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# Social-, health care and rehabilitation educators' competence: a cross-sectional study

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# Social-, health care and rehabilitation educators' competence: a cross-sectional study

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**ABSTRACT**

An educator's competence influences the implementation of evidence-based education and the overall quality of social and health care. This study aimed to identify distinct competence profiles from Finnish social, health and rehabilitative care educators, as well as describe which personal and professional characteristics influenced belonging to a certain profile. Data were collected from 28 educational organizations located throughout Finland using the Health and Social Care Educators' Competence instrument. The survey was answered by 422 educators. The performed K-means cluster analysis identified three distinct educator competence profiles, which differed in terms of self-assessed expertise in various competence areas and certain background characteristics. The results highlight that educational institutions should concentrate on refining the digital competence of educators, which requires networking, collaboration, and work-related pedagogical competence. The differences in evaluation identified for the three profiles demonstrates that more experienced educators should mentor their less experienced counterparts to ensure a high quality of education.

## Introduction

Social, health and rehabilitative care educators play a key role in educating students in these fields to become highly competent professionals (Mikkonen, Koskinen, et al., 2019). An educator's

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competence is essential to the successful implementation of evidence-based health care education (Salminen et al., 2013) and is important for promoting student learning (Fowler et al., 2017; Salminen et al., 2013). Despite the importance of social, health and rehabilitative educators' expertise, little attention has been paid to designing – and implementing – instruments that can reliably measure educator competence, including knowledge, skills and educational values. Individual aspects of health care educators' knowledge, skills and values have been extensively studied (Dekker-Groen et al., 2011; Fowler et al., 2017; Koivula et al., 2011; Leonard et al., 2016; Salminen et al., 2013), while only a few studies have focused on how educators require multi-dimensional competence (Gibson et al., 2019; Mikkonen, Koskinen, et al., 2019; WHO, 2016; Zlatanovic et al., 2017). The latest Education Reform (2016) highlighted that the competences required for educating students change and evolve along with our rapidly changing society. For example, digitalization has broadened the skillset that health care professionals must master to successfully interact with their patients or clients (Konttila et al., 2019; Vehko et al., 2019); hence, social, health and rehabilitative care educators must be able to adjust to digital innovations in health care (Zlatanovic et al., 2017). As such, these educators must continuously develop their competences if they are to provide high-quality education that is in line with the rapidly changing health sector (Zlatanovic et al., 2017). Exploratory and descriptive research concerning social, health and rehabilitative care educators' competence can significantly impact the provision of health care and health promotion within society. Furthermore, the comprehensive exploration of social, health and rehabilitative care educators' competence can provide knowledge about which competence areas must be further developed to enhance students' professional development. The present study aimed to describe social, health and rehabilitative care educators' self-assessed competence according to distinct competence profiles, as well as examine which personal and professional characteristics influenced belonging to a certain profile.

## *Background*

Previous research has shown that educators in the field of social, health and rehabilitative care must have diverse competencies, including knowledge, skills and attributes relevant to their area of work (Mikkonen, Koskinen, et al., 2019; Zlatanovic et al., 2017). Generally, educators are expected to have strong professional expertise in two broad areas: pedagogy and subject matter (Zlatanovic et al., 2017). Hence, social, health and rehabilitative care educators have two distinct roles, i.e., they are social, health and rehabilitative professionals first and educators second (Laurencelle et al., 2016; Zlatanovic et al., 2017). These educators differ from educators representing other fields as they must continue performing their professional responsibilities along with teaching duties, i.e., split time between the clinical and learning settings. According to the World Health Organization (2016), a nursing educator's competence is based on knowledge, skills, attitudes and behaviours that can be divided under the eight following areas: theories and principles of adult learning; curriculum and implementation; nursing practice; research and evidence; communication, collaboration and partnership; ethical/legal principles and professionalism; monitoring and evaluation; as well as management, leadership and advocacy (WHO, 2016). Tapani and Salonen (Tapani & Salonen, 2019) have defined teachers' competencies in Finnish vocational education (without distinction of educators' background in social, health and rehabilitative care professional field) by *scholarship in teaching and learning relating to pedagogy, guidance and counselling, and interaction, scholarship in authentic learning and development referring to pedagogical leadership, partnership and innovator competency, and scholarship in evaluation and monitoring associated with assessment.* According to the latest study from Mikkonen, Koskinen, et al. (2019), social- and health care educators' competence was defined based on nine areas of competence, namely, competence in the profession they are educating students in, the subject being taught, ethics, pedagogy, management and organization, innovation and development, collaboration, handling cultural and linguistic diversity, and continuous professional development. Additionally, Kuivila et al. (2020) interviewed health

