Clinical Epidemiology*, 67, 267-277.
- McGregor C. (2019). A Paradigm Framework for Social Work Theory for Early 21st Century Practice. *British Journal of Social Work* 49, 2112-2129.
- McMillan D., McConnel B. & O'Sullivan H. (2016). Continuing professional development – why bother? Perceptions and motivations of teachers in Ireland. *Professional Development in Education*, 42(1), 150-167.
- McNabb D. (2021). *Research Methods for Political Science/: Quantitative, Qualitative and Mixed Method Approaches*. Routledge, New York NY 10017, Abingdon OX14 4RN.
- Mentz E. & Oosthuisen I. (2016). *Self-directed learning research- An imperative for transforming the educational landscape*. Aosis Ltd, Cape Town, South-Africa.
- Merriam S., Caffarella R. & Baumgartner R. (2007). *Learning in adulthood*. Jossey-Bass, San Francisco, USA.
- Mezirow J. (1991). *Transformative Dimensions of Adult learning*. Jossey Bass, San Francisco, USA.

- Mikkonen K., Kuivila H-M., Sjögren T., Korpi H., Koskinen C., Koskinen M., Koivula M., Koskimäki M., Lähteenmäki M-L., Saaranen T., Sormunen M., Salminen L., Mäki-Hakola H., Wallin O., Holopainen A., Tuomikoski A-M. & Kääriäinen M. (2021). Social- health care and rehabilitation educators' competence in professional education- Empirical testing of a model. *Health and Social Care in the Community* 00, 1-11.
- Mikkonen K., Koskinen M., Koskinen C., Koivila M., Koskimäki M., Lähteenmäki M-L., Mäki-Hakola H., Wallin O., Sjögren T., Salminen L., Sormunen M., Saaranen T., Kuivila H-M & Kääriäinen M. (2019). Qualitative study of social and healthcare educators' perceptions of their competence in education. *Health and Social Care in the Community* 27, 1555-1563. <https://doi.org/10.1111/hsc.12827>
- Mikkonen K., Ojala T., Sjögren T., Piirainen A., Koskinen C., Koskinen M., Koivula M., Sormunen M., Saaranen T., Salminen L., Koskimäki M., Ruotsalainen H., Lähteenmäki M-L., Wallin O., Mäki-Hakola H. & Kääriäinen M. (2018). Competence areas of health science teachers- A systematic review of quantitative studies. *Nurse Education Today* 70, 77-86.
- Nabhani M. & Bahous R. (2010). Lebanese teachers' views on continuing professional development. *Teacher Development* 14(2), 207-224.
- NLN. National League for Nursing.(2019). Certified Nurse Educator (CNE) 2019 Candidate Handbook. Academic Nurse Educator Certification Program. Available at: http://www.nln.org/docs/default-source/default-document-library/cne-handbook-2021_revised_07-01-2021.pdf?sfvrsn=2
- Neha S. (2021). Encouraging multiculturalism in social workeducation and practice: responding to Covid 19 pandemic. *Social Work Education*, Vol. ahead- of- print, 1-8.
- OECD. (2012). Organization for Economic Co-Operation and Development. Fostering Quality Teaching in Higher Education: Policies and Practises. An IMHE guide for Higher Education Institutions. Available at: <https://www.oecd.org/education/imhe/QT%20policies%20and%20practic es.pdf>
- OKM. Opetus- ja Kulttuuriministeriö. (2016). Opettajakoulutuksen kehittämisen suuntaviivoja, Opetus- ja kulttuuriministeriön julkaisuja 2016: 34. [Developing the Teacher Training- Guidelines]. Available at: <https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/75553/okm34.pdf>. Retrieved 17.8.21
- OKM. Opetus- ja Kulttuuriministeriö. (2017). Asetus Ammatillisen koulutuksen tutkintorakenteesta [Regulation on Vocational Education Degree

680/2017]. Available at:
<https://www.finlex.fi/fi/laki/alkup/2017/20170680>

- Opetushallinnon tilastopalvelu, Statistical Service of Finnish National Agency for Education. (2018). Available at: https://vipunen.fi/fi-fi/_layouts/15/xlviewer.aspx?id=/fi-fi/Raportit/Opettajatiedot%20-%20ammatillinen%20-%20kelpoisuus%20-%20ala.xlsb
- Oprescu F., McAllister M., Duncan D. & Jones C. (2017). Professional development needs of nurse educators: An Australian case study. *Nurse Education in Practice*, 27, 165–168.
- Palinkas L., He A., Choy-Brown M. & Locklear Hertel A. (2017). Operationalizing Social Work Science Through Research-Practice Partnerships: Lessons from Implementation Science. *Research on Social Work Practice* 27(2), 181-188.
- Paul P. (2015). Transition from novice adjunct to experienced associate degree nurse educator: a comparative qualitative approach. *Teaching and Learning in Nursing* 10(1), 3-11.
- Payne M. (2020). *How to Use Social Work Theory in Practice: An Essential Guide*. Policy Press, Bristol UK & Chicago, IL 60637, USA.
- Personal Data Act 1050/2018. Ministry of Justice, Finland. Available at <https://www.finlex.fi/fi/laki/alkup/2018/20181050>
- Polit D., Beck C. & Owen S. (2007). Is the CVI an acceptable indicator of content validity? Appraisal and recommendation. *Research in Nursing & Health*, 30, 459–467.
- Power K. & Goodnough K. (2019). Fostering teachers' autonomous motivation during professional learning: a self-determination theory perspective. *Teaching Education*, 30(3), 278-298.
- Qablan A., Mansour N., Alshamrani, S., Aldahmash, A., & Sabbah, S. (2015). Ensuring effective impact of continuing professional development: Saudi science teachers' perspective. *EURASIA Journal of Mathematics, Science & Technology Education*, 11(3), 619-631.
- Rachal, J. (2002). Andragogy's Detectives: The Critique of the Present and a Proposal for the Future. *Adult Education Quarterly* 52(3), 210-227.
- Redmond R. & Curtis E. (2009). "Focus groups: principles and process." *Nurse Researcher*, 16(3), 57-69.

- Reeve J. & Tseng C. (2011). "Agency as a Fourth Aspect of Students' Engagement during Learning Activities." *Contemporary Educational Psychology* 36, 257-267.
- Rogers C. (1969). *Freedom to learn*. Charles F. Merrill Publishing Co., Ohio, USA.
- Rosa W., Meghani S., Stone P. & Ferrel B. (2020). Opportunities for Nursing Science to Advance Patient Care in the Time of Covid-19: A Palliative Care Perspective. *Journal of Nursing Scholarship* 52(4), 341-343.
- Ruwang H., Koskinen M., Mikkonen K., Sjögren T., Korpi H., Koivula M., Koskimäki M., Lähteenmäki M-L., Sormunen M., Saaranen T., Salminen L., Wallin O., Kääriäinen M. & Koskinen C. (2020). Social- and Health Care Educators' Cultural Competence. *International Journal of Caring Science* 13(3), 1555-1562.
- Salminen L., Stolt M., Koskinen S., Katajisto J. & Leino-Kilpi H. (2013). The competence and the cooperation of nurse educators. *Nurse Education Today* 33(11), 1376-1381.
- Sandelowski M. & Barroso J. (2002). Reading qualitative studies. *International Journal of Qualitative Methods* 1(1), 74-108.
- Saroyan A. & Trigwell K. (2015). Higher education Teachers professional learning: Process and outcome. *Studies in Educational Evaluation* 46, 92-101.
- Schumaker R. & Lomax R. (2004). *A Beginner's Guide to Structural Equation Modeling*. Lawrence Erlbaum Associates, Inc. New Jersey 07430, USA.
- Seezink A. & Poell R. (2010). Continuing professional needs of teachers in schools for competence-based vocational education: A case study from the Netherlands. *Journal of Industrial Training* 34(5), 455-474.
- Streubert Speziale H. & Carpenter D. (2007). *Qualitative Research in Nursing: Advancing the Humanistic Imperative (4th edn)*. Lippincott Williams and Wilkins, Philadelphia, USA.
- Stewart D., Shamdasani P. & Rook D. (2007). *Focus Groups: Theory and Practice*. Sage Publications Ltd. Available at: <https://www-doi-org.libproxy.tuni.fi/10.4135/9781412991841>
- Sum R., Morgan K., Ma M., & Choi S. (2021). The influence of a customized continuing professional development program on physical education teachers' perceived physical literacy and efficacy beliefs. *Prospects: Quarterly Review of Comparative Education*, 50(1-2), 87-106.

- SVT, Suomen virallinen tilasto. (2019). Väestöennuste [Population forecast]. ISSN=1798-5137. Helsinki: Tilastokeskus. Retrieved: <http://www.stat.fi/til/vaenn/index.html>. 17.8.2021.
- Tabatabaee-Yazdi M., Motallebzadeh K., Ashraf H. & Baghaei P. (2018). Continuing professional development strategies: A model for the Iranian EFL teachers' success. *SAGE Open*, 8(1), 1-14.
- Tannehill D., Demirhan G., Caplov P. & Avsar Uludag Z. (2021). Continuing professional development for physical education teachers in Europe. *European Physical Education Review*, 27(1), 150–167.
- Tanji S. & Viena L. (2012). Continuing education subsidizing the competence of teachers of graduate nursing course. *Journal of Nursing UEPE On Line*, 6, 2065-2070.
- Teddlie C. & Tashakkori A. (2009). *Foundations of Mixed Methods Research*. Thousand Oaks, CA: Sage Publications, USA.
- Thorpe C. (2018). *Social Theory for Social Work, Ideas and Applications*. Routledge, Oxon OX14 4RN, New York NY 10017.
- TENK. Tutkimuseettinen neuvottelukunta. Finnish Advisory Board on Research Integrity (2012). *Responsible conduct of research and procedures for handling allegations of misconduct in Finland*. Available at: https://www.tenk.fi/sites/tenk.fi/files/HTK_ohje_2012.pdf. 10.10.2019.
- TerOpe- Osaavat opettajat yhdessä! (2017). Valtakunnallinen terveystieteiden opettajankoulutuksen ja soteku-opettajien täydennyskoulutuksen uudistaminen, OKM kärkihanke. Available: <https://www oulu.fi/terveystieteet/terope>.
- Tilastokeskus, Statistics Finland. (2020). Available at: https://pxnet2.stat.fi/PXWeb/pxweb/fi/StatFin/StatFin__kou__opiskt__akop/statfin_opiskt_pxt_135b.px/table/tableViewLayout1/
- Tjin A Tsoi S., de Boer A., Croiset G., Koster A., van der Burgt S. & Kusurkar R. (2018). How basic psychological needs and motivation affect vitality and lifelong learning adaptability of pharmacists: a structural equation model. *Advances in Health Science Education* 23, 549-566.
- Tosriadi A. & Marmanto S. (2018). In-service EFL teachers' experiences of conducting reflective practice as continuing professional development. *International Journal of Language Education*, 2(2), 52-64.

- Vaismoradi M., Turunen H. & Bondas T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing and Health Science* 15, 398-405.
- Van As F. (2018). Communities of practice as a tool for continuing professional development of technology teachers' professional knowledge. *International Journal of Technology & Design Education*, 28, 417-430.
- Van Schalkwyk S., Leibowitz B., Herman N. & Farmer J. (2015). Reflection on professional learning: Choices, context and culture. *Studies in Educational Evaluation* 46, 4-10.
- Venkatesh V., Brown S. & Bala H. (2013). Bridging the Qualitative-Quantitative Divide: Guidelines for Conducting Mixed Methods Research in Information Systems. *MIS Quarterly*, 37(1), 21-54.
- Vilen, L. & Salminen, L. (2016). Täydennyskoulutus terveystien ammattitaidon ylläpidossa ja kehittämisessä.[The continuing education-Maintaining and developing health care teachers' professional competence]. *Hoitotiede*, 28, 137-149.
- Westfall-Rudd D. (2011). Agricultural Education Teacher Leaders' Development of Ownership and Responsibility for the Profession through Participation in Continuing Education Program Planning: A Case Study. *Journal of Agricultural education* 52(3), 148-161.
- WHO. (2016). Nurse educator core competencies. Available at: https://www.who.int/hrh/nursing_midwifery/nurse_educator050416.pdf
- WHO. (2013). Health 2020 A European policy framework and strategy for 21st century. Available at: <https://www.euro.who.int/en/publications/abstracts/health-2020-a-european-policy-framework-and-strategy-for-the-21st-century-2013>.
- Wieland W.(2011). Continuing professional development in context: Teachers' continuing professional development culture in Germany and Sweden. *Professional Development in Education*, 37(5), 665-683.
- Witte T. & Jansen E. (2016). Students' voice on literature teacher excellence. Towards a teacher-organized model of continuing professional development. *Teaching & Teacher Education*, 56, 162-172.
- Wyatt M. & Ager E. (2017). Teachers' Cognitions Regarding Continuing Professional Development. *English Language Teaching Journal* 71(2), 171-185.

Zlatanovic T., Havnes A. & Mausethagen S. (2017). A Research review of Nurse Teachers' competencies. *Vocations and Learning* 10, 201-233.

ATTACHMENTS

Appendix 1. Flow chart of research selection process

Databases: Education Collection, Social Science Premium Collection, Education Research Complete, Teacher Reference Center, Eric, Cinahl
Search Terms: "continuing professional development" AND educator* OR teacher* OR instructor* OR lecturer*

Inclusion criteria: Relevant for the theme of educators' continuing professional development, upper secondary or post compulsory education or higher education or vocational education context

Total amount of articles (n=622): Education Collection (149), Social Science Premium Collection (213), Education Research Complete (102), Teacher Reference Center (49), Eric (103), Cinahl (6)
Limit: peer review, years 2010-2021, duplicate records(n= 25)

Exclusion criteria based on title and abstract (n=397)

- context lower secondary or primary school
- professional development of teacher assistants or teacher educators

Researches included based on title and abstract (n= 200)

Education Collection (51), Social Science Premium Collection (22), Education Research Complete (50), Teacher Reference Center (15), Eric (56), Cinahl (6)

Exclusion criteria based on full text (n= 173)

- context lower, secondary or primary school

Researches included based on full text (n= 27)

Education Collection (3), Social Science Premium Collection (0), Education Research Complete (20), Teacher Reference Center (0), Eric (4), Cinahl (0)

Manual search n= 3

Total number of researches n= 30

Appendix 2. Items of EduProDe- scale and supporting evidence

Item	Evidence
Educators' needs to develop pedagogical competence	
I need to develop my competence-based student evaluation	Educators needed more competence in planning students' evaluation ^{2,8}
I need more competence in student centered teaching	One of the pedagogical competence needs was the student-centered teaching ^{1,9}
I need more competence in work-life oriented learning	Educators expressed the need for knowledge about current work life ¹
I need more competence in using teaching methods in versatile ways	Educators needed continuing education to increase their teaching methods ^{2,5}
I need more competence in using digital technology in pedagogically relevant ways	Educators wanted to use digital technology in relevant ways in their teaching ^{1,2,7,10}
I need more competence in simulation teaching	Educators needed continuing education in simulation teaching ^{1,8}
I need more competence to carry out development projects	One of the most needed was competence to carry out development projects ^{1,10}
Educators' needs to manage challenging situations in teaching	
I need more skills to solve conflict situations in teaching	Educators needed continuing education about teaching students with anxiety problems, poor interaction skills and poor study outcomes ^{1,8}
I need more competence to deal with students' problems related to studying	Educators needed more competence when they were teaching challenging students ^{1,8}

I need more competence in teaching culturally diverse students	Educators need more knowledge about teaching students from different cultures ¹
Leadership of educators' competence	
Discussions with my superior to support my professional development	Development discussions with superior are benefitting educators' learning ^{6,11}
Organizational atmosphere supports my professional development	Organizational atmosphere that supports learning is crucial for professional development ^{1,5,6}
The personal development plan supports my professional development	Educators recognize the shortage of knowledge or skills and are willing to learn goal oriented ^{1,8,10}
Educators' self-directed learning	
I develop my competence through international collaboration	International collaboration in projects or exchange programs was beneficial for educators ¹
I actively develop my language skills	Educators learned languages in their freetime ¹
Participating in conferences helps me update my competence	Educators participated in professional congresses and fairs to update subject competence ¹
Educators needs to develop their clinical competence	
I need networking to develop my subject-matter competence	One of the most needed competences was clinical competence ¹⁰ and networking was an effective way to update subject-matter knowledge ¹
I need to participate in developmental projects to maintain my subject competence	Participating in projects enhanced the subject-matter knowledge ^{1,6}

I need to work in clinical environment to update my subject-matter competence	Working in clinical environment increased educators' subject-matter competence ¹
Benefits of continuing professional development	
Continuing competence development promotes my work well-being	Educators experienced professional growth through continuing education ⁴ and also through informal learning at work ¹
Regular updates to subject-matter competence improves my teaching	Updated subject-matter competence enabled educators to teach better and increased their self-confidence as educators ¹
Pedagogical continuing education improves my teaching skills	Pedagogical continuing education helps educators to understand the learning process altogether ^{3,9}

Citations: ¹Educators' interviews (n=35), ²Dickerson et al. 2014, ³Ferreira et al. 2012, ⁴Holopainen et al. 2005, ⁵Ignatavius & Chung 2016, ⁶Kangasoja 2017, ⁷Kovalchuk et al. 2017, ⁸Opreescu et al. 2017, ⁹Tanji & Viana 2012, ¹⁰Vilen & Salminen 2016, ¹¹Westfall 2011.

PUBLICATIONS

PUBLICATION

1

Continuing professional development among social and healthcare educators


Koskimäki M., Lähteenmäki M-L., Mikkonen K., Kääriäinen M., Koskinen C.,
Mäki-Hakola H., Sjögren T. & Koivula M

Scandinavian Journal of Caring Sciences 35 (2), 668-677

<https://doi-org.libproxy.tuni.fi/10.1111/scs.12948>

Publication reprinted with the permission of the copyright holders.

Continuing professional development among social- and health-care educators

Minna Koskimäki MNs (Doctoral Candidate)¹ , **Marja-Leena Lähteenmäki** PhD (Head of Rehabilitation Education)², **Kristina Mikkonen** PhD (Post-Doctoral Researcher)³ , **Maria Kääriäinen** PhD (Professor)^{3,4}, **Camilla Koskinen** PhD (Professor, Associate Professor)^{5,6}, **Hanne Mäki-Hakola** MA (Senior Lecturer)⁷, **Tuulikki Sjögren** PhD (University Lecturer)⁸ and **Meeri Koivula** PhD (University Lecturer)⁹

¹Faculty of Social Sciences, Nursing science/Health Sciences, Tampere University, Tampere, Finland, ²Tampere University of Applied Sciences, Tampere, Finland, ³Research Unit of Nursing Science and Health Management, University of Oulu, Oulu, Finland, ⁴Medical Research Center Oulu, Oulu University Hospital and University of Oulu, Oulu, Finland, ⁵Department of Caring and Ethics, Faculty of Health Sciences, University of Stavanger, Stavanger, Norway, ⁶Faculty of Education and Welfare Studies, ÅboAkademi University, Vaasa, Finland, ⁷Vocational Teacher Education, Tampere University of Applied Sciences, Tampere, Finland, ⁸Faculty of Sport and Health Sciences, University of Jyväskylä, Jyväskylä, Finland and ⁹Faculty of Social Sciences, Tampere University, Tampere, Finland

Scand J Caring Sci. 2021; 35: 668–677

Continuing professional development among social- and health-care educators

Abstract Future social- and health-care educators will be required to have versatile competence in educating professionals that reflects both the constantly changing health-care environment and delivery of high-quality patient care. Continuing professional development can be defined as a process that aims to increase educators' competence and well-being, along with the effectiveness of an organisation. This study aimed to describe educators' continuing professional development and clarify the contribution of continuing education. The research applied a qualitative approach as only limited information about social- and health-care educators' professional development currently exists. Data were collected by group interviews of 35 experienced social- and health-care educators from six institutions of higher education and two vocational schools across Finland. An inductive content analysis yielded 39 subcategories, 11 categories and three main categories, namely, educators' approaches for developing professional competence, barriers to continuing

education, and educators' continuing education needs. The educators reported that they maintain and develop their competence in versatile ways; for example, continuing professional development takes place through both formal continuing education and informal collaboration at daily work. Regarding barriers to continuing education, the educators most often cited the lack of planning and a lack of resources, for example, scheduling and financial factors. The continuing education needs of social- and health-care educators are highly individual and should not only reflect organisational goals. The fact that this study only included experienced educators can be considered a limitation, as a sample that also included novice educators may have yielded different perceptions of continuing education and professional development. The results of the research can be utilised when designing the continuing professional development of educators at the individual, group or organisational level.

Keywords: continuing education, continuing professional development, educator, social and health-care education, vocational education.

Submitted 20 January 2020, Accepted 29 November 2020

Introduction

Educators play a key role in ensuring that social- and health-care professionals have the skills necessary for clinical practice (1). According to a systematic review by Mikkonen et al. (2), educators' competence comprises

three categories: knowledge; skills; and attitude. As such, educators need to have good knowledge about their subject and how to integrate theory into practice (2). Furthermore, educators require sound pedagogical, guidance and interaction skills (3, 4, 5), along with sufficient ethical competence (6). Previous research has shown that an educator's ethical competence is connected with individual qualities and values, that is, an ethical bearing. Educators serve as role models; thus, their ethical competence will significantly affect how students develop their ethical bearing, personal ethics and professional

Correspondence to:

Minna Koskimäki, Nursing Science, Faculty of Social Sciences, Arvo Building, ArvoYlpönkatu 34, 33520 Tampere.
E-mail: minna.koskimaki@tuni.fi

values in caring and clinical practice (6). Each of these aspects will influence how social- and health-care professionals function in care and clinical practice.'

Previous research has emphasised that future nurse educators will require exceptional leadership and cooperation skills, be able to identify multiculturalism (7, 8, 9), and continuously develop their own competence (10, 11).

In Finland, social- and health-care educators at universities of applied sciences educate social- and health-care professionals such as registered nurses, public health nurses, paramedics, midwives, physiotherapists, biomedical laboratory scientists, dental technicians, dental hygienists, opticians, auxiliary technicians, radiotherapists, naprapaths, osteopaths, rehabilitation counsellors, occupational therapists and social workers (12). Practical nurses who work at, for instance, old peoples' homecare, day care centres, disabled facilities and dentist consulting, are educated at vocational schools (13, 14). The requirements for acting as an academic social- and health-care educator differ among European countries (15, 16), and there is no common consensus regarding the qualifications to serve as a nurse educator (17). In Finland, academic educators are required to have a professional degree in social- or health-care, three to five years of clinical experience, a Master's or doctoral degree, as well as 60 ECTS of pedagogical studies (18).

Continuing professional development occurs after formal education, in the context of working life, and includes organised continuing education along with learning at work and in everyday life (19, 20). Since continuing professional development includes elements of different forms of learning, the theories of lifelong learning, social learning and self-directed learning were taken into account in the theoretical approach of this study.

Lifelong learning should be seen as a process; hence, this concept challenges the traditional understanding of education in which learning is defined more as a product. Lifelong learning usually includes a vision of a society where citizens are provided the opportunity and social circumstances to continuously learn at the workplace (21). However, the current dominant lifelong learning processes in the workplace are informal and incidental learning. The learning process usually starts with an existing problem, after which the problem is examined and a solution is produced (22).

Social learning theory (23) emphasises reflective learning that happens informally in social situations and communities (22). The main premise of self-directed learning theory is that learning happens in a social context where other people are the most important learning resource. Under this theory, the learners are independent and able to set goals for their learning (24).

Continuing professional development should be relevant, respond to the needs of employee learning (25), and be based on specific attributes of adult learning, that

is, voluntary participation, collaboratively determined objectives and measurable satisfaction (26). Van der Bergh (27) voiced that the transfer of new knowledge into practical teaching situations, together with learning and active reflection, is a key element of the professional development of teachers, while Avalos (28) has noted that the professional development of teachers is a complex process which involves highly individualised methods and needs. The main objective of professional development is to increase the professional expertise, competence and well-being of the individual, as well as improve the organisation's competitiveness and effectiveness (19, 25, 29, 30). For this reason, the continuous improvement of teaching and student learning must lie at the core of professional development (31).

While numerous studies have investigated the clinical competence of nursing faculty (32–36), only a few studies have focused on the continuing professional development of nursing educators in educational institutions. Research on the topic has identified areas that educators are interested in learning about, for example, specific teaching and learning assessment methods, competence in teaching, and how to transfer knowledge from an educational event to everyday practice (37–40). Furthermore, educators have a generally positive attitude towards continuing education; for example, a survey by Vilen (39) found that 80% of educators had taken part in continuing education during the previous year.

Continuing education has helped nursing educators overcome their work challenges, increase well-being, and unify educators' working processes, as well as offered social- and health-care professionals important knowledge (41, 42). Koivula et al. (43) also suggest that continuing education is related to the educators' teaching methods.

Earlier studies related to the clinical competence of nursing faculty members or nursing educators' professional development only cover a narrow field, with the results predominantly describing formal continuing education. In this way, there is a lack of comprehensive information on continuing education among social- and health-care educators. Previous studies have adopted the nursing educator perspective, while the professional development of social work educators and rehabilitation educators has barely been covered.

This research aimed to describe social- and health-care educators' continuing professional development and identify the contribution of continuing education. The research question was: How do social- and health-care educators describe continuing professional development?

Research data and method

Data collection

The presented research applied a qualitative descriptive design because little is known about the studied

phenomenon. A qualitative descriptive study can provide broad information on a phenomenon such as the continuing professional development of social- and health-care educators (44). Multi-professional focus group interviews were used because the research was conducted to study social- and health-care educators' experiences and get different perspectives of the phenomenon (45). The focus group interviews were conducted in a way that the educators could openly express their thoughts, react to others' opinions and share experiences. This approach was chosen to improve the chances of collecting versatile and authentic information (45).'

Purposive sampling was used, with six universities of applied sciences and two vocational schools from different parts of Finland selected to identify diverse educators. Of these institutions, seven were Finnish while one was Swedish-speaking. The educators, who had at least ten years of teaching experience, were approached because it was assumed that they would have deep perceptions of the studied phenomenon. Educators were invited to participate via email by contact persons from each institution, who were the heads of social- and health-care fields. All of the educators who wanted to participate were interviewed.

The group interviews were conducted by the main author and six other project investigators from January to April 2018. The interviewers held either a Master's or doctoral degree in health sciences and were all teachers and researchers at a university. Each interview group included 2–5 educators representing various professions in the social- and health-care field. There was a total of 10 groups, with 35 educators participating. The background questions were related to age, education, work experience and status Table 1. The interviews were conducted in a semi-structured way that included various open-ended questions (45). The questions – which covered competence development and the features of good continuing education – were based on previous continuing education literature. The questions were pilot tested on two educators, with no changes made after the pilot interview.

The interviews were carried out at the educators' workplaces, either in a meeting room or classroom, at a time that was suitable for the educators. The interviews lasted for an average of 1.5 h. Only the participants and researcher were present, and field notes were made after the interview had finished. Educators were allowed to talk freely, and the facilitator moved on to the next question when they felt that the discussion about the previous topic had finished. The interviews were recorded and transcribed. Transcripts were not returned to the participants.

Analysis

Qualitative inductive content analysis was chosen so that a large amount of subjective information could be

Table 1 Characteristic of participants in groups

Group	n	Gender	Mean of age,	Mean of work
		F/M	years (range)	experience, years (range)
A	3	3/0	56 (53–61)	16 (9–24)
B	3	3/0	54 (43–61)	24 (11–32)
C	4	4/0	54 (45–61)	20 (10–30)
D	2	2/0	53 (45–60)	11 (10–12)
E	3	2/1	48 (39–62)	18 (10–32)
F	4	4/0	57 (49–66)	25 (12–38)
G	3	3/0	61 (60–62)	31 (28–33)
H	4	4/0	61 (59–62)	22 (15–30)
I	4	4/0	57 (53–62)	25 (9–34)
J	5	5/0	56 (49–64)	17 (15–24)
Total	35	34/1	56 (39–66)	21 (9–38)

Educators' teaching field: Nursing 46%, rehabilitation 14%, social work 11%, social and health care 11% (vocational school), radiography 6%, bioanalytics 3%, missing information 9%.

analysed as objectively as possible (46). The preparation phase started with the selection of an analysis unit; the researchers chose that this would be a word or words relating to continuing education or professional development (47). The researchers also decided that only manifest content would be analysed. Next, the researchers read the written material through several times to familiarise themselves with the data (46). The research question was particularised at this point.

The data were organised by open coding, the creation of categories and abstraction (46). During open coding, three researchers underlined a word or words (a code) related to the study phenomenon. Written headings were used to describe all aspects of the content of identified codes after researchers had come to agreement. At this point, the list of categories was freely generated from 491 headings based on similarities and dissimilarities. This yielded 39 subcategories that could be organised under 11 categories. The creation of these subcategories and categories from the identified codes were discussed by three researchers to find a common interpretation. During abstraction, categories were organised into three main categories to give a general description of educators' continuing professional development (46).

Ethical issues

The presented research followed the guidelines of the Finnish Research Ethics Advisory Board on Good Practice (48) and received ethical permission from the University of Jyväskylä Ethical Permission Board in December 2017. Furthermore, research permission was requested – and received – from all of the universities and vocational schools where the interviews were carried out. Educators were invited to the interviews through contact persons

Table 2 Social- and health-care educators' continuing professional development

Main category	Categories	Subcategories
Educators' approaches for developing professional competence	Active participation	Participation in continuing education Participation in professional fairs Participation in congresses Participation in working life
	Multi-faceted collaboration	Networking Team teaching Getting help from colleagues Cooperation in working life
	Working in projects	Projects in own institution Various educational projects Working life projects International projects
	International activities of organisation Self-study	Teaching students from different cultures Participating in international exchange programmes Studying during work time Studying at free-time Following current issues Adding cultural know-how
Barriers to continuing education	Lack of planning in staff development	Information about education comes too late or not at all No planned participation in continuing education among the team Educators cannot implement what they have learned in their work
	Education-related factors	Education is not timely Education is not carried out in an appropriate way Education does not add knowledge Education related to clinical competence is not available
	Lack of resources	Lack of financial resources Lack of time Fixed-term educators are not entitled to participate in continuing education Educators have no motivation
Educators' continuing professional development needs	High-quality professional development	Planned continuing education Relevant continuing education Individual educational needs Receiving adequate supervision
	Extensive professional development	Enhancing clinical competence Development of digital competence Development of pedagogical competence Development of cultural competence Competence for acting with challenging students Change management skills

and had the opportunity to refuse. Educators received an information letter about the research by e-mail before the interview, and had the opportunity to read it again from paper at the beginning of the interview. The information letter provided information on the purpose of the research, research permission, collection and preservation of data, and reporting of results. The voluntary and confidential nature of the research was emphasised. Informed consent was obtained from all individual participants included in the study. Data were anonymised and stored

in secure folders at the University of Jyväskylä. The interview transcripts and background data will be stored for ten years in archived folders in accordance to GDPR regulations (49).

Results

A majority of the participants held a Master's degree in health science (15 educators), while two educators each held a Master's degree in management sciences,

education sciences, and social sciences. Two of the interviewed educators had finished a vocational teacher education, while six educators had a PhD degree, two educators had a licentiate degree and one had a Bachelor's degree. Educational information about three of the participating educators was missing (Table 1).

The inductive content analysis identified three main categories: educators' approaches for developing professional competence; barriers to continuing education; and educators' continuing professional development needs (Table 2. Social- and health-care educators' continuing professional development).

Educators' approaches for developing professional competence

The participating educators specified various approaches for developing professional competence, namely, active participation, multi-faceted collaboration, working in projects, taking part in international activities, and self-study.'

The active participation category consisted of participation in continuing education, professional fairs, congresses and working life. Educators reported that they like to participate in both internal and external formal education. They felt that both forms of education provide them with up-to-date information and new teaching methods, which can also benefit students. Formal education helps them manage their work better and is necessary for maintaining an appropriate level of competence. One of the participants expressed:

Continuing education is often the answer to a lot of questions, and one is coping with work. Although studying is an additional job, I still get motivated to learn and get into new circles. There will be networking if there are people from different organisations who do quite different jobs, so I feel I can get a lot of intellectual capital. (Group 10)

On the other hand, the participating educators felt as though they are learning all the time even if they do not participate in formal education. One of the educators explained how formal education is an important way of developing competence, but not the only one:

I feel that continuing education is one way of developing competence, but there are lots of other ways. You do not always have to participate in continuing education to be up-to-date with your own knowledge or your own skills. I have to think about when I've been in continuing education. I constantly learn new things, but I have never been in any continuing training. (Group 3)

Educators reported participating in professional fairs and conferences related to their own field, and felt them particularly important for substance knowledge and networking. One participant expressed:

The Aged People Nursing- fair is very good and there are experts who speak about nursing of aged people from their own perspective. They are really good and interesting. (Group 5)

Multi-faceted collaboration is made up of various factors, that is, networking, team teaching, getting help from colleagues and cooperation with working life. Educators network with educators from their own organisation, employees from working life as well as on an international level. Educators learn by comparing their practices with what occurs at other organisations, and one educator stated how keeping up-to-date with information is easy with a broad network.

I network with teachers from around Finland, as I can quickly update my own knowledge when I talk to people. This is a nice, comfortable way [to gain knowledge]. It is better to talk to a colleague than searching for information on various schools' websites. You will get the relevant information right from your colleague. They are interested in the same things and conversations often bring new perspectives, after which you can consider what this could mean for your school. (Group 3)

Educators also reported developing their competence by team teaching with another educator. As another educator may have more knowledge in a specific area, team teaching can facilitate knowledge sharing. Educators also learn by getting concrete help from their colleagues, such as sharing teaching material or advice. One participant explained:

I know that if I need help, then I get it from xx. I'll get help from the teacher. If I consult our helpdesk, I will get technical information, whereas teachers will also be able to cover the pedagogical aspect. (Group 4)

Educators felt that working life is also essential for their continuing professional development. In working life educators are able to quickly update their skills and knowledge and also learn what is most important in the subject they are teaching.