sciences students who were currently completing their teacher education to further describe the competences associated with the educator role. At this stage in their professional career, the students already expressed that the following eight competence areas are crucial to the successful education of students: leadership and management competence; evidence-based practice competence; subject competence, ethical competence, pedagogical competence, collaboration competence, internationalization competence, and continuous professional development competence (Kuivila et al., 2020). In a national report of the key-government funded project, social, health and rehabilitative care educators' competencies were distributed among micro and macro competence areas. The micro competence areas were explained by competence in social, health and rehabilitative care science and profession; competence in pedagogy (curriculum work, teaching and mentoring, student-centred teaching method and learning environments), competence in ethics and culture, competence in interaction, collaboration and network, and competence in administration and welfare. The macro-level competence were explained by competence in evidence-based practice, competence in sustainable innovation and future, and continuing competence development (Mikkonen, Koivula, et al., 2019a).

Previous studies of educators in the field of social, health and rehabilitative care have shown that these educators value their own practical professional skills and rely on their professional subject knowledge (Ramsburg & Childress, 2012; Salminen et al., 2013). Furthermore, previous research has stressed that social- and health care educators must maintain their skills through continuous education (Salminen et al., 2013). There is some evidence that educational institutions and healthcare settings in Europe differ in the competence requirements of educators (European Commission, 2020), with numerous reasons cited for why different countries and regions differ in the competence of social- and health care educators (Fowler et al., 2017; Koivula et al., 2011; McAllister & Flynn, 2016). Work experience from the health care sector and acting as an educator, along with the skills learned during postgraduate studies, project management and/or research work, have been linked to an educator's ability to effectively teach students (McAllister & Flynn, 2016). Koivula et al. (2011) also discussed how evidence-based practice can only be maintained if every educator proactively reads and shares the latest relevant research. In addition to following the latest research, educators can maintain their competence by participating in practical work, which can positively influence the educators' curriculum development work (Fowler et al., 2017; McAllister & Flynn, 2016; Salminen et al., 2013). It is also important to continuously gauge which areas of competence educators are not confident in, as educators have previously reported lacking pedagogical skills (Salminen et al., 2013) as well as the need to improve development work (Ramsburg & Childress, 2012), research and evidence-based practice (Koivula et al., 2011), integrating digital technology into education (Oprescu et al., 2017; Zlatanovic et al., 2017), the balance between education and administration work, and defending patient care in the political arena (Ramsburg & Childress, 2012). It has been reported that social, health and rehabilitative care students expect their educators to maintain and develop their professional skills, which is supported by findings that educators strongly influence student learning (Fowler et al., 2017). Improving and maintaining the competence of educators increases their confidence, which subsequently improves student learning experiences and enhances the quality of education (Fowler et al., 2017; Zlatanovic et al., 2017). Therefore, research on the competence of social, health and rehabilitative care educators is important.

For the purposes of this study, a social, health and rehabilitative care educator is defined as a professional qualified in at least one of the social- or health care professions defined by the World Health Organization (2013) and having completed 60 ECTS credits in pedagogical studies (University of Applied Sciences Act, 2014). These educators commonly work at universities, university of applied sciences or vocational colleges. In Finland, social, health and rehabilitative care educators' qualification is regulated by Government regulations and law in order to ensure high-quality professional education. Vocational education educators are required to have a minimum of master's degree with additional of 60 ECTS credits in pedagogical qualification and at least five years of working experience in the social, health and/or rehabilitative care field (Decree on