When you have been teaching for a long time without being actively involved, when you go back [to the hospital] the subject will again become clear. Then I will be able to come back to teaching again, my back even straighter. I'm speaking with deep experience. It will disappear, if you have been separated from it for years. (Group 8)

Working in projects includes project work in the professional's own institution, across various educational organisations, within working life and with international partners. Based on the educators' experiences, all of these forms of project work provide new perspectives on work. Projects within working life increase educators' perceptions of pedagogical competence and provide information

on the skills needed for future working life, with one participant stating:

I feel that cooperation with the information systems and technology teachers and students has been key for us. (Group 3)

International activities include teaching students from different cultures and participating in international exchange programmes. The educators felt that international activities are part of their daily work.

For example, we have students from different countries, we have a lot of countries, and then we get a cultural experience. (Group 7)

The educators reported that they participate in self-study by studying during work and free time to follow current issues and gain cultural knowledge. The educators revealed that they independently study many issues related to teaching during working hours. Staying up-to-date also requires free-time learning about pedagogy, didactics and also keeping up with societal issues. Furthermore, the participants reported that travelling abroad on their free time gives them insight into other cultures, more specifically:

It is important to keep your eyes open, what is happening in society and internationally, in the whole area and what it means for education. (Group 1)

Barriers to continuing education

Educators experienced continuing education to be hampered by a lack of staff development planning, certain education-related factors and insufficient resources.

A lack of staff development planning means that information about education either comes too late or is not disseminated, there are no plans for how team members should participate in continuing education, and educators cannot implement what they have learned in their work. Furthermore, the participants expressed that education relevant to their work could be improved upon as prior education had included inadequate information on a topic and/or had been poorly coordinated, with one participant noting:

I recognize there is a shortage of my knowledge. I know there is 800 euros for my continuing education, and I go and look when there would be something suitable for me. It does not happen because I have eight hours of a thesis seminar on that day. (Group 4)

Educators also felt that there were insufficient plans for how team members would participate in educational events. In their view, it would be important for the whole team to participate in the education if the goal is to achieve organisational aims and apply the content of the education into practice. Sharing what has been learned is difficult if only the educator participates in the education.

I've worked on projects with both the whole work community or a certain group, and it has always worked fine. I prefer working together over going to a course alone. The glow of new ideas only takes a while. But when you are working together with others you can produce ideas that may untangle some of the problems at your organisation. (Group 5)

The participating educators shared that the knowledge gained from education is not always easy to immediately implement in their work. Educators felt that they do not always have enough time to practice new skills and may not receive enough support from the organisation, both of which mean that important learning remains unused. One participant stated:

It is not so simple that I complete only a training and then nothing else to start to use that skill. Now I can, but I have to do it in the desert alone a few times before. That in a way it would start to live in your work. (Group 8)

Education-related factors described untimely education, an inappropriate way of conducting the education, that the education does not add new knowledge, and no education related to a specific clinical competence is available. Educators felt that the time, method and content of the education did not always meet educators' individual needs, as expressed in the following quotation:

We were trained in that Teams (application) and we'll get a certificate from that course. And there is guarantee that it will be used one day. That is not even agreed. (Group 4)

Lack of resources can concern any combination of financial, scheduling, organisation, and motivational factors. The interviewed educators shared that they could not access education courses or clinical work periods because there were insufficient financial resources to pay for the costs. Educators also reported a lack of time to attend educational events or learn new job-related issues during work time. The following quotation provides an example of the lack of resources for continuing education:

I think there is a really small budget. How to get a clinical work period? It has been the last nine years and I had only two days working in a hospital. I think it's a little bit sad. I would feel happy that I could go to work for a few months. If you are tempted to go to working life period and you get off from your work and go to work in the hospital, then you lose all your vacation. Then next time you will not do it. (Group 9)

Educators' continuing professional development needs

Educators need extensive, high-quality professional development. In other words, educators' professional development must be both planned and relevant, as well

as allow educators to reach their individual aims. Each organisation also needs to supervise educators to ensure that they are completing their objectives.'

According to the participating educators, Finnish educational institutions must improve how they plan the participation, timing, content and methods of continuing education for educators. The achievement of education should not be based on what is currently offered by the educational market. Furthermore, educators' developmental needs should strongly reflect the professionals' individual goals rather than only the needs of the organisation or supervisors. One participant stated:

I have to constantly be in control of what I need, and understand that I need to gain knowledge through either experience or reading something. If I cannot, I will tell my supervisor that I need to go to this education. No superior can tell us that "you need that knowledge," the superior cannot know this. (Group 2)

The participating social- and health-care educators expressed that their work involves a great deal of interpersonal contact because they meet with many students, teachers and other staff. However, the problems that sometimes occur as a result of these interactions will require educators to manage their emotions and potentially request a supervisor's assistance.'

The interviews revealed that educators need to develop their skills across diverse areas, for example, digital competence, clinical competence, pedagogical competence, ability to work with culturally diversity students, change management, and ability to challenge their students. The participating educators identified the utilisation of digital technology and clinical competence as the most important skills to develop. Digitalisation is rapidly developing and the educators felt that they are somewhat lagging behind. One of the educators expressed the need for an understanding of basic digital issues and how to combine digital content with teaching in the following way:

I want something that connects digitalisation and pedagogy and all these systems you are using in your everyday life, Surely most digital technologies can be applied to teaching'. (Group 10)

The educators' responses during the interviews showed that they understand how rapidly the working environment of future professionals is changing. As such, they expressed a need to update their clinical skills and knowledge through working life, for example:

Learning at work, I mean really clinical, practical work, where I have good experiences. I have been working there for a while to see how things are done. (Group 7)

Educators also need pedagogical competence to identify the most relevant content, combine different teaching methods and manage with large groups. One respondent stated:

They are so terribly heterogeneous [the groups here], from Master's of law graduates to hairdressers [students who are studying a second profession]. The biggest challenge is to know the students and to modify my own teaching so that this heterogeneous student ultimately finds it meaningful. (Group 3)

Educators shared experiences of how working with students from different countries requires cultural competence and special pedagogical skills because these students often have weak Finnish language skills. Furthermore, these students may also have weaker baseline knowledge than Finnish students. As such, the educators reported worrying about students who fall behind the rest of the group and do not correctly understand what is being taught, for example:

The tasks are done, but he [student from a different country] does not understand what it is about and how they are related. He says that he does not understand any of the questions even though he has faithfully written things on the paper. (Group 9)

The participating educators also reported needing more knowledge to be able to sufficiently understand the different life situations of today's young people. For example, some students have mental health, substance abuse, concentration and/or neuropsychological problems. According to the participating educators, these students need special support in their studies. One participant described these types of challenges as follows:

I need some tips for how to act in a classroom situation when there is a variety of problems [in the classroom] and you have to guide both students who are really good and others who can't focus [at all] and have to move all the time. (Group 5)

Educators expressed a desire to develop their competence and stay involved in the rapidly changing social- and health-care environment. From an educator's point of view, adaptation to change is a key factor in coping with working life:

Again, I point out this fast-changing reality where we - as trained professionals- need competence for the changing situation, perhaps through continuing education. (Group 8)

The participating educators shared experiences of change management requiring flexibility, crossing boundaries of their own competence and networking. In addition, educators ought to know which professional competencies will be needed in the future social- and health-care field.

Discussion

The presented research aimed to describe social- and health-care educators' continuing professional development and clarify the contribution of continuing education. Experienced educators from universities of applied science and vocational schools described their perceptions

of their professional development. The results demonstrate that educators' participate in professional development in various ways, as well as have diverse opinions of how continuing education contributes to their professional development.

The educators' comments during group interviews suggest that continuing education has a strong role in their professional development. Furthermore, this study confirmed that learning as part of daily work is central to professional development, a dynamic which has also been previously reported (19, 20). Educators learn in versatile ways, but it appears that these ways of learning are not well recognised in organisations. This finding is in line with the lifelong learning theoretical approach, that is, learning – both formal and informal – usually happens at the workplace (21). Educators were aware of their learning, but it was neither well planned nor organised. The presented results revealed that the most common route for learning at work was collaboration, which has been reported in other studies (26, 28, 51, 52), and this is also supported by the social learning theory (23). Collaborative learning is based on an education culture that facilitates networking and joint projects (28). Töytäri et al. (50) found contrasting results, that is, individual learning was typical, especially for educators under 50 years old. A notable difference was that Töytäri et al. (50) studied educators from all educational fields whereas this study focused on educators from the social- and health-care field. Furthermore, the mean age of educators was 56 years in the current study, so a younger study population may explain the differences in results.

Educators described some obvious barriers, for example, scheduling and financial factors, that prevented them from fully benefiting from educational events. Similar results have been reported in a Finnish study by Vilen and Salminen (39), while Avalos (28) stated that background factors such as policy environment and school conditions affect continuing education. The educators also expressed distinct educational needs, which are influenced by the political and organisational climate at the time of the research, and – as such – not surprising. Nevertheless, this result gives an overall picture of which issues are currently relevant to social- and health-care education, which is a rapidly changing field.

This study revealed that there is a general lack of planning for how continuing education should be carried out. The participating educators emphasised several issues which should be considered when planning continuing education and which can benefit both the individual and the organisation, namely, educators' individual needs and ongoing education. For example, longer educational interventions, which include different learning tools and reflection of experiences, are more beneficial than short, simplified approaches (28). Based on the educators' comments, it seems that – at the moment – the professional

development of Finnish social- and health-care educators is centralised around continuing education, with little attention paid to how educators can take advantage of opportunities to learn during daily work. As has been previously suggested, the multi-faceted competence social- and health-care educators require in today's work environment commands an effective continuous professional development programme which is meticulously planned and evaluated (28).

Strengths, limitations and implications

The trustworthiness of the research was strengthened through the extensive time period that the researchers spent investigating the phenomenon of continuing education, that is, interviewing, transcribing, reading, and analysing data along with discussing the data. The researchers were social- and health-care educators from universities and universities of applied sciences, so they were aware how their experiences could influence the analysis. The prerequisite that three researchers had to unanimously agree on any interpretations of the analysis strengthened this study. The Consolidated criteria for reporting the qualitative research (COREQ) representing domains of research team and reflexivity, study design, analysis and findings were used to improve accuracy (53).

The sample was large, nationwide, covered both linguistic areas and the data were saturated (54). However, this study only included participants who were highly experienced educators, reported versatile ways for learning, and described continuing education as a key element for their learning. This can be considered a limitation of this study because educators with less work experience might view professional development and the meaning of continuing education differently.

The selected sample, that is, social- and health-care educators from universities of applied sciences and vocational schools, is a strength of this study. The results give valuable and new knowledge of social- and health-care educators' continuing education and continuous learning. The reported findings may be transferable to other fields in the context of universities of applied sciences and vocational education in Finland, and – depending on the educational system – other countries as well. Transferability was confirmed by describing the research process as precisely as possible (55).

Future research should concentrate on designing a survey for educators in both Finland and other countries to gain more information about this phenomenon. The results can be utilised when designing the continuing professional development of educators at the individual, group and organisational levels, and may be relevant to the education of social- and health-care educators. In addition, these results may have implications for decision-making related to educational policies.

Acknowledgements

This study is part of the TerOpe project funded by the Ministry of Education and Culture in Finland [grant OKM/61/523/2017]. We would like to acknowledge the Ministry of Education and Culture for providing us this opportunity.

Conflict of interest

Author Koskimäki, Author Lähteenmäki, Author Mikkonen, Author Kääriäinen, Author Koskinen, Author Mäki-Hakola, Author Sjögren and Author Koivula declare that they have no conflict of interest.

Authors contributions

Minna Koskimäki Conception, design, acquisition of data, data analysis, drafting and revising the manuscript,

Marja-Leena Lähteenmäki Data analysis, **comments on** manuscript, Kristina Mikkonen **Conception**, design, acquisition of data, **comments on** manuscript, Maria Kääriäinen **Conception**, design, acquisition of data, **comments on** manuscript, Camilla Koskinen Acquisition of data, **comments on** manuscript, Hanne Mäki-Hakola **Comments on** manuscript, Tuulikki Sjögren **Comments on** manuscript, Meeri Koivula Conception, design, data analysis, **comments on** manuscript.

Ethical approval

All of the procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional and/ or national research committee and with the 1964 Helsinki declaration, along with its later amendments or comparable ethical standards. The study was approved by University of Jyväskylä Ethical Permission Board.

References

- Salminen L, Stolt M, Koskinen S, Katajisto J, Leino-Kilpi H. The competence and the cooperation of nurse educators. *Nurse Educ Today* 2013; 33: 1376–81.
- Mikkonen K, Ojala T, Sjögren T, Piirainen A, Koskinen C, Koskinen M, Koivula M, ... Kääriäinen M. Competence areas of health science teachers- A systematic review of quantitative studies. *Nurse Educ Today* 2018; 70: 77–86.
- Bulman C, Lathlean J, Gobbi M. The process of teaching and learning about reflection: Research insights from professional nurse educator. *Stud High Educ* 2017; 39: 1219–36.
- Cassus S, Allana S, Dias J. Experiences of adopting blended pedagogies in health assessment course in post RN Baccalaureate program of nursing in Karachi Pakistan. *J Educ Train Stud* 2015; 4: 221–8.
- Duphily N. The experience of novice nurse faculty in an associate degree education program. *Teach Learn Nurs* 2011; 6: 124–30.
- Koskinen C, Koskinen M, Koivula M, Korpi H, Koskimäki M, Lähteenmäki M-L, Mikkonen K, ... Kääriäinen M. Health and social care educators' ethical competence. *Nurs Ethics* 2019; 2019: 1–12.
- Felicida-Reynaldo R, Utely R. Reflections of evidence-based practice in nurse educators' teaching philosophy statements. *Nurs Educ Perspect* 2015; 36: 89–95.
- Iqbal S, Gul R, Lakhani A, Rizvi A. Teachers' accounts of their perceptions and practice of providing written feedback to nursing students on their assessments. *Int J High Educ* 2014; 3: 70–80.
- Beard K. Teaching in a multicultural society: How nurse educators describe their role. *J Natl Black Nurses Assoc* 2013; 24: 64–71.
- Elliot D, Campbell T. "Really on the ball": exploring the implications of teachers' PE-CPD experience. *Sport Educ Soc* 2013; 20: 381–97.
- WHO. Nurse Educator Core Competencies. 2016, Retrieved from http://www.who.int/hrh/nursing_midwifery/nurse_educator050416.pdf.
- Valtioneuvoston Asetus Ammattikorkeakouluista 1129/2014. (2014) [Government decree of the Universities of Applied Sciences 1129/2014]. Retrieved from <https://www.finlex.fi/fi/laki/alkup/2014/20141129?search%5Btype%5D=pika&search%5Bpika%5D=asetus%20ammattikorkeakouluista#Pidp450128512>
- Opetus- ja Kulttuuriministeriö. (2017). Asetus Ammatillisen koulutuksen tutkintorakenteesta [Regulation on Vocational Education Degree 680/2017]. Retrieved from <https://www.finlex.fi/fi/laki/alkup/2017/20170680>
- SuPerin Eettinen työryhmä. Lähiohittajan Eettiset Ohjeet [Practical Nurse's Ethical Guidance]. Retrieved from https://www.superliitto.fi/site/assets/files/4599/lahiohittajan_eettiset_ohjeet_148x148_12s.pdf.
- Pallisera M, Fullana J, Palaudarias J, Padosa M. Personal or professional development (or use of self) in social educator training. An experience based on reflective learning. *Social Work Educ* 2013; 32: 576–89.
- Spitzer A, Perrenoud B. Reforms in nursing education across western Europe: From agenda to practice. *J Prof Nurs* 2006; 22: 150–61.
- Jackson C, Bell L, Zabalegui A, Palese A, Sigurðardóttir ÁK, Owen S. A review of nurse educator career pathways; a European perspective. *J Res Nurs* 2009; 14: 111–22.
- Valtioneuvostonasetusammattikorkeakouluista [University of Applied Science Act 1129/2014] (2014). Ministry of Education and Culture, Finland.
- Collin K, Van der Heijden B, Lewis P. Continuing professional development. *Int J Train Dev* 2012; 16: 155–63.
- Van der Rijst R, Baggen Y, Sjoer E. University teachers' learning paths during technological innovation in education. *Int J Acad Dev* 2019; 24: 7–20.
- Hager P. Lifelong learning in the workplace? Challenges and issues. *J Workplace Learn* 2004; 16: 22–32.
- Watkins K, Marsick V, Wofford M, Ellinger A. The evolving Marsick and

- Watkins (1990) theory of informal and incidental learning. *New Dir Adult Contin Educ* 2018; 159: 21-36.
- 23 Andrew N, Tolson D, Ferguson D. Building Wenger: Communities of practice in nursing. *Nurse Educ Today* 2008; 28: 246-52.
- 24 Brookfield S. *Self-Directed Learning: From Theory to Practice*. Jossey-Bass Inc. Publishers, San Francisco, 17-31.
- 25 McMahon GT. The leadership case for investing in continuing professional development. *Acad Med* 2017; 92: 1075-77.
- 26 Rachal J. Andragogy's detectives: A critique of the present and a proposal of the future. *Adult Educ Q* 2002; 22: 210-27.
- 27 Van der Bergh L, Ros A, Beijaard D. Improving teacher feedback during active learning: Effects of a professional development program. *Am Educ Res J* 2014; 51: 772-809.
- 28 Avalos B. Teacher professional development in Teaching and Teacher Education over ten years. *Teach Teach Educ* 2011; 27: 10-20.
- 29 Dymoc D, Tyler M. Towards a more systematic approach to continuing professional development in vocational education and training. *Stud Cont Educ* 2018; 40: 198-211.
- 30 Stoll L, Bolam R, McMahon A, Wallace M, Thomas S. Professional learning communities: A review of the literature. *J Educ Change* 2016; 7: 221-58.
- 31 Huang Hoon C. Fostering community, building trust, and navigating risks in academic development [Editorial]. *Int J Acad Dev* 2016; 21: 163-5.
- 32 Labrague L, McEnroe-Petitte D, D'Souza M, Hammad K, Hayudini J. Nursing faculty teaching characteristics as perceived by nursing students: An integrative review. *Scand J Caring Sci* 2019; 34: 1-11.
- 33 Shinael A, Nam-Jul L, Haena J. Patient safety teaching competencies of nursing faculty. *J Korean Acad Nurs* 2018; 48: 720-30.
- 34 Marzilli C. Assessment of cultural competence in Texas nursing faculty. *Nurse Educ Today* 2016; 45: 225-9.
- 35 Cooley S, De Gagne J. Transformative experience: Developing competence in novice nursing faculty. *J Nurs Educ* 2016; 55: 96-100.
- 36 XiaoJing H, Dan Z, MinHua Z. Clinical nursing faculty competence inventory- development and psychometric testing. *J Adv Nurs* 2011; 67: 1109-17.
- 37 Dickerson PS, Decker S, Scanlon N. Developing an interprofessional continuing education symposium for health care educators in Qatar. *J Cont Educ Nurs* 2014; 45: 545-51.
- 38 Oprescu F, McAllister M, Duncan D, Jones C. Professional development needs of nurse educators. An Australian case study. *Nurse Educ Prac* 2017; 27: 165-8.
- 39 Vilen L, Salminen L. Täydennyskoulutus terveysalan opettajien ammattaitaidon ylläpidossa ja kehittämisessä. *Hoitotiede* 2016; 28: 137-49.
- 40 Ignatavicius D, Chung CE. Professional development for nursing faculty: Assessing transfer of learning into practice. *Teach Learn Nurs* 2016; 11: 138-42.
- 41 Salminen L, Karjalainen T, Väisänen S, Leino-Kilpi H, Hupli M. Hoitotyön opettajien arviointi omasta osaamisestaan [Educators' assessment of their own competencies]. *Hoitotiede* 2011; 23: 72-80.
- 42 Tanji S, Ligia de Oliveira V. Continuing education subsidizing the competence of teachers of graduate nursing course. *J N UEPE On Line*, 2012; 6: 2065-70. Retrieved January 15, 2018, from <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/7310>.
- 43 Koivula M, Tarkka M-L, Simonen M, Katajisto J, Salminen L. Research utilization among nursing teachers in Finland: A national survey. *Nurse Educ Today* 2011; 31: 24-30.
- 44 Sandelowski M, Barroso J. Reading qualitative studies. *Int J Qual Methods* 2002; 1: 74-108. Retrieved June 26, 2018, from <http://journals.sagepub.com/doi/10.1177/160940690200100107>
- 45 Parahoo K. Nursing Research, Principles, Process and Issues. Great Britain, Creative Print and Design. 1997.
- 46 Elo S, Kyngäs H. The qualitative content analysis process. *J Adv Nurs* 2008; 62: 107-15.
- 47 Guthrie J, Yongvanich K, Ricceri F. Using content analysis as a research method to inquire into intellectual capital reporting. *J Intellect Cap* 2004; 5: 282-93.
- 48 TENK, Finnish Advisory Board on Research Integrity. Responsible conduct of research and procedures for handling allegations of misconduct in Finland. 2012. Retrieved from http://www.tenk.fi/sites/tenk.fi/files/HTK_ohje_2012.pdf.
- 49 GDPR. Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). Retrieved from <https://eur-lex.europa.eu/eli/reg/2016/679/oj>.
- 50 Töytäri A, Tynjälä P, Piirainen A, Ilves V. Higher education teachers' descriptions of their own learning: A quantitative perspective. *High Educ Res Dev* 2017; 36: 1295-304.
- 51 Johnson D, Johnson R. The use on cooperative procedures in teacher education and professional development. *J Educ Teach* 2017; 43: 284-95.
- 52 Sjoer E, Meirink J. Understanding the complexity of teacher interaction in a teacher professional learning community. *Eur J Teach Educ* 2016; 39: 110-25.
- 53 Tong A, Sainsbury P, Graig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care* 2007; 19: 349-57.
- 54 Cope D. Methods and meanings: credibility and trustworthiness of qualitative research. *Oncol Nurs Forum* 2014; 41: 89-91.
- 55 Korstjens I, Moser A. Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *Eur J Gen Pract* 2018; 24: 120-4.

PUBLICATION

2

Development and testing of the Educators' Professional Development scale (EduProDe) for the assessment of social and health care educators' continuing professional development

Koskimäki M., Mikkonen K., Kääriäinen M., Lähteenmäki M-L., Kaunonen M.
Salminen L. & Koivula M

Nurse Education Today 98, 1-6

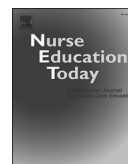
<https://doi-org.libproxy.tuni.fi/10.1016/j.nedt.2020.104657>

Publication reprinted with the permission of the copyright holders.



Contents lists available at ScienceDirect

Nurse Education Today

journal homepage: www.elsevier.com/locate/nedt

Development and testing of the Educators' Professional Development scale (EduProDe) for the assessment of social and health care educators' continuing professional development

Minna Koskimäki^{a,*}, Kristina Mikkonen^b, Maria Kääriäinen^{b,c,d}, Marja-Leena Lähteenmäki^e,
Marja Kaunonen^f, Leena Salminen^g, Meeri Koivula^h

^a Faculty of social sciences, Nursing Science/Health Sciences, Tampere university, Arvo Ylpön katu 34, 33520 Tampere, Finland

^b Research Unit of Nursing Science and Health Management, University of Oulu, Oulu, Finland

^c Medical Research Center Oulu, Oulu University Hospital and University of Oulu, Oulu, Finland

^d The Finnish Centre for Evidence-Based Health Care: A Joanna Briggs Institute Centre of Excellence, Finland

^e Tampere University of Applied Sciences, Tampere, Finland

^f Faculty of Social Sciences, Tampere University, Finland and Pirkanmaa Hospital District, Finland

^g Department of Nursing Science, University of Turku, Turku, Finland

^h Department of Nursing Science, Tampere University, Finland

ARTICLE INFO

Keywords:

Continuing professional development
Educator
Factor analysis
Health care
Scale development
Social care

ABSTRACT

Background: Social and health care educators are crucial to educating competent professionals that are prepared to work in a rapidly changing society. Previous studies have primarily assessed educators' continuing professional development from a single perspective. It would be important to gauge educators' perceptions about their professional development from multiple dimensions to identify the strengths and weaknesses of the current learning process.

Aim: To develop and validate a new educators' professional development scale that is relevant to social and health care education institutions.

Method: The development and validation of the scale comprised four phases: defining continuing professional development; creating an item pool; an expert review of the item pool; and psychometric testing of the scale. Face and content validity were evaluated by two expert panels. The initial item pool included 104 items, with 41 remaining after the expert review. A total of 2330 social and health care educators from 29 organizations were invited to respond to the developed self-assessment survey. The response rate was 18% (n = 422).

Results: Explorative factor analysis identified six factors, including a total of 22 items, that accounted for 68.37% of the total variance. The factors defined different elements of continuing professional development for educators, namely, "need for pedagogical development" (7 items), "need to manage challenging situations in teaching" (3 items), "leadership of competence development" (3 items), "self-directed learning" (3 items), "need to develop clinical competence" (3 items) and "benefits of professional development" (3 items). Internal consistency for the six subscales, measured through Cronbach's alpha coefficient, ranged from 0.70 to 0.89.

Conclusion: The EduProDe scale is a relevant and reliable tool for the planning and evaluation of continuing professional development processes or programs designed for educators of social and health care students.

1. Introduction

The current aging, multi-cultural and technology-centric society presents numerous challenges to which social and health care systems

must respond (WHO, 2016). Educational institutions are expected to provide society with high-quality health professionals, more specifically, practitioners who are highly motivated, have the necessary competencies, and can focus on clients' diverse needs in an ethical and

* Corresponding author.

E-mail addresses: minna.koskimaki@tuni.fi (M. Koskimäki), kristina.mikkonen@oulu.fi (K. Mikkonen), maria.kaariainen@oulu.fi (M. Kääriäinen), marja-leena.lahteenmaki@tuni.fi (M.-L. Lähteenmäki), leena.kaarina.salminen@utu.fi (L. Salminen).

<https://doi.org/10.1016/j.nedt.2020.104657>

Received 3 December 2019; Received in revised form 9 October 2020; Accepted 1 November 2020

Available online 11 November 2020

0260-6917/© 2020 Elsevier Ltd. All rights reserved.

efficient way (WHO, 2013; WHO, 2016). Strong health care systems leverage collaboration between workers from various fields (WHO, 2010), i.e., complex health problems might require the expertise of both social and health care professionals (Siu et al., 2019; Sundström et al., 2018). Educators can emphasize the importance of interprofessional education to gradually help fragmented health care systems embrace collaborative practice (Furr et al., 2020; WHO, 2010).

According to Mikkonen et al. (2019), social and health care educators need competencies representing the subject, ethical, pedagogical, management and organizational, innovation and development, collaboration, cultural and linguistic, and professional development perspectives. In Finland, social and health care educators must have a professional degree (Master's or Doctorate) in social or health care, three to five years of clinical experience, and pedagogical studies representing 60 ECTS (University of Applied Sciences Regulation 2014/1129, Regulation on Vocational Education Degree 680/2017). These educators train nurses, midwives, public health nurses, social workers, physiotherapists and paramedics in universities of applied sciences (Government Decree of the Universities of Applied Sciences 1129/2014, 2014) and practical nurses in vocational colleges (Regulation on Vocational Education Degree 680/2017).

Continuing professional development is a multi-dimensional learning process that takes place after formal education in working life and is necessary for all stages of an educator's career (Cooley and De Gagne, 2016; Summers, 2017). Continuing professional development involves both formal forms, e.g., organized continuing education, and informal forms, e.g., learning at work (Collin et al., 2012; Van der Rijst et al., 2019); irrespective of form, the training should be based on individual learning needs (Avalos, 2011; McMahon, 2017). Professional development is designed to increase educators' professional expertise, well-being and job satisfaction, as well as to improve students' learning and the organization's competitiveness and effectiveness (Collin et al., 2012; McMahon, 2017; Arian et al., 2018; Dymoc and Tyler, 2018; Huang et al., 2019).

The assessment of continuing professional development has been studied from different dimensions. For example, educator learning and the extent of support they received during the educational program have been assessed (Baker, 2010; Buusboje et al., 2017). Furthermore, nurse educators have evaluated their attitudes, knowledge and skills when implementing evidence-based practice in their teaching (Yuossef et al., 2018), while social educators have evaluated their critical thinking skills and challenges in using technology during education (Harnek et al., 2019; Diaconu et al., 2019). Jetha et al. (2016) identified that novice clinical nurse educators gain an insufficient amount of pedagogical skills through their professional development, while Bay et al. (2019) revealed that social work educators should focus more on critical reflection processes after the conclusion of professional development workshops. McAllister and Flynn (2016) previously developed a questionnaire that nurse educators can use to self-assess their competencies; more specifically, the Capabilities of Nurse Educators (CONE) questionnaire measures nurse educators' capabilities and identifies professional development needs. It may also be relevant to evaluating professional development (McAllister and Flynn, 2016).

Previous research has mainly produced knowledge about single elements of professional development, such as educator learning and the assessment of attitudes, knowledge, skills and needs for professional development from one disciplinary perspective. However, additional knowledge should be collected by applying a wider perspective, i.e., one that combines information about professional development needs, the benefits of self-directed learning, and organizational leadership. This information could be pivotal to planning effective professional development programs for social and health care educators.

In this study we aimed to develop and validate a new scale, the Educators' Professional Development (EduProDe) scale, which explores social and health care educators' perceptions of continuing professional development. The research was guided by the following questions: 1)

What is the face and content validity of the EduProDe scale?; and 2) What is the construct validity and reliability of the EduProDe scale?

2. Methods

The development process followed DeVellis' (2017) guidelines to scale development. As such, the process had four phases: defining continuing professional development; creating an item pool; an expert review of the item pool; and psychometric testing of the EduProDe scale.

2.1. Defining continuing professional development

The definition of social and health care educators' continuing professional development was based on the findings of a previous literature review (DeVellis, 2017) conducted in the Cinahl, Eric, Medline, Applied Social Sciences Index (ASSIA) and Social Service Abstracts databases. The presented scale was theoretically based upon previously published literature (Oprescu et al., 2017; Vilen and Salminen, 2016; Ignatavicius and Chung, 2016; Dickerson et al., 2014; Tanji and Ligia de Oliveira, 2012; Ferreira et al., 2012) and qualitative data. Qualitative data were collected from ten focus groups which included 35 experienced educators from the social and health care fields. The collected data were analyzed with qualitative content analyses, and four distinct categories were verified: professional development; continuing education needs; benefits; and barriers.

2.2. Creating an item pool

The initial item pool was constructed based on the qualitative study describing social and health care educators' experiences on developing their professional competence. The initial item pool comprised 104 items divided across the following subscales: continuing professional development needs; forms; benefits; barriers; and leadership. At this point, the measurement format was determined. A four-point Likert scale was chosen because it is widely used in scales measuring perceptions. The response options were strongly disagree, moderately disagree, moderately agree and strongly agree (DeVellis, 2017).

2.3. Expert review of the item pool

The validity of the item pool was assessed by external experts. More specifically, four experienced educators from one university of applied sciences who were familiar with educators' professional development were invited to the first expert panel. They rated the relevancy and clarity of the items using a four-point scale: not relevant/clear; needs some revision; relevant/clear but needs minor revision; and very relevant/clear (DeVon et al., 2007). They also gave recommendations for how to reformat the items. Based on the first review of the initial item pool, 54 items were rejected and 50 remained. Items were rejected whenever 2–4 experts rated item relevancy as 1 or 2, i.e., not relevant/clear or needs some revision, respectively (Polit et al., 2007). The rest of the items were reformatted according to the expert panel recommendations. The second expert review included three experts from one university who were involved in health science education and research. They rated the items with the same scale as had been used in the first expert panel, and the content validity index for items (I-CVI) and the scale (S-CVI) were calculated based on the responses (Davis 1992). All nine items for which I-CVI was below 0.33 were rejected, and items with a I-CVI below 0.67 were reformatted according to expert recommendations. The S-CVI for different subscales ranged from 0.82–0.92, which was deemed sufficient for the new scale (Polit et al., 2007). After the second expert review, the scale included a total of 41 items. The subscales were: educators' needs for pedagogical development; need to develop clinical expertise; need to manage challenging situations in teaching; different forms of continuing education; educators' self-directed learning; benefits of professional development; barriers for

continuing education; and leadership of educators' competence development. The scale was tested in a pilot study that included 34 educators (Hertzog, 2008), with the Cronbach's alpha values of the sub-scales varying between 0.55 and 0.89 (Dixon, 2005).

2.4. Psychometric testing of the EduProDe scale

Construct validity was tested with exploratory factor analysis (EFA), and reliability was evaluated based on the calculated Cronbach's alpha coefficient (Dixon, 2005). The EFA results were used to identify the latent variables underlying a set of items (or individual items) that were performing poorly in the scale.

2.5. Sample

The sample size was determined based on the recommendation that scale validation should involve at least 10 participants per item (DeVon et al., 2007). This study included 19 participants per variable, which was adequate for validating the EduProDe scale. The social and health care educators were invited from all 21 Finnish universities of applied sciences ($N = 1851$) and seven randomly chosen vocational colleges ($N = 479$) from different regions in Finland. Since Finland is a bilingual country, Swedish-speaking educators from two vocational colleges were also invited to participate in the study. The scale was developed in Finnish because the researchers were Finnish-speaking and additionally translated into Swedish. Full- or part-time educators ($N = 2330$) teaching in the health, social or rehabilitative care fields in these institutions were invited to participate.

2.6. Ethical considerations

The researchers followed the Finnish Advisory Board on Research Integrity guidelines for the responsible conduct of research (Finnish Advisory Board on Research Integrity, 2012) and World Medical Association Declaration of Helsinki (2013) principles about human participants at all stages of the presented research. Under Finnish ethical guidelines for research, an ethical statement was not required because the study did not violate participants' integrity, it did not use data without informed consent, participants were not under 15 years old and the study did not involve any security threat against them (World Medical Association Declaration of Helsinki, 2013). All of the universities of applied sciences and vocational colleges involved in this study have been given research permission. A participant's voluntary informed consent was taken as agreement to join the study. Each participant anonymously answered the questionnaire via a link provided in an invitation letter. Both the data analysis and reporting of results ensured strict data confidentiality. A data management plan for the study was designed according to GDPR (2016) and the Personal Data Act (1050/2018) guidelines. The data are stored in protected files at the university, and will be archived for 50 years after the completion of the project.