the Qualification Requirements for Teaching Staff, 1150/2017). Vocational education offers qualifications for young people without upper secondary qualification and adults in working life in, for example, community nursing of professional qualification to working life (MINEDU, 2020). At the University of Applied Sciences educators are required to have a minimum of a suitable master's degree and at least three years of working experience in the similar position (Government Decree on Polytechnics, 932/2014) and recommended to have 60 ECTS credits in pedagogical qualification. Universities of Applied Sciences offer qualifications suitable for working life and its development in multiple professional areas, including social, health and rehabilitative care professions, offering a bachelor's degree qualification (Government Decree on Polytechnics, 932/2014; University of Applied Sciences Act, 2014). Universities offer master's and doctoral degrees in health sciences education with the goal to produce experts in leadership, education, clinical expertise and health management. In Finland, health sciences' degree programmes at the universities offer master's degree of health sciences teacher degree education with the aim to provide highly competent educators profiled for the education of vocational or university of applied science education in social, health and rehabilitative care fields (Mikkonen, Koivula, et al., 2019a). Social, health and rehabilitation care educators are able to receive their 60 ECTS credit pedagogical qualification in health sciences education, in schools of professional teacher education, and educational sciences. The pedagogical qualifications among those three educational possibilities distinguish in connection of pedagogical competence development into one's own professional field and teaching practice, of which only master's degree in teacher education offers precise qualification relevant for social, health and rehabilitation care professions.

## Material and method

### Aims

The present study aimed to describe social, health and rehabilitative care educators' self-assessed competence according to distinct competence profiles, as well as examine which personal and professional characteristics influenced belonging to a certain profile. The research questions in this study were: (i) how do social, health and rehabilitative care educators perceive their level of competence in social and health care education?; and (ii) which personal and professional characteristics are related to social, health and rehabilitative educators' self-assessed competence in social- and health care education?

### Design

This study applied a quantitative secondary data analysis approach in that the research analyzed statistical data to make inferences about the studied phenomenon. Previously, the same data has been used to develop and test an empirical model explaining educators' competence areas and statistical relationships between those areas (Mikkonen et al., 2022). The data was collected by implementing a cross-sectional survey design. This research was part of the TerOpe project, funded by the Finnish Ministry of Education and Culture, which aims to develop national, and internationally comparable, competence requirements for social, health and rehabilitative care educators (Mikkonen, Koivula, et al., 2019a).

### Participants

A total of 2330 social, health and rehabilitative care educators from 21 universities of applied sciences and seven vocational colleges in Finland were invited to participate in the study. The inclusion criteria were: being a part- or full-time social, health or rehabilitative care educators and working at a university of applied sciences or vocational college. Professional experience was

not held as an inclusion criteria to participate. A total of 422 participants responded to the invitation.

### Instrument

This study applied the Health and Social Care Educators' Competence (HeSoEduCo) self-assessment instrument (Mikkonen et al., 2020), which covers eight sub-dimensions of competence and includes 43 items, more specifically: competence in evidence-based practice (8 items); competence in digital collaborative learning (5 items); competence in student-centred pedagogy (8 items); competence in collaboration and societal aspects (5 items); competence in leadership and management (6 items); competence in cultural and linguistic diversity (4 items); competence in mentoring students in professional development (4 items); and competence in subject and curriculum (3 items). Participants scored each item using a four-point Likert scale (1 = strongly disagree, 2 = partially disagree, 3 = partially agree, 4 = strongly agree). Based on the calculated Cronbach's alpha values, which ranged from 0.72 to 0.89, the instrument demonstrated sufficient reliability (Mikkonen et al., 2020).

### Data collection

Data were collected from social, health and rehabilitative care educators from 21 universities of applied sciences and seven vocational colleges that were randomly selected to provide an accurate geographical representation of the Finnish population. The data were collected during the autumn of 2018. The participants responded to an electronic questionnaire via Webpropol software which included certain background questions (i.e., age, gender, background in educator education, work organization, work experience, professional field and job description) along with the HeSoEduCo instrument. The educators received a link to the questionnaire via a contact person at each organization, with either three to four reminders to complete the questionnaire sent between two-week intervals.

### Data analysis

The data were analyzed using IBM SPSS software (V.25, IBM Corporation, Armonk, NY) by two researchers (KM, SPK). K-means cluster analysis was performed to identify three – A, B, C- educator competence profiles according to the eight sum-variables of HeSoEduCo self-assessment instrument. K-means clustering is a methodology of algorithm, which aims to collect cluster of participants with the nearest mean value, serving as a prototype of the cluster. Clustering methodology is rarely used in nursing science, but was found to be an effectful method to identify participant's clusters of competence levels (Männistö et al., 2020; Saukkoriipi et al., 2020). Four different cluster models, with cluster groups of five, four, three and two have been primarily tested with the cut-off held to be not less than 5% of a group representing a total sample. Three group model has been eventually chosen. The significance of differences between the educator competence profiles was determined using the Kruskal–Wallis test, and further analyzed by the Bonferroni post-hoc test by implementing Mann Whitney test. The significance of differences in background characteristics was analyzed using Chi-squared test and one-way analysis of variance (ANOVA). The threshold for statistical significance in all of the analyses was set at $p$-value < 0.05. The participating educators' levels of competence were interpreted according to the applied Likert scale, with a low level representing a score <2.49, an intermediate level representing a score between 2.5 and 3.49, and a strong level representing a score > 3.5.

### Ethical consideration

This study was conducted in compliance with the ethical principles of human research (Declaration of Helsinki, 2013). The social, health and rehabilitative care educators were informed that participation in the study was voluntary, and that their personal data would be anonymized and stored in a confidential manner. The participants had the right to withdraw from the study at any time during the research process. Responding to the electronic questionnaire was interpreted as informed consent to participate in the study (World Medical Association, 2013). No bioethical committee approval was required according to the local ethical regulations when the study was conducted, since the study used a questionnaire design. However, research authorizations to perform the research were obtained from the participating organizations accordingly (Data Protection Act, 1050/2018).

## Results

### Participants

The research material consisted of data from 422 social, health and rehabilitative care educators. The response rate in this study was 18%. Of the participants, 88, 260, and 32 served as educators in the fields of social care, health care, and rehabilitation, respectively, while 42 were educators in combined units. Most of the participants worked at universities of applied sciences ($n = 332$), with the rest employed at vocational colleges ($n = 90$). Of the total participants, 378 were women, 42 were men and two did not indicate their gender. The educators who participated in the study had an average age of 51 years (range 23–66) and an average of 14 years of experience as a teacher (range 0–45). There was noticeable variation in the education level of educators, yet most held either a Master's (71%) or doctoral (21%) degree.

The participating social, health and rehabilitative care educators were divided into three clusters, educator profiles A, B, and C (see Table 1). Profile A consisted of 183 educators, profile B consisted of 146 educators and profile C consisted of 93 educators. The identified educator profiles did not differ significantly with regards to characteristics such as age, gender, Finnish/Swedish national languages, level of education and educator's educational background, year of graduation, and field of teaching. However, the three educator profiles did differ significantly in terms of current work situation ($p < 0.001$), work organization ($p = 0.003$), educator experience ($p = 0.023$), work experience in corresponding field ($p = 0.003$), and all the aspects of education competence ($p < 0.001$).

### Educators' competence in social-, health care and rehabilitation education

The identified educator profiles (A, B, and C) differed significantly ($p < 0.001$) across all of the investigated competence areas between each group (see Table 1). Profile A educators' competence ranged from the lowest evaluated competence in cultural and linguistic diversity (mean 3.52) to the highest in the competence of student-centred pedagogy (mean 3.89). Profile B and C educators' competence ranged from the lowest evaluated competence in digital collaborative learning (B: mean 2.89; C: mean 2.42) to the highest competence in mentoring students in professional competence development (B: mean 3.71; C: mean 3.40). Overall, the participating social, health and rehabilitative care educators felt that they had good levels of competence. Educators belonging to profile A had the strongest competence (mean > 3.5) across all eight areas, while educators belonging to profiles B and C demonstrated intermediate competence (mean 2.5–3.49) in most competence areas. The educators belonging to profile B profile reported subject and curriculum competence (mean 3.58, SD 0.41), student professional development guidance competence (mean 3.71, SD 0.31) and student-centred pedagogical competence (mean 3.61, SD 0.25) to be their strongest areas of competence. These educators rated their competence in other areas – evidence-based