2.7. Data collection

This study is part of large national research project which aimed to define national competence requirements for social-, health care and rehabilitation educators, and develop and integrate a model for continuous education (<https://shareducationnetwork.com/>). Data were collected between October–December 2018 via a Webropol survey by combining large national data collection involving educators' competence in general, continuous education (reported in this study) and in specific digital competence. The invitation was sent to each institution's contact person, who then forwarded the letter and link to the educators. The letter provided information about the study, inclusion criteria and voluntary and anonymous participation. After the first invitation, four reminders were sent to the contact persons every 3–4 weeks.

2.8. Data analysis

Data analysis was performed with SPSS Statistics 24 (IBM Corporation, Armonk, NY). Demographic data were described using descriptive statistics. EFA was used to test the construct validity of the new subscales by identifying items that should be grouped together and that may need to be removed from the scale (Dixon, 2005). Factor analysis also provides information about the number and content of possible latent variables (DeVellis, 2017). Internal consistency reliability was measured using the Cronbach's alpha coefficient, with all of the subscales assessed simultaneously (Dixon, 2005). During the preliminary data analysis, the missing values analysis employed the Missing at Random (MAR), Missing Completely at Random (MCAR) and Missing Not at Random (MNAR) mechanisms. Questionnaires in which more than 5% of the data were missing were excluded from the data analysis phase. Univariate and multivariate outliers were examined by calculating Mahalanobis distance and Mardia's kurtosis index, respectively. The threshold for an outlier was set at p -value < 0.01 .

3. Results

3.1. Participants

The response rate was 18%, with 422 educators answering the questionnaire. Eighteen multivariate outliers (4%) were identified and removed (Duffy and Jacobsen, 2005), leaving a total of 404 participants. Most of the participants were female (90%, $n = 365$), and the participants had an average age of 51 years ($SD = 8.7$). Most of the educators (63%, $n = 253$) were teaching in the health care field, while 21% ($n = 83$) taught social care students, 7% ($n = 28$) taught in the rehabilitation field, and nearly 10% ($n = 40$) taught across the health, social and rehabilitative care fields. The participating educators had an average work experience of 14 years ($SD = 9.0$), which varied from < 1 to 45 years. Educators most commonly held a Master's of Health Sciences degree (70%, $n = 284$), with 21% ($n = 83$) holding a doctoral degree. Almost all of the participating educators (95.3%, $n = 402$) had completed a pedagogical education of 60 ECTS.

3.2. Construct validity of the EduProDe scale

The internal consistency of the scale was primarily tested based on item-to-total correlation, with the threshold for acceptable internal consistency set as Cronbach's alpha ≥ 0.80 (Tabachnick and Fidell, 2007). Of the 41 total items, seven had Cronbach's alpha values under the set threshold and were thus removed. Construct validity was tested with EFA. The Kaiser-Meyer-Olkin measure (0.82) was higher than the recommended value of 0.80, which demonstrated that the data were suitable to factor analysis, while Bartlett's Test of Sphericity also yielded an acceptable result ($\chi^2 = 6049.449$, $df = 820$, $p < 0.001$). The EFA, which employed Principal Axis Factor extraction and Varimax rotation, was conducted to identify latent variables underlying the items included in the scale. The item factor loading cut-off was set as 0.30. After removing the cross-loading items, 22 items remained in the scale. The factor analysis identified six factors based on eigenvalue > 1.0 and the results of a scree test (DeVellis, 2017).

The first factor, "educators' needs for pedagogical development", consisted of seven items accounting for 27.81% of total variance, while "educators' needs to manage challenging situations in teaching" included three items and explained 14.33% of total variance, "leadership of educators' competence development" contained three items and explained 8.06% of total variance, "educators' self-directed learning" included three items and accounted for 6.65% of total variance, "educators' needs to develop substance (subject/clinical) competence" included three factors and explained 5.90% of total variance, and the sixth factor, "the benefits from professional development", included three items accounting for 5.62% of total variance. These six factors,

which included a total of 22 items, accounted for 68.37% of the total variance (Table 1).

3.3. Internal consistency reliability of the EduProDe scale

Cronbach's alpha coefficient was computed to measure internal consistency reliability for the entire scale as well as the distinct subscales. The Cronbach's alpha value for the full scale was 0.89, while the Cronbach's alpha values for the subscales are shown in Table 1. A Cronbach's alpha value ≥ 0.70 is generally considered acceptable for research scales, while a threshold of ≥ 0.90 is usually set for clinical scales (DeVon et al., 2007).

4. Discussion

This study aimed to develop and validate a new scale (EduProDe) for measuring educators' perceptions about continuing professional development. The results presented in this paper provide evidence that the scale is reliable and valid. The scale includes 22 items that measure six distinct elements of social and health care educators' continuing professional development. The Needs Assessment for Nurse Educators was recently developed as a self-reflective tool for assessing nurse educators' skills and attitudes toward their scope of practice (Dickerson et al., 2014). Another assessment, presented by Johnson and Puglia (2012), collects information about educators' responsibilities and learning

needs, while The CONE questionnaire, which was found to be reliable, was developed to measure the complexity of the nurse educators' role (McAllister and Flynn, 2016). The scale presented in the current paper assesses continuing professional development from not only the perspective of needs, but also in terms of leadership, self-directed learning and benefits.

The first factor - *educators' needs for pedagogical development* - covers the need for further competence in versatile teaching methods, student-centered teaching, pedagogically-relevant digital technology use, simulation teaching, student evaluation, work-oriented teaching and how to carry out development projects. McAllister and Flynn's (2016) CONE instrument - which measures nurse educators' capabilities - also evaluates an educator's competence in versatile teaching methods and simulation teaching. The EduProDe scale differs as it includes items related to various pedagogical approaches, e.g., student centrality and evaluation, under professional development needs; in contrast, the CONE assessment is more concerned with nurse educators' capabilities.

The second factor - *educators' needs to manage challenging situations in teaching* - includes items such as skills to solve conflict situations in teaching, competence to guide culturally diverse students and competence to deal with students' studying problems. Taniyama et al. (2012) previously identified that clinical nurse educators face challenges when working with students who have low levels of readiness, while Salminen et al. (2016, 2017) found that nursing students experience inequality between themselves and the educator, and sometimes feel that the

Table 1
Results of the exploratory factor analysis of the EduProDe scale.

Factor of professional development	Item	Factor 1	Factor 2	Factor3	Factor 4	Factor 5	Factor 6
Educators' needs to develop pedagogical competence	1. I need to develop my competence-based student evaluation	0.852					
	2. I need more competence in Student-centered teaching	0.828					
	3. I need more competence in work life-oriented learning	0.813					
	4. I need more competence in using teaching methods in versatile ways	0.778					
	5. I need more competence in using digital technology in a pedagogically relevant way	0.745					
	6. I need more competence in simulation teaching	0.592					
	7. I need more competence to carry out development projects	0.519					
Educators' needs to manage challenging situations in teaching	1. I need more skills to solve conflict situations in teaching		0.883				
	2. I need more competence to deal with students' problems related to studying		0.866				
	3. I need more competence in teaching culturally diverse students		0.525				
Leadership of educators' competence	1. Discussions with my superior support my professional development		0.943				
	2. Organizational atmosphere supports my professional development			0.657			
	3. The personal development plan supports my professional development			0.642			
Educators' self-directed learning	1. I develop my competence through international collaboration				0.863		
	2. I actively develop my language skills				0.730		
	3. Participating in conferences helps me update my competence				0.657		
Educators' needs to develop their clinical competence	1. I need networking to develop my subject competence					0.877	
	2. I need to participate in developmental projects to maintain my subject competence					0.748	
	3. I need to work in a clinical environment to update my subject competence					0.390	
Benefits of continuing professional development	1. Continuing competence development promotes my work well-being						0.691
	2. Regular updates to subject competence improves my teaching						0.666
	3. Pedagogical continuing education improves my teaching skills						0.654
Eigenvalue		6.119	3.152	1.772	1.462	1.297	1.237
Percentage of variance explained		27.8%	14.3%	8.1%	6.6%	5.9%	5.6%
Total percentage of factor model							68%
Cronbach's alpha value per factor		0.89	0.82	0.79	0.79	0.76	0.71
Cronbach's alpha value for the total scale							0.89

Extraction method: Principal Axis Factoring with Promax rotation, presented in Pattern matrix, only factors with loadings ≥ 0.30 are presented in the table.

educators are unfair toward them. Harris (2018) advises nurse educators to be proactive and develop teaching strategies that support diverse learning needs, while Ingraham et al. (2018) state that diversity should be appreciated in teaching and learning environments. Brown et al. (2019) also encourage social work educators to use proactive models based on social justice when they are teaching culturally diverse students. The CONE instrument (McAllister and Flynn, 2016) also includes a section in which educators assess the teaching relationship with students, with the items quite similar to those in the EduProDe scale.

Leadership of educators' competence development includes items related to how an organization supports professional development, e.g., a personal development plan, discussions about personal development with a superior and organizational atmosphere. Organizational support is a pivotal element of educators' professional development. Baker (2010) has shown that novice educators felt supported and valued after their orientation program, which included collaboration with other more experienced employees, and that this orientation program also reduced employees' desire to leave. McPhee et al. (2009) state that getting support from an organization increases educators' job satisfaction. Ayala and Lev-Ari (2016) clarified that work climate is not the single issue influencing educator learning, as self-efficacy and -confidence are also crucial to learning and professional development.

The fourth factor - *educators' self-directed learning* - included items through which educators assessed the development of language skills, conference participation and international collaboration in terms of competence development. Self-directed learning was investigated from a slightly different perspective by Doneski (2017), who assessed learning among novice educators. The research revealed that self-directed learning, together with mentoring, increased educators' skills and self-efficacy. Successful self-directed learning requires openness to learning opportunities, good self-concept, taking initiative and being an independent learner (Van Rensburg et al., 2018).

The fifth factor - *educators' needs to develop clinical competence* - includes three items: educators' needs to update clinical competence; collaboration with the clinical environment's development projects; and networking. Adelman-Mullally et al. (2013) and Langeland and Thoresen (2013) have previously highlighted the importance of collaboration between clinical practitioners and academia; more specifically, clinical nurse educators should rely on members of academia for mentoring and teaching on how to develop their skills and guide nursing students. Clinical knowledge is one of the core competences for social and health care educators (Mikkonen et al., 2019); this is rather self-evident because they educate professionals for practical work.

The sixth and final factor - *benefits from professional development* - assessed the benefits of educators' continuing education, e.g., improved teaching skills, enhanced work well-being, and excellent clinical skills. Similarly, Rogan (2014) reported that educators believe that continuing professional development is beneficial for them, while Baker (2010) notes that educators felt increased job satisfaction after the orientation program. Sheppard-Law et al. (2018) has also highlighted how a clinical nurse educator professional development program, when conducted in the early stages of their career, can benefit these professionals. Most of the previous research on educators' continuing education has focused on programs which were designed to increase familiarity with certain practices and build relationships between educators.

4.1. Limitations and strengths

This study had some limitations. The response rate (18%) was quite low, but was nevertheless sufficient to reach the recommended 5–10 participants per item (DeVellis, 2017). In comparison, Koivula et al. (2011) had a response rate of 26% in their national survey on research utilization among nursing teachers. The fact that educators had an autumn break during data collection may have decreased the response rate. Based on the EFA results, 19 items from the total 41 items were removed because of poor fit or that the item belonged to multiple

categories (DeVellis, 2017). It is possible that the removed items contributed to the definition of the various subscales that are included in the final version of the scale. It is also important to note that most of the respondents were from the health care field, with a small proportion representing the social care and rehabilitation fields. This should be considered when drawing conclusions or utilizing the results. The results describing the professional development should not be generalized to contexts other than Finnish health and social care education because the scale has not yet been tested in an international context. A strength of this study is that the scale is based on self-assessment. Previous studies have found educators' self-assessments of individual learning needs (Silver et al., 2008; Avalos, 2011; McMahon, 2017) and learning process outcomes (Silver et al. 2008) to be a critical part of continuing professional development. Self-assessment is thus considered a motivating factor of continuing professional development.

5. Conclusion

The Educators' Professional Development (EduProDe) scale measures educators' professional development in terms of needs, approaches, benefits and essential support from superiors. The subscales may help social and health care educators, as well as their superiors, appreciate the multidimensionality of professional development, while the entire scale emphasizes the importance of the planning and continuity of professional education. More testing is needed to confirm the utility of this scale for the educators of medical practitioners. Furthermore, the scale needs to be further validated in an international context while an English language version would also be beneficial. This scale may be a useful tool for planning and evaluating the available continuing education processes or programs for health and social care educators. The presented research is important because the continuous assessment and building of competencies among educators may be one critical solution for how health and social care students are adequately trained to provide the high-quality service expected in today's constantly changing society.

Funding

This work was supported by the Ministry of Education and Culture Finland [Grant OKM/61/523/2017].

Ethical approval

All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The study was approved by University of Jyväskylä Ethical Permission Board.

Declaration of competing interest

Author Koskimäki, Author Mikkonen, Author Kääräinen, Author Lähteenmäki, Author Kaunonen, Author Salminen and Author Koivula declare that they have no conflict of interest.

References

- Adelman-Mullally, T., Mulder, C., McCarter-Spalding, D., Hagler, D., Gaberson, K., Hanner, M., Oermann, M., Speakman, E., Yoder-Wise, P., Young, P., 2013. The clinical nurse educator as leader. *Nurse Educ. Pract.* 13, 29–34.
- Arian, M., Soleimani, M., Oghazian, M., 2018. Job satisfaction and the factors affecting satisfaction in nurse educators: a systematic review. *J. Prof. Nurs.* 34 (5), 389–399.
- Avalos, B., 2011. Teacher professional development in teaching and teacher education over ten years. *Teach. Teach. Educ.* 27, 10–20.
- Ayala, G., Lev-Ari, L., 2016. The relationship between work climate and nurse educators' use of information technology. *Nurse Educ. Today* 39, 1–6.
- Baker, S., 2010. Nurse educator program: professional development that promotes retention. *The Journal of Continuing Education in Nursing* 41 (9), 413–417.