**Table 1.** Educator profiles ($n = 422$).

| Characteristics and competence | Profile A ($n = 183$) | Profile B ($n = 146$) | Profile C ($n = 93$) | p-value |
|---|---|---|---|---|
| Age in years, mean (SD)[1] | 51.98 (7.95) | 50.39 (8.99) | 49.52 (9.17) | 0.560[2] |
| Gender, % | | | | |
| Male | 9.3 | 9.6 | 11.8 | 0.546[3] |
| Female | 89.6 | 90.4 | 88.2 | |
| Languages, % | | | | |
| Finnish | 91.8 | 87.7 | 95.7 | 0.100[3] |
| Swedish | 8.2 | 12.3 | 4.3 | |
| Education, % | | | | |
| Vocational qualification | 0.0 | 0.7 | 0.0 | 0.167[3] |
| University (Bachelor's) degree | 1.1 | 0.0 | 2.2 | |
| University (Master's) degree | 72.7 | 83.6 | 80.7 | |
| University (Doctoral) degree | 26.2 | 15.8 | 17.2 | |
| Teacher training (pedagogical education), % | | | | |
| Vocational teacher training | 33.3 | 36.3 | 40.9 | 0.399[3] |
| Teacher training in health sciences | 55.7 | 54.8 | 44.1 | |
| Teacher training in educational sciences | 10.9 | 8.2 | 14.0 | |
| No teacher training | 0.0 | 0.7 | 1.1 | |
| Year of completion of highest degree, mean (SD) | 2005 (8.33) | 2006 (7.81) | 2006 (8.41) | 0.584[2] |
| Current teacher work field, % | | | | |
| Social services | 21.9 | 19.9 | 20.4 | 0.484[3] |
| Healthcare | 57.4 | 67.8 | 60.2 | |
| Rehabilitation | 7.1 | 7.5 | 8.6 | |
| Combination of social services, healthcare and/or rehabilitation | 13.6 | 4.8 | 10.9 | |
| Current employment, % | | | | |
| Part-time teacher | 1.6 | 3.4 | 7.5 | **<0.001**[3] |
| Full-time teacher | 10.4 | 17.8 | 32.2 | |
| Lecturer | 71.6 | 70.5 | 49.5 | |
| Principal lecturer | 13.7 | 5.5 | 9.7 | |
| Head of education | 2.7 | 2.1 | 1.1 | |
| Other | 0.0 | 0.7 | 0.0 | |
| Current work organization, % | | | | |
| Vocational college | 14.2 | 76.0 | 68.8 | **0.003**[3] |
| University of applied sciences | 85.8 | 24.0 | 31.2 | |
| Work experience as an educator, years, mean (SD) | 14.96 (8.56) | 13.37 (9.14) | 11.92 (8.82) | **0.023**[2] |
| Work experience in corresponding field, years, mean (SD) | 19.04 (10.02) | 16.24 (10.12) | 15.14 (9.16) | **0.003**[2] |
| I have the ability to do teamwork with my colleagues. | 3.95 (0.22) | 3.91 (0.29) | 3.67 (0.50) | **< 0.001**[4] |
| Participation in development work enhances my competence. | 3.81 (0.43) | 3.55 (0.64) | 3.26 (0.69) | **< 0.001**[4] |
| I know how to take the principles of sustainable development into account in my practice. | 3.55 (0.55) | 3.23 (0.66) | 2.86 (0.65) | **< 0.001**[4] |
| Competence in evidence-based practice | 3.74 (0.29) | 3.48 (0.38) | 3.17 (0.47) | **< 0.001**[4] |
| Competence in leadership and management | 3.68 (0.31) | 3.34 (0.37) | 2.99 (0.39) | **< 0.001**[4] |
| Competence in collaboration and societal | 3.59 (0.33) | 3.07 (0.41) | 2.70 (0.43) | **< 0.001**[4] |
| Competence in subject and curriculum | 3.86 (0.25) | 3.58 (0.41) | 3.19 (0.53) | **< 0.001**[4] |
| Competence in mentoring students in professional competence development | 3.88 (0.22) | 3.71 (0.31) | 3.40 (0.39) | **< 0.001**[4] |
| Competence in student-centred pedagogy | 3.89 (0.14) | 3.61 (0.25) | 3.26 (0.32) | **< 0.001**[4] |
| Competence in digital collaborative learning | 3.60 (0.34) | 2.89 (0.44) | 2.42 (0.54) | **< 0.001**[4] |
| Competence in cultural and linguistic diversity | 3.52 (0.44) | 3.24 (0.44) | 2.62 (0.47) | **< 0.001**[4] |