- Bay, U., Haynes, A., Western, D., 2019. Thinking what we do: reflexively testing post-structural theoretical concepts with social work practitioners and field work educators. *Soc. Work. Educ.* 38 (7), 941–953. <https://doi.org/10.1080/02615479.2019.1586868>.
- Brown, S., Leverett, J., Zoe, M., Shari, E., 2019. Racial microaggressions and black social work students: a call to social work educators for proactive models informed by social justice. *Soc. Work. Educ.* 38 (5), 618–630.
- Buusboje, R., Bland, A., Sutton, A., Hartvigsen, T., Hannula, L., Koivisto, J., Raussi-Lehto, E., Prescott, S., 2017. Developing and testing transferability and feasibility of a model for educators using simulation based learning – a European collaboration. *Nurse Educ. Today* 58, 53–58.
- Collin, K., Van Der Heijden, B., Lewis, P., 2012. Continuing professional development. *Int. J. Train. Dev.* 16 (3), 155–163.
- Cooley, S., De Gagne, J., 2016. Transformative experience: developing competence in novice nursing faculty. *J. Nurs. Educ.* 55 (2), 96–100.
- DeVellis, R., 2017. *Scale Development Theory and Applications*, 4th ed. Sage Publications, Thousand Oaks.
- DeVon, H., Block, M., Moyle-Wright, P., Ernst, D., 2007. A psychometric toolbox for testing validity and reliability. *J. Nurs. Scholarsh.* 39 (2), 155–164.
- Diaconu, M., Racovita, L., Munoz, D., Faubert, S., 2019. Social work educators' perceived barriers to teaching with technology: the impact on preparing students to work with younger clients. *Soc. Work. Educ.* <https://doi.org/10.1080/02615479.2019.1683155>.
- Dickerson, P.S., Decker, S., Scanlon, N., 2014. Developing an interprofessional continuing education symposium for health care educators in Qatar. *The Journal of Continuing Education in Nursing* 45, 545–551.
- Dixon, J., 2005. Exploratory factor analysis. In: Munro, B. (Ed.), *Statistical Methods for Health Care Research*. Lippincott Williams & Wilkins, Philadelphia, pp. 321–325.
- Doneski, A., 2017. *Evaluating the Self-Efficacy of Novice Educators in Nursing and Allied Health Care Programs as it Pertains to Faculty Development* (Doctoral dissertation). Lindenwood University, Saint Charles.
- Duffy, M., Jacobsen, B., 2005. Univariate descriptive statistics. In: Munro, B. (Ed.), *Statistical Methods for Health Care Research*. Lippincott Williams & Wilkins, Philadelphia, pp. 54–57.
- Dymoc, D., Tyler, M., 2018. Towards a more systematic approach to continuing professional development in vocational education and training. *Stud. Contin. Educ.* 40 (2), 198–211.
- Ferreira, R., Pereira, M., Xavier, S., 2012. The training and development of skills in teacher. *Journal of Nursing UFPE On Line* 6 (9), 2298–2306.
- Finnish Advisory Board on Research Integrity (2012). Responsible conduct of research and procedures for handling allegations of misconduct in Finland. Retrieved from https://www.tenk.fi/sites/tenk.fi/files/HTK_ohje_2012.pdf. 10.10.2019.
- Furr, S., Hayes, Lane S., Martin D. & Brackney D., 2020. Understanding roles of health care through interprofessional educational experiences. *Br. J. Nurs.* 29 (6), 364–372.
- GDPR, 2016. Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April, 2016 on the Protection of Natural Persons With Regard to the Processing of Personal Data and on the Free Movement of Such Data, and Repealing Directive 95/46/EC (General Data Protection Regulation). Retrieved from: <https://eur-lex.europa.eu/eli/reg/2016/679/oj>.
- Government Decree of the Universities of Applied Sciences 1129/2014. (2014). Retrieved from https://www.finlex.fi/fi/laki/alkup/2014/20141129?search%5Btype%5D=pika&search%5Bpika%5D=asetus%20ammattikorkeakoulusta#Pidp450128512_2.12.2019.
- Harnek, Hall D., Miller, S., Tice, C., 2019. Understanding and assessing critical thinking: a national survey for social work educators' perceptions. *J. Soc. Work. Educ.* <https://doi.org/10.1080/10437797.2019.1670308>.
- Harris, C., 2018. Reasonable adjustments for everyone: exploring a paradigm change for nurse educators. *Nurse Educ. Pract.* 33, 178–180.
- Hertzog, M., 2008. Considerations for determining sample size for pilot studies. *Research in Nursing & Health* 31, 180–191.
- Huang, Hoon C., Mighty, J., Roxå, T., Sorcinelli, M.D., DiPietro, M., 2019. 'The danger of a single story': a reflection on institutional change, voices, identities, power, and outcomes. *International Journal of Academic Development* 24 (2), 97–108.
- Ignatavicius, D., Chung, C.E., 2016. Professional development for nursing faculty: assessing transfer of learning into practice. *Teach. Learn. Nurs.* 11, 138–142.
- Ingraham, K., Davidson, S., Yonge, O., 2018. Student-faculty relationships and its impact on academic outcomes. *Nurse Educ. Today* 71, 17–21.
- Jetha, F., Boschma, G., Clauson, M., 2016. Professional development needs of novice clinical teachers: a rapid evidence assessment. *Int. J. Nurs. Educ. Scholarsh.* 13 (1), 1–10.
- Johnson, R., Puglia, C., 2012. Designing a needs assessment survey for clinical nurse educators. *J. Nurses Staff Dev.* 28 (5), 225–228.
- Koivula, M., Tarkka, M.-L., Simonen, M., Katajisto, J., Salminen, L., 2011. Research utilization among nursing teachers in Finland: a national survey. *Nurse Educ. Today* 31, 24–30.
- Langeland, K., Thoresen, L., 2013. Nurse teacher in clinical practice – for the supervisor? *Nordic Journal of Nursing Research & Clinical Studies* 33 (4), 19–22.
- McAllister, M., Flynn, T., 2016. The Capabilities of Nurse Educators (CONE) questionnaire: development and evaluation. *Nurse Educ. Today* 39, 122–127.
- McMahon, G.T., 2017. The leadership case for investing in continuing professional development. *Acad. Med.* 92 (8), 1075–1077.
- McPhee, M., Wejr, P., Davis, M., Semeniuk, P., Scarborough, K., 2009. Practice and academic nurse educators: finding common ground. *Int. J. Nurs. Educ. Scholarsh.* 6 (1), 18.
- Mikkonen, K., Koskinen, M., Koskinen, C., Koivula, M., Koskimäki, M., Lähteenmäki, M.-L., Mäki-Hakola, H., Wallin, O., Sjögren, T., Salminen, L., Sormunen, M., Saarinen, T., Kuivila, H., Kääriäinen, M., 2019. Qualitative study of social and health care educators' perceptions of their competence in education. *Health and Social Care in the Community* 27, 1555–1563.
- Oprescu, F., McAllister, M., Duncan, D., Jones, C., 2017. Professional development needs of nurse educators: an Australian case study. *Nurse Educ. Pract.* 27, 165–168.
- Personal Data Act 1050/2018. Ministry of Justice, Finland. Retrieved from https://www.finlex.fi/en/laki/kaanokset/2018/20181050_2.12.2019.
- Polit, D., Beck, C., Owen, S., 2007. Is the CVI an acceptable indicator of content validity? Appraisal and recommendation. *Research in Nursing & Health* 30, 459–467.
- Regulation on Vocational Education Degree 680/2017. Ministry of Education and Culture. Retrieved from: https://www.finlex.fi/fi/laki/alkup/2017/20170680_2.12.2019.
- Rogan, L., 2014. *Nurse Educators' Beliefs About the Relevance of Continuing Professional Development*. Doctoral dissertation. College of Saint Mary, Omaha.
- Salminen, L., Stolt, M., Metsämäki, R., Rinne, J., Kasen, A., Leino-Kilpi, H., 2016. Ethical principles in the work of nurse educator – a cross sectional study. *Nurse Educ. Today* 36, 18–22.
- Salminen, L., Rinne, J., Stolt, M., Leno-Kilpi, H., 2017. Fairness and respect in nurse educators' work – nursing students' perceptions. *Nurse Educ. Pract.* 23, 61–66.
- Sheppard-Law, S., Curtis, S., Bancroft, J., Smith, W., Fernandes, R., 2018. Novice clinical nurse educators' experience of self-directed learning, education and mentoring program: a qualitative study. *Contemporary Nurse: A Journal for the Australian Nursing Profession* 54 (2), 208–219.
- Silver, L., Campbell, C., Marlow, B., Sargeant, J., 2008. Self-assessment and continuing professional development: the canadian perspective. *J. Contin. Educ. Heal. Prof.* 28 (1), 25–31.
- Siu, J., Chan, K., Lee, A., 2019. Adolescents from low-income families and unhealthy eating behaviours: implications for health and social care practitioners. *Health & Social Care in the Community* 27 (2), 366–374.
- Summers, J., 2017. Developing competencies in the novice nurse educator: an integrative review. *Teach. Learn. Nurs.* 12, 263–276.
- Sundström, M., Petersson, P., Rämgård, M., Varland, L., Blomqvist, K., 2018. Health and social care planning in collaboration in older persons' homes: the perspectives of older persons, family members and professionals. *Scandinavian Journal of Caring Science* 32 (1), 147–156.
- Tabachnick, B., Fidell, L., 2007. *Using Multivariate Statistics*, 5th ed. Allyn & Bacon, Boston, MA.
- Taniyama, M., Ichiro, K., Takahashi, M., 2012. Differences and commonalities in difficulties faced by clinical nursing educators and faculty in Japan: a qualitative cross-sectional study. *BMC Nurs.* 11 (21), 1–11.
- Tanji, S., Ligia de Oliveira, V., 2012. Continuing education subsidizing the competence of teachers of graduate nursing course. *Journal of Nursing UFPE On Line* 6, 2065–2070. Retrieved January 15, 2018, from: <https://periodicos.ufpe.br/revistas/revistaenfrmagem/article/view/7310>.
- University of Applied Sciences Regulation 2014/1129. Ministry of Education and Culture, Finland. Retrieved from: https://finlex.fi/fi/laki/ajantasa/2014/20141129?search%5Btype%5D=pika&search%5Bpika%5D=valtioneuvoston%20asetus%20ammattikorkeakoulu#P17_29.4.2020.
- Van Rensburg, G., Botma, Y., Heyns, T., Coetzee, I., 2018. Creative strategies to support student learning through reflection. *S. Afr. J. High. Educ.* 32 (6), 604–618.
- Van der Rijst, R., Baggen, Y., Sjoer, E., 2019. University teachers' learning paths during technological innovation in education. *Int. J. Acad. Dev.* 24 (1), 7–20.
- Vilen, L., Salminen, L., 2016. Continuing education in maintaining and developing health care educators competence (Ja kehityksikoulutus työveitsäalan opettajien ammattitaidon ylläpidossa ja täydityksessä). *Hoitotiede* 28, 137–149 (in Finnish).
- WMA Declaration of Helsinki, 2013. World medical association, ethical principles for medical research involving human subjects. Retrieved from: <https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>.
- World Health Organization, 2010. *Framework for Action on Interprofessional Education and Collaborative Practice*. Retrieved from: <https://www.who.int/hrh/resources/framework-action/en/>, 20.4.2020.
- World Health Organization, 2013. *Transforming and Scaling up Health Professionals' Education and Training, World Health Organization Guidelines*. Retrieved from: https://apps.who.int/iris/bitstream/handle/10665/93635/9789241506502_eng.pdf;jsessionid=800DF66F0ED695C58F1D242C4DD586B9?sequence=1, 13.4.2019.
- World Health Organization, 2016. *Nurse educator core competencies*. In: *World Health Organization Guidelines*. Retrieved from: http://www.who.int/hrh/nursing_midwifery/nurse_educator050416.pdf, 13.4.2019.
- Yuossef, N., Alshraifeen, A., Alnuaimi, K., Upton, P., 2018. Egyptian and Jordanian nurse educators' perceptions of barriers preventing the implementation of evidence based practice: a cross-sectional study. *Nurse Educ. Today* 64, 33–41.

PUBLICATION

3


An empirical model of social and healthcare educators' continuing professional development in Finland

Koskimäki M., Mikkonen K., Kääriäinen M., Lähteenmäki M-L., Kaunonen M.
Salminen L. & Koivula M

Health and Social Care in the Community, 2021, 00, 1-9
<https://doi-org.libproxy.tuni.fi/10.1111/hsc.13473>

Publication reprinted with the permission of the copyright holders.

An empirical model of social and healthcare educators' continuing professional development in Finland

Minna Koskimäki¹  | Kristina Mikkonen²  | Maria Kääriäinen³ |
Marja-Leena Lähteenmäki⁴ | Marja Kaunonen^{5,6} | Leena Salminen⁷  | Meeri Koivula⁸

¹Faculty of Social Sciences, Nursing Science/Health Sciences, Tampere University, Tampere, Finland

²Research Unit of Nursing Science and Health Management, University of Oulu, Oulu, Finland

³Research Unit of Nursing Science and Health Management, Medical Research Center Oulu, The Finnish Centre for Evidence-Based Health Care: A Joanna Briggs Institute Centre of Excellence, University of Oulu, Oulu, Finland

⁴Rehabilitation Education, Tampere University of Applied Sciences, Tampere, Finland

⁵Faculty of Social Sciences, Tampere University, Tampere, Finland

⁶General Administration, Pirkanmaa Hospital District, Tampere, Finland

⁷Department of Nursing Science, University of Turku, Turku University Hospital, Turku, Finland

⁸Department of Nursing Science, Tampere University, Tampere, Finland

Correspondence

Minna Koskimäki, Faculty of Social Sciences, Nursing Science/Health Sciences, Tampere University, Arvo Building, Arvo Ylpön katu 34, Tampere 33,520, Finland.
Email: minna.koskimaki@tuni.fi

Funding information

Ministry of Education and Culture in Finland, Grant/Award Number: OKM/61/523/2017

Abstract

The objective of this work was to develop and test an empirical model of social and healthcare educators' continuing professional development. A cross-sectional survey study design was adopted, and a total of 422 part-time and full-time social and healthcare educators from 28 universities of applied sciences and vocational schools in different regions of Finland participated. Data were collected from October to December in 2018. The participants taught in the fields of healthcare, social services, and rehabilitation. The questionnaire included the EduProDe scale and background questions. Confirmatory factor analysis and structural equation modelling were used to develop the model, and its quality was assessed by computing goodness of fit indexes. The main finding was that when educators understand the benefits of continuing professional development, they will recognise their developmental needs and proactively seek support from their superiors. The results obtained provide insight into the preconditions for professional development and offer guidance for the design of future shared development programmes or activities for social and healthcare educators.

KEYWORDS

continuing professional development, educator, healthcare, model, social care

1 | INTRODUCTION

Social and healthcare systems are facing major challenges: societies around the world are ageing and becoming more culturally diverse, interactions are becoming increasingly technical, and clients' needs

are becoming ever more complex. Social and healthcare organisations thus require highly professional workforces. Moreover, global health policy calls for efforts to reduce health inequalities and create resilient communities and supportive environments (World Health Organization [WHO], 2013). Multiskilled, team-oriented and

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2021 The Authors. *Health and Social Care in the Community* published by John Wiley & Sons Ltd.

collaborative social and healthcare professionals will be central to achieving these goals.

The competence and continuous learning of social and healthcare educators have important effects on the education of future professionals (Mikkonen et al., 2019). In Finland, academic educators usually hold a master's degree in Health or Social Sciences, and most of them have completed pedagogical studies worth 60 ECTS. They educate registered nurses, public health nurses, paramedics, midwives, physiotherapists, biomedical laboratory scientists, dental technicians, dental hygienists, opticians, auxiliary technicians, radiotherapists, naprapaths, osteopaths, rehabilitation counsellors, occupational therapists, undergraduate students of the social sciences in universities of applied sciences of which education consists of 210–270 ECTS credits qualification (Government decree of the Universities of Applied Sciences, 1129/2014) or in vocational schools of which education consists of 180 ECVET credits qualification (EU Education & Training; Regulation on Vocational Education Degree680/, 2017). Elsewhere in the world, academic educators usually hold a master's or doctoral degree and have at least 2-year clinical experience (Lahtinen et al., 2014; National League for Nursing's Academic Nurse Educator Certification Program, 2021; Paul, 2015). Although educators are highly educated, they must maintain and develop their competencies in their own subjects as well as ethics, pedagogy, management and organisation, innovation and development, collaboration, cultural and linguistic diversity and continuous development (Mikkonen et al., 2019).

Continuing professional development (CPD) is a multifaceted process encompassing both formal and informal learning throughout one's career (Avalos, 2011). Learning should be based on learning needs (McMahon, 2017), and forms of learning range include formal continuing education, collaborative activities and self-directed learning. The individual benefits of CPD are increased expertise and well-being (Dymoc & Tyler, 2018), which confer organisational benefits resulting from greater staff effectiveness (Collin et al., 2012). The main objective of professional development is to root new knowledge into practice (Van der Berg et al., 2014) in order to improve teaching and students' learning (Huang Hoon, 2016).

Previous studies have developed separate models of pedagogical approaches to social and healthcare education (Funda et al., 2019; Buus Boje et al., 2017; Roberson, 2019) as well as models intended to enhance interprofessional collaboration (Dijkman et al., 2017; Haruta et al., 2018). Additionally, Stanley and Stanley (2019) developed a framework for the interprofessional socialisation of health educators that includes strategies for implementing socialisation and reducing barriers to interprofessional collaboration. There is a great demand for educators to find effective ways of bringing social and healthcare students into closer contact during their education in order to encourage future collaboration between social and healthcare professionals (Khalili et al., 2013). Joint CPD programmes for social and healthcare educators were recommended as one way of encouraging such outcomes because of their potential to promote collaborative practices and mutual understanding (Stanley & Stanley, 2019). A precondition for the success of such joint educational programmes is

What is known about this topic

- Continuing professional development is a multifaceted process involving both formal and informal learning
- both of which should be based on learning needs.
- Current learning needs are to enhance pedagogical and subject competence as well as ability to manage challenging teaching situations.
- Educators are developing pedagogical competence through self-directed learning.
- Recognising the benefits of professional development increases the motivation to learn

What this paper adds

- When educators understand and seek the benefits of continuing professional development
- they will recognise the need to develop subject and pedagogical competence.
- Educators who recognise the need to develop their pedagogical competence subsequently understand the need to develop subject competence and skills in managing challenging situations in teaching.
- When educators understand the benefits of professional development
- they proactively seek support from their superiors

to identify the different elements of professional development and the relationships between them.

To facilitate the identification and characterisation of these elements and their relationships, this work presents the development of an empirical model of social and healthcare educators' CPD. The model is used to explore the relationships between the concepts developed in a previous study (Author, et al. 202X) by qualitative analysis of 35 group interviews with educators. This analysis revealed several different elements that are important in CPD (Author, et al. 202X). These elements were grouped into three main categories: educators' approaches to developing professional competence, educators' CPD needs and barriers to continuing education. Educators used different approaches to develop their competences. The most common approach involved some form of collaboration such as active participation in educational events, networking, team teaching or working on projects in their institute during the course of their working activities or with international colleagues. Educators also enhanced their competence by participating in international activities at their institute, such as educator exchange programmes and teaching students from different cultures. Finally, educators also studied by themselves at work and in their free time. The participants recognised a need for planned and ongoing continuing education and needed to develop their clinical, digital, pedagogical and cultural competencies. Barriers to continuing education encountered by the participants included lack of planning, financial and time

constraints and the fact that the available education did not always meet their needs.

Previous studies have shown that educators' needs to develop pedagogical and subject competence are related. In particular, it was found that nurse educators use both academic and subject competence to promote students' learning (Bono-Neri, 2019) and that nurse educator students build their pedagogical competence on their previous professional experience as nurses (Koivusalo et al., 2014). Additionally, a study from the perspective of students found that clinical teachers with greater subject competence were better able to connect theory and practice than university teachers (Gustafsson et al., 2015). Similarly, studies have shown that students expect holistic teaching from educators who possess strong subject competence and connect it to their pedagogical knowledge (Kettunen et al., 2013) and that medical educators' ability to give students useful formative feedback depends on their clinical competence (Barr & Massagli, 2014). The need for educators to develop subject competence is also linked to self-directed learning: Hamilton Broad (2016) found that vocational educators undertook self-directed learning to enhance their subject and occupational competence.

Pedagogical development needs appear to be similarly related to self-directed learning. Development of pedagogical competence is one of the most important objectives for nurses training as nurse educators. Studies on such nurses have shown that self-directed learning is beneficial in educational programmes (Sheppard-Law et al., 2018) and that educators in higher education have been able to improve their teaching through self-development (Alshehry, 2018).

Another important relationship is that between the needs to develop pedagogical skills and skills in managing challenging situations when teaching. L'Ecuyer (2019) found that nurse preceptors are encountering growing numbers of students with learning difficulties that could cause them to drop out (Heublein, 2014). Educators need pedagogical knowledge to support these students (L'Ecuyer, 2019). Additionally, healthcare researchers have found that their programmes of study can themselves adversely affect student well-being (Hughes & Byrom, 2019). However, studies on social work education have shown that a challenging field practicum can enhance students' professional growth if they receive appropriate pedagogical support from their supervisors (Ben-Porat et al., 2020). Nursing mentors also experience challenges when guiding students from linguistic minorities (Oikarainen et al., 2018), and social work educators acknowledge difficulties with gay and lesbian students and seek ways of showing respect to minorities in pedagogical situations (Papadaki, 2017). New pedagogical practices could reduce the anxiety of linguistic or sexual minority students and create a richer pedagogical dialogue (Daddow, 2017).

Educators experience the benefits of CPD as being connected to their needs to develop subject competence. For example, midwife educators felt that their pedagogical education and teaching work strengthened their subject competence and ultimately improved maternal and newborn survival (West et al., 2017). Additionally, educators found it beneficial to participate in CPD programmes that

facilitated theoretical discussions and professional engagement with other subject specialists because it made them more familiar with subject-specific terminology and knowledge (Woolhouse & Cochrane, 2015).

The benefits of CPD are thus connected to educators' need to develop pedagogical competence. Collaborative networking as a form of professional development strengthens clinical nurse educators' pedagogical development by improving research capacity and knowledge translation (Coates & Fraser, 2014). Among medical faculty, motivation to engage with CPD depended on its perceived benefits and the identification of pedagogical development needs (Bone et al., 2020). The benefits of CPD experienced by educators seem to depend on the support that they receive. During education, social work educators who had positive attitudes towards the offered learning opportunities proactively sought support (Burton, 2020), and the motivation of teachers in higher education was related to the perceived level of organisational support and their relationship with their superiors (Pauli et al., 2018). Similarly, medical faculty found that mentor support increased the benefits of CPD programmes (Sandi & Chubinskaya, 2020). However, midwifery educators were motivated to participate in CPD but felt unsupported by the education institute in terms of their career progression and role development (West et al., 2017).

2 | METHODS

2.1 | Aim

The aim of this study was to develop and test an empirical model of social and healthcare educators' CPD.

The study was designed to answer two research questions: (a) What is the structure of social and healthcare educators' CPD and can it be modelled empirically? and (b) what are the relationships between the concepts important in CPD?

The developed model, which is based on previous research, was used to test the following hypotheses. The hypotheses, including concepts representing empirical model and relationships between the concepts, are presented in Figure 1:

H1. Needs for pedagogical development are positively related to needs for clinical development.

H2. Needs for pedagogical development are positively related to educators' self-directed learning.

H3. Needs for pedagogical development are positively related to needs to manage challenging situations in teaching.

H4. Needs to develop clinical competence are positively related to educators' self-directed learning.

H5. The benefits of CPD are positively related to needs of clinical development.

H6. The benefits of CPD are positively related to needs for pedagogical development.

H7. The benefits of CPD are positively related to leadership of educators' competence.

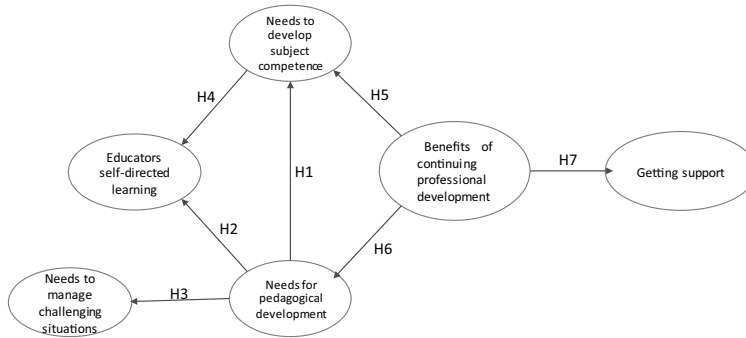


FIGURE 1 The hypothesized model of social and healthcare educators' professional development based on the previous research

2.2 | Design

A cross-sectional survey study design was adopted.

2.3 | Participants and settings

A total of 2,330 educators were invited to participate in the study, and 422 volunteered to do so, giving a response rate of 18%. This study is part of a national research project. As part of this project, a major data-gathering exercise was conducted in the autumn of 2018 to address several research aims relating to the continuing education of social, healthcare and rehabilitation educators, the development of their competences and the digitalisation of education (<https://sharededucationnetwork.com/>). Educators from 21 universities of applied sciences and seven vocational schools in Finland were invited to participate in the study in the autumn of 2018. Inclusion criteria for prospective participants were part- or full-time employment as an educator in social or healthcare within an educational organisation. The sample size was considered sufficient (minimum $n = 110$) because the recommended minimum sample for confirmatory factor analysis (CFA) using structural equation modelling is five participants per variable ($n = 22$ in this study) (DeVon et al., 2007).

2.4 | Data collection

A link to the questionnaire was sent to a contact person at each participating educational organisation. The contact person then forwarded it to educators with an invitation to participate. In one organisation, the link was sent directly to educators. Data collection was performed between October and December 2018; 3–4 invitations were sent at biweekly intervals during this time.

2.5 | Instrument

The items of the Educators' Professional Development-scale (EduProDe-scale) were developed from qualitative research concepts

(Koskimäki et al., 2020). The scale's purpose is to determine how professional development is conducted. The items were analysed using exploratory factor analysis, and the final EduProDe scale contains background questions and 22 items grouped into six factors: educators' needs to develop pedagogical competence (seven items), educators' needs to manage challenging situations in teaching (three items), educators' needs to develop their subject competence (three items), leadership of educators' competence (three items), educators' self-directed learning (three items) and benefits of professional development (three items) (Koskimäki, 2021). The respondents evaluated the items using a 4-point Likert scale where scores of 1 and 4 indicate complete disagreement and complete agreement, respectively. The content and construct validity of the EduProDe scale was tested (and separately reported) using the data gathered in this work using exploratory factor analysis (Koskimäki et al., 2021). The Cronbach's alpha varied between 0.70 and 0.89.

2.6 | Ethical considerations

The ethical principles of the Declaration of Helsinki (2013) were followed strictly during the research process. All organisations participating in the study granted research permission in accordance with Finnish ethical regulations. The letters inviting educators to participate in the study contained information about the research, funding and autonomy of the respondents. Educators who read the information about the study, clicked on the link to the questionnaire and completed the questionnaire were assumed to have given informed consent to participation. The gathered data were stored in secure files in accordance with the GDPR (2016) and Personal Data Act (1050/2018).

2.7 | Data analysis

Missing data analysis was performed using the maximum likelihood method, using missing at random (MAR), missing completely at random (MCAR) and missing not at random (MNAR) approaches. The

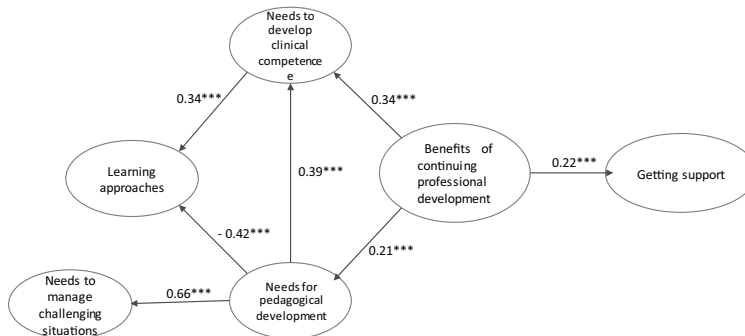


FIGURE 2 The empirical model of social and healthcare educators' continuing professional development. *** $p < 0.001$

threshold for listwise deletion was set at $\geq 5\%$ of missing data. No instances of missing data were found (Graham, 2009a). Multivariate outliers were identified by computing Mahalanobis distances (threshold: $p < 0.01$). The normality of the data was assessed using Mardia's kurtosis coefficient (the threshold was set at 3.017.86); the coefficient's value was 3.248, indicating normality (Graham, 2009). Eighteen outliers were removed to ensure normality; the remaining 404 responses were used for structural equation model (SEM) testing.

In the first phase of the modelling process, the measurement model was tested using CFA to confirm the indicators identified previously (Author 202X), the relationships between the factors and the indicator errors. In the second phase, the SEM, its various factors and their relationships were tested (Brown, 2015). The following fit indices and cut-off values were used to assess the fit of the measurement and structural models: root mean square error of approximation (RMSEA) < 0.08 , standardised root mean residual (SRMR) < 0.08 , comparative fit index (CFI) > 0.90 and Tucker–Lewis index (TLI) > 0.90 (Brown, 2015). All analyses were performed using IBM SPSS Statistics V.26 and Stata V.12.

3 | RESULTS

3.1 | Participants

The data consisted of questionnaire responses from 404 educators. The mean age of the participants was 51 years (SD 8.54 years). Most of the participants were female (90%) and had a master's degree (78%). One fifth of the sample (21%) had a doctoral degree, and all but one of the participants had completed 60 ECTS' worth of study on pedagogy. Most of the participants (80%) worked at universities of applied sciences, but 20% were employed in vocational colleges. Their mean work experience was 14 years (SD 8.78), and most of them were lecturers (69%). Additionally, 19% were part- or full-time teachers, 10% were principal lecturers, and 2% were heads of degree programmes. Most of the educators (63%) worked in the field of healthcare, but 20% worked in social services and 8% in rehabilitation.

3.2 | Empirical model of social and healthcare educators' CPD

All but one of the model's hypotheses were confirmed. The exception was H2: whereas it was hypothesised that needs for pedagogical development would be positively related to self-directed learning among educators, the observed relationship was actually negative (-0.42). The hypothesised model was confirmed, and all connections between the concepts were significant ($p < 0.001$). In Figure 2, the empirical model and relationships of concepts are further presented.

More specifically, the model indicates that when educators understand and seek the benefits of CPD, they will recognise the need to develop their clinical (0.34) and pedagogical (0.21) competence. Additionally, recognition of the need to develop pedagogical competence (0.39) leads to recognition of needs to develop subject competence (0.66) and skills in managing challenging teaching situations (0.66). Learning approaches with international contexts such as international collaboration or conferences do not support educators' pedagogical development (-0.42) but do support the development of their subject competence (0.34). Educators who recognise the benefits of professional development seek support from their superiors (0.22). The model had satisfactory goodness of fit values: RMSEA 0.068, SRMR 0.066, CFI 0.905, TLI 0.891.

4 | DISCUSSION

This study aimed to develop and test an empirical model of social and healthcare educators' CPD. The benefits that educators expect and seek from professional development are central to the model. Herzberg's two-factor theory (1959) describes motivation as an internal engine founded on the satisfaction of achievement, recognition of achievement and personal growth (Bassett-Jones & Lloyd, 2005). When developing the model presented here, motivation was evaluated on the basis of educators' statements concerning the realisation of the benefits of professional development, such as improved teaching and increased well-being as a result of recognising their pedagogical and subject competence needs (Author 202X).

Motivated learners are engaged and experience autonomy (Tjin et al., 2018).

Educators' motivation is also dependent on educational leadership and may be enhanced if superiors support their autonomy (Eyal & Roth, 2011). Superiors have a strong impact on the atmosphere of educational institutions and the degree to which they promote educators' learning and personal growth (Eyal & Roth, 2011). According to Bassett-Jones (2005), employees have 'a desire for recognition from a manager.' This desire is complex: it can be regarded as a motivator, which is the term Herzberg et al., (1959) used to describe the situation where an employee receives supportive feedback from a manager. Alternatively, the desire may arise from the probability of promotion, which is regarded as an example of external movement. The external movement does not create actual motivation; instead, the real motivation comes from within (Herzberg et al., 1959).

When educators are motivated to develop their competencies, they recognise their learning needs. Questionnaire-based methods are widely used to evaluate learning needs and develop educational programmes to meet those needs (Heidbuchel et al., 2018; Loue et al., 2015; Sockalingam et al., 2015). Previous research in this area has relied on self-assessment to evaluate the outcomes of learning processes (Karabacak et al., 2019; Sevin et al., 2016). In contrast, the model presented here is based on educators' descriptions of their professional development. Self-assessment of needs is fundamental to the andragogy approach, which emphasises the need for learners to consider why learning is essential (Knowles, 2015).

One of the tested hypotheses was unexpectedly contradicted: educators were not found to gain pedagogical competence through learning in an international context. In other words, when educators develop their language skills, attend international conferences or collaborate with international educators, there is no resulting positive impact on their teaching skills. This is surprising given the widely acknowledged need for culturally diversity pedagogy (Oikarainen et al., 2018; Ross et al., 2018), but it may be that educators mainly attend conferences to expand their subject knowledge or to get to know other participants and their culture more generally rather than from a pedagogical perspective (Witchger Hansen, 2015). Barriers to participation in international programmes may include poor language skills and financial costs (Takenouchi et al., 2017). International partnerships and programmes could potentially support different kinds of learning experiences that could enhance teaching and learning skills if planned in a way that strengthens educators' motivation and encourages relationship building, shared understanding of the partnership's aims, adaptation to different cultures and the creation of a supportive environment (West et al., 2017).

4.1 | Limitation and strengths

This study presents new knowledge about CPD for social and healthcare educators. In particular, it shows how core concepts of professional development are interrelated. However, the study has some

limitations. First, although the sample size was sufficient for SEM validation, a larger national sample would have strengthened the study's validity. The response rate was also rather low (only 18%). It is therefore important to not overstate the results and recognise that their generality may be limited.

The second limitation (which is also in some ways a strength) is that the participants all work in the same country. When attempting to generalise the results of studies in this field, it is essential to compare the educational systems in different countries. The model presented here may be difficult or even impossible to use in other national or international contexts. However, it also provides valuable evidence-based knowledge about Finnish social and healthcare educators' professional development.

A major strength of this study is the interprofessional nature of the sample: 63% of the participants work in healthcare education, 21% in social work education, 7% in rehabilitation education, and 9% in social and healthcare education. However, this study does not examine interprofessional collaboration level between the samples of this study.

5 | CONCLUSION

An empirical model of the CPD of social and healthcare educators was created, providing theoretical knowledge and understanding about professional development and its preconditions. The results presented here will help educators and superiors understand the importance of needs self-assessment, recognising the benefits of continuing learning and seeking support from the work community. The model could be used in the education of social and healthcare educators to increase students' knowledge of lifelong learning and as a tool to guide organisational recruitment. For example, organisations could emphasise motivation and efforts to seek learning situations and support during recruitment. The model may also be useful in the design of shared development programmes or activities for social and healthcare educators that could promote joint education and working practices in social and healthcare. Future work in this area could focus on retesting the model with a larger sample or in international contexts. A larger sample could also include educators from other disciplines. It would be essential to study more about social and healthcare educators' learning in an international context and the factors increasing educators' motivation in this field. Additional studies need to be conducted in examining educators' competence development and its progress according to their educational background, social or healthcare education, leadership support and motivation in self-development.

ACKNOWLEDGEMENTS

We would like to acknowledge the Ministry of Education and Culture for funding. We would also like to acknowledge Dr. Marco Tomietto, University of Oulu, for his valuable consultation of statistical methods. This work was supported by the Ministry of Education and Culture Finland (Grant OKM/61/523/2017).

CONFLICT OF INTEREST

All authors declare that they have no conflict of interest.


AUTHOR CONTRIBUTIONS


Minna Koskimäki, Kristina Mikkonen, Maria Kääriäinen, Leena Salminen and Meeri Koivula conceptualised the study. Minna Koskimäki and Kristina Mikkonen performed the methodology and formal analysis. Minna Koskimäki, Kristina Mikkonen, Marja-Leena Lähteenmäki, Leena Salminen and Meeri Koivula performed the investigation. Minna Koskimäki performed the writing of original draft. Minna Koskimäki, Kristina Mikkonen, Maria Kääriäinen, Leena Salminen and Meeri Koivula performed the writing - review & editing. Minna Koskimäki visualised the study. Meeri Koivula supervised the study. Kristina Mikkonen and Maria Kääriäinen are responsible for the project administration.


DATA AVAILABILITY STATEMENT

The data are not available.

ORCID

Minna Koskimäki  <https://orcid.org/0000-0002-1568-1123>

Kristina Mikkonen  <https://orcid.org/0000-0002-4355-3428>

Leena Salminen  <https://orcid.org/0000-0002-9730-5331>

REFERENCES

- Alshetry, A. (2018). Case Study of Science Teachers' professional development in Saudi Arabia: Challenges and Improvements. *International Education Studies*, 11(3), 70–76. <https://doi.org/10.5539/ies.v11n3p70>
- Aslan, F., Şahin, N. E., & Emiroğlu, O. N. (2019). Turkish nurse educators knowledge regarding LGBT health and their level of homophobia: A descriptive-cross sectional study. *Nurse Education Today*, 76, 216–221. <https://doi.org/10.1016/j.nedt.2019.02.014>
- Avalos, B. (2011). Teacher professional development in Teaching and Teacher Education ten years. *Teaching and Teacher Education*, 27, 10–20.
- Barr, K., & Massagli, T. (2014). New challenges for the graduate medical educator. *American Journal of Physical Medicine and Rehabilitation*, 93(7), 624–631. <https://doi.org/10.1097/PHM.0000000000000073>
- Basset-Jones, N., & Lloyd, G. (2005). Does Herzberg's motivation theory have staying power? *Journal of Management Development*, 24(19), 929–943. <https://doi.org/10.1108/02621710510627064>
- Ben-Porat, A., Gottlieb, S., Refaeli, T., Shemesh, S., & Zahav, R. (2020). Vicarious growth among social work students: What makes the difference? *Health and Social Care in the Community*, 28, 662–669. <https://doi.org/10.1111/hsc.12900>
- Bone, M., Mink, R., Marcdante, K., Czaja, A., Storgion, S., & Turner, D. (2020). Expanding faculty development of teaching skills: a national needs assessment of pediatric critical care medicine faculty. *Pediatric Critical Care Medicine*, 21(5), 486–493. <https://doi.org/10.1097/PCC.0000000000002265>
- Bono-Neri, F. (2019). Pedagogical nursing practice: Redefining nursing practice for the academic nurse educator. *Nurse Education in Practice*, 37, 105–108. <https://doi.org/10.1016/j.nepr.2019.04.002>
- Brown, T. (2015). *Confirmatory factor analysis for applied research*, 2nd ed. The Guilford Press.
- Burton, J. (2020). Reframing social work practice education: Practice educators' perceptions of the Professional Capabilities Framework (PCF) and the support provided during implementation. *Journal of Social Work Practice*, 34(1), 39–52. <https://doi.org/10.1080/02650533.2019.1594177>
- Buus, B. R., Bland, A., Sutton, A., Hartvigsen, T., Hannula, L., Koivisto, J., Raussi-Lehto, E., & Prescott, S. (2017). Developing and testing transferability and feasibility of a model for educators using simulation-based learning – A European collaboration. *Nurse Education Today*, 58, 53–58. <https://doi.org/10.1016/j.nedt.2017.08.005>
- Coates, K., & Fraser, K. (2014). A case for collaborative networks for clinical nurse educators. *Nurse Education Today*, 34, 6–10. <https://doi.org/10.1016/j.nedt.2013.04.003>
- Collin, K., Van der Heijden, B., & Lewis, P. (2012). Continuing professional development. *International Journal of Training and Development*, 16(3), 155–163. <https://doi.org/10.1111/j.1468-2419.2012.00410.x>
- Daddow, A. (2017). Diverse students and literacy in social work education: Pedagogies for new tertiary landscape. *Social Work Education*, 36(3), 323–338. <https://doi.org/10.1080/02615479.2016.1221394>
- Declaration of Helsinki (2013). Ethical principles for medical research involving human subjects. World Medical Association. Retrieved from <https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>
- DeVon, H. A., Block, M. E., Moyle-Wright, P., Ernst, D. M., Hayden, S. J., Lazzara, D. J., Savoy, S. M., & Kostas-Polston, E. (2007). A psychometric toolbox for testing validity and reliability. *Journal of Nursing Scholarship*, 39(2), 155–164. <https://doi.org/10.1111/j.1547-5069.2007.00161.x>
- Dijkman, B., Reehuis, L., & Roodpol, B. (2017). Competencies for working with older people: The development and verification of the European core competence framework for health and social care professionals working with older people. *Educational Gerontology*, 43(10), 483–497.
- Dymoc, D., & Tyler, M. (2018). Towards a more systematic approach to continuing professional development in vocational education and training. *Studies in Continuing Education*, 40(2), 198–211. <https://doi.org/10.1080/0158037X.2018.1449102>
- EU. European Commission, Education and Training, The European Credit System for Vocational Education and Training. Retrieved from https://ec.europa.eu/education/resources-and-tools/the-european-credit-system-for-vocational-education-and-training-ecvet_en
- Eyal, O., & Roth, G. (2011). Principals' leadership and teachers' motivation. Self determination theory analysis. *Journal of Educational Administration*, 49(3), 256–275. <https://doi.org/10.1108/09578231111129055>
- GDPR (2016). Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April, 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). Retrieved from <https://eur-lex.europa.eu/eli/reg/2016/679/oj>
- Graham, J. (2009). Missing data analyses: Making it work in the real world. *Annual Review of Psychology*, 60, 549–576. <https://doi.org/10.1146/annurev.psych.58.110405.085530>
- Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology*, 60, 549–576. <https://doi.org/10.1146/annurev.psych.58.110405.085530>
- Gustafsson, M., Kullen, E. A., Ohlsson, U., Sundler, A., & Bisholt, B. (2015). Nurse teacher models in clinical education from the perspective of student nurses- A mixed methods study. *Nurse Education Today*, 35, 1289–1294. <https://doi.org/10.1016/j.nedt.2015.03.008>
- Hamilton, B. J. (2016). Vocational knowledge in motion: Rethinking vocational knowledge through vocational teachers' professional development. *Journal of Vocational Education & Training*, 68(2), 143–160. <https://doi.org/10.1080/13636820.2015.1128962>
- Haruta, J., Yoshida, K., Goto, M., Yoshimoto, H., Ichikawa, S., Mori, Y., Yoshimi, K., & Otsuka, M. (2018). Development of an interprofessional competence framework for collaborative practice in Japan. *Journal of Interprofessional Care*, 32(4), 436–443.

- Heidbuchel, H., Dagnes, N., Antz, M., Kuck, K.-H., Lazure, P., Murray, S., Carrera, C., Hindricks, G., & Vahanian, A. (2018). Major knowledge gaps and system barriers to guideline implementation among European physicians treating patients with atrial fibrillation: A European Society of Cardiology international educational needs assessment. *Europace*, 20(12), 1919–1928. <https://doi.org/10.1093/europace/euy039>
- Herzberg, F., Mausner, B., & Snyderman, B. (1959). *The motivation to work*. Wiley.
- Heublein, U. (2014). Student drop-out from German higher education institutions. *European Journal of Education*, 49(4), 497–513. <https://doi.org/10.1111/ejed.12097>
- Huang Hoon, C. (2016). Fostering community, building trust, and navigating risks in academic development [Editorial]. *International Journal of Academic Development*, 21(3), 163–165.
- Hughes, G., & Byrom, N. (2019). The challenges faced by academics on professional healthcare courses. *Journal of Advanced Nursing*, 75(7), 1539–1548. <https://doi.org/10.1111/jan.13989>
- IBM (2019). IBM SPSS Statistics 26. Available from <https://www.ibm.com/support/pages/downloading-ibm-spss-statistics-26>
- Karabacak, U., Unver, V., Ugur, E., Kocatepe, V., Ocaktan, N., Ates, E., & Uslu, Y. (2019). Examining the effect on simulation based learning on self-efficacy and performance of first-year nursing students. *Nurse Education in Practice*, 36, 139–143. <https://doi.org/10.1016/j.nepr.2019.03.012>
- Kettunen, E., Lukkarinen, H., Salminen, L., & Kääriäinen, M. (2013). Nurse educator's clinical competence evaluated by nursing students [Hoitotyön opettajan kliininen osaaminen hoitotyön opiskelijoiden arvioimana]. *Nursing Science [hoitotiede]*, 25(1), 24–35.
- Khalili, H., Orchard, C., Laschinger, H., & Frahr, R. (2013). An interprofessional socialization framework for developing an interprofessional identity among health professional students. *Journal of Interprofessional Care*, 27(6), 448–453.
- Knowles, M., Holton, E., & Swanson, R. (2015). *The Adult Learner: The Definitive classic in Adult Education and Human Resource Development*, 8th ed. Butterworth-Heinemann.
- Koivusalo, H., Joronen, K., & Koivula, M. (2014). Nurse Educator Students Occupational Identity during the pedagogical studies in nursing science education [Hoitotyön opettajaopiskelijoiden ammatti-identiteetti hoitotieteiden opinnoissa]. *Nursing Science [hoitotiede]*, 26(3), 154–165.
- Koskimäki, M., Lähteenmäki, M.-L., Mikkonen, K., Kääriäinen, M., Koskinen, C., Mäki-Hakola, H., Sjögren, T., & Koivula, M. (2020). Continuing professional development among social- and health care educators. *Scandinavian Journal of Caring Science*, 35(2), 668–677. <https://doi.org/10.1111/scs.12948>
- Koskimäki, M., Mikkonen, K., Kääriäinen, M., Lähteenmäki, M.-L., Kaunonen, M., Salminen, L., & Koivula, M. (2021). Development and Testing of the Educators' Professional Development Scale (EduProDe) for the assessment of social and health care educators' professional development. *Nurse Education Today* 98 (will be published in March 2021).
- Lahtinen, P., Leino-Kilpi, H., & Salminen, P. (2014). Nursing Education in the European higher education area- variations in the implementation. *Nurse Education Today*, 34(6), 1040–1047.
- L'Ecuyer, K. (2019). Perceptions of nurse preceptors of students and new graduates with learning difficulties and their willingness to precept them in clinical practice (part 2). *Nurse Education in Practice*, 34, 210–217. <https://doi.org/10.1016/j.nepr.2018.12.004>
- Loue, S., Wilson-Delfosse, A., & Limbach, K. (2015). Identifying gaps in cultural competence/sensitivity components of an undergraduate medical school curriculum: a needs assessment. *Journal of Immigrant and Minority Health*, 17(5), 1412–1419. <https://doi.org/10.1007/s10903-014-0102-z>
- McMahon, G. T. (2017). The leadership case for investing in continuing professional development. *Academic Medicine*, 92(8), 1075–1077. <https://doi.org/10.1097/ACM.0000000000001619>
- Mikkonen, K., Koskinen, M., Koskinen, C., Koivula, M., Koskimäki, M., Lähteenmäki, M.-L., Mäki-Hakola, H., Wallin, O., Sjögren, T., Salminen, L., Sormunen, M., Saaranen, T., Kuivila, H.-M., & Kääriäinen, M. (2019). Qualitative study of social and healthcare educators' perceptions of their competence in education. *Health and Social Care in the Community*, 27, 1555–1563. <https://doi.org/10.1111/hsc.12827>
- National League for Nursing's Academic Nurse Educator Certification Program. (2021). *Certified Nurse Educator (CNE) 2021 Candidate Handbook*. Washington, DC: National League for Nursing/Customer Service Academic Nurse Educator Certification Program. Available from: <http://www.nln.org/docs/default-source/default-document-library/cne-handbook-2021.pdf?sfvrsn=2>
- Oikarainen, A., Mikkonen, K., Tuomikoski, A.-M., Elo, S., Pitkänen, S., Ruotsalainen, H., & Kääriäinen, M. (2018). Mentors' competence in mentoring culturally and linguistically diverse nursing students during clinical placement. *Journal of Advanced Nursing*, 74, 148–159. <https://doi.org/10.1111/jan.13388>
- Opetus- ja Kulttuuriministeriö. (2017). Asetus Ammatillisen koulutuksen tutkintorakenteesta [Regulation on Vocational Education Degree 680/2017]. Retrieved from <https://www.finlex.fi/fi/laki/alkup/2017/20170680>
- Papadaki, V. (2017). "Even if Martians exist, they're far from our everyday life": Faculty perspectives regarding gay and lesbians students in social work education. *Social Work Education*, 36(1), 88–101. <https://doi.org/10.1080/02615479.2016.1254770>
- Paul, P. (2015). Transition from novice adjunct to experienced associate degree nurse educator: A comparative qualitative approach. *Teaching and Learning in Nursing*, 10(1), 3–11. <https://doi.org/10.1016/j.teln.2014.09.001>
- Pauli, J., Chambel, M., Capellari, M., & Rissi, V. (2018). Motivation, organizational support and satisfaction with life for private sector teachers in Brazilian Higher Education. *Higher Education Quarterly*, 72(2), 107–120.
- Personal Data Act 1050/2018. Ministry of Justice, Finland. Retrieved from <https://www.finlex.fi/fi/laki/alkup/2018/20181050>
- Roberson, C. (2019). Understanding simulation in social work education: A Conceptual framework. *Journal of Social Work Education*, 56(3), 576–586. <https://doi.org/10.1080/10437797.2019.1656587>
- Ross, B., Ta, B., & Grieve, A. (2018). Placement educators' experiences and perspectives of supervising international social work students in Australia. *Australian Social Work*, 72(2), 188–205. <https://doi.org/10.1080/0312407X.2018.1557230>
- Sandi, G., & Chubinskaya, S. (2020). A faculty development model that promotes success in early career faculty in academic medicine. *Journal of Continuing Education in the Health Professions*, 40(1), 69–72. <https://doi.org/10.1097/CEH.0000000000000282>
- Sevin, A., Hale, K., Brown, N., & McAuley, J. (2016). Assessing interprofessional education collaborative competencies in service-learning course. *American Journal of Pharmaceutical Education*, 80(2), 1–8. <https://doi.org/10.5688/ajpe80232>
- Sheppard-Law, S., Curtis, S., Bancroft, J., Smith, W., & Fernandez, R. (2018). Novice clinical nurse educator's experience of a self-directed learning, education and mentoring program: a qualitative study. *Contemporary Nurse*, 54(2), 208–219. <https://doi.org/10.1080/10376178.2018.1482222>
- Sockalingam, S., Tehrani, H., Kacikanis, A., Tan, A., Hawa, R., Anderson, R., Okrainec, A., & Abbey, S. (2015). Determine the need for team-based training in delirium management: A needs assessment of surgical healthcare professionals. *Journal of Interprofessional Care*, 29(6), 649–651. <https://doi.org/10.3109/13561820.2015.1045061>
- Stanley, K., & Stanley, D. (2019). The HEIPS framework: Scaffolding interprofessional education starts with health professional educators. *Nurse Education in Practice*, 34, 63–71. <https://doi.org/10.1016/j.nepr.2018.11.004>

- Takenouchi, A., Sakurai-Matsukubo, M., & Matsukubo, T. (2017). Interest in international programs- a survey of Japanese dental hygiene students and educators. *International Journal of Dental Hygiene*, 15, 93-99. <https://doi.org/10.1111/idh.12223>
- Tjin, A., Tsoi, S., de Boer, A., Croiset, G., Koster, A., van der Burgt, S., & Kusurkar, R. (2018). How basic psychological needs and motivation affect vitality and lifelong learning adaptability of pharmacists: A structural equation model. *Advances in Health Science Education*, 23, 549-566. <https://doi.org/10.1007/s10459-018-9812-7>
- Valtioneuvoston Asetus Ammattikorkeakouluista 1129/2014 (2014). Government decree of the Universities of Applied Sciences 1129/2014. Retrieved from <https://www.finlex.fi/fi/laki/alkup/2014/20141129?search%5Btype%5D=pika&search%5Bpika%5D=asetus%20ammattikorkeakouluista#Pidp450128512>
- Van der Bergh, L., Ros, A., & Beijjaard, D. (2014). Improving teacher feedback during active learning: Effects of a professional development program. *American Educational Research Journal*, 51(4), 772-809. <https://doi.org/10.3102/0002831214531322>
- West, F., Dawson, A., & Homer, C. (2017). Building midwifery educator capacity using international partnerships: Findings from a qualitative study. *Nurse Education in Practice*, 25, 66-73. <https://doi.org/10.1016/j.nepr.2017.05.003>
- Witchger Hansen, A. M. (2015). Crossing borders: A qualitative study of how occupational therapy educators and scholars develop and sustain global partnerships. *Occupational Therapy International*, 22(3), 152-162. <https://doi.org/10.1002/oti.1401>
- Woolhouse, C., & Cochrane, M. (2015). Educational policy or practice? Traversing the conceptual divide between subject knowledge, pedagogy and teacher identity in England. *European Journal of Teacher Education*, 38(1), 87-101. <https://doi.org/10.1080/02619768.2014.921154>
- World Health Organization (2013). Health 2020 A European policy framework and strategy for 21st century. Retrieved from <https://www.euro.who.int/en/publications/abstracts/health-2020.-a-european-policy-framework-and-strategy-for-the-21st-century-2013>

How to cite this article: Koskimäki M, Mikkonen K, Kääriäinen M, et al. An empirical model of social and healthcare educators' continuing professional development in Finland. *Health Soc Care Community*. 2021;00:1-9. <https://doi.org/10.1111/hsc.13473>