[1]M:mean (SD: standard deviation).
[2]oneway ANOVA test.
[3]Chi-Square.
[4]Kruskal-Wallis test, Mann Whitney test used for Bonferroni correction.
$p < 0.05$ (marked in bold).

practice competence (mean 3.48, SD 0.38), leadership and management competence (mean 3.34, SD 0.37), collaboration and societal competence (mean 3.07, SD 0.41), digital collaborative learning (mean 2.89, SD 0.44) and cultural and linguistic diversity competence (mean 3.24, SD 0.44) – as being at an intermediate level. Educators belonging to profile C reported intermediate competence

in seven of the eight investigated competence areas, and a low level of competence (mean <2.49) in competence in digital collaborative learning.

Across all three educator profiles, the majority (A-71.6%, B-70.5%, C-49.5%) of social, health and rehabilitative care educators worked as lecturers, with profile C showing the lowest share of lecturers. When compared to the other educator profiles, Profile C had the most part-time (7.5%) and full-time (32.2%) educators. Most of the educators working as head educators belonged to profile A. The majority (86%) of educators in profile A worked at a university of applied sciences, while the majority (B-76%, C-69%) of educators in profiles B and C worked at a vocational college ($p = 0.003$). Furthermore, the educator profiles differed significantly in terms of work experience in their own working field ($p = 0.023$) and work experience in the field corresponding to training ($p = 0.003$). The difference between groups A and C in terms of work experience in the field corresponding to training ($p = 0.006$) was more significant than the difference between groups A and B ($p = 0.033$). There were also differences between profiles ($p = 0.023$) in the average experience as educators, with the most significant difference observed between profiles A and C. Educators in profile A had worked as educators for an average of 15 years (SD 8.6), while the corresponding educator experience in profile C was 11.9 years (SD 8.8).

Additionally, educators were asked to evaluate their ability to do teamwork with their colleagues, to participate in development work enhancing their competence and know-how to take the principles of sustainable development into account in my practice. All three profile groups evaluated their ability to do teamwork with colleagues highly (mean > 3.50, $p < 0.001$), whereas participation in development work to enhance their competence was evaluated the lowest by Profile C (mean 3.26). Know-how to take the principles of sustainable development into educational practice was evaluated the lowest by Profile C (mean 2.86).

### *Sensitivity analysis*

Additionally, the differences between the current work organization (incl. vocational college and university of applied sciences) of the educators were further explored by comparing their competence levels (see Table 2). The competencies in evidence-based practice ($p < 0.001$), leadership and management ($p = 0.002$), student-centred pedagogy ($p = 0.002$), digital collaborative learning ($p < 0.001$), and cultural & linguistic diversity ($p = 0.024$) were significantly lower of vocational college educators.

## Discussion

The analyses presented in this study provided good clustering performance and identified three distinct educator profiles for the fields of social, health and rehabilitation services. The three educator

**Table 2.** Educators' competence areas according to their current work organization ($n = 422$).

| Competence areas | Vocational college educators ($n = 90$)[a] | University of applied sciences educators ($n = 332$)[a] | p-value[b] |
|---|---|---|---|
| Competence in evidence-based practice | 3.27 (0.46) | 3.59 (0.39) | **< 0.001** |
| Competence in leadership and management | 3.27 (0.48) | 3.45 (0.42) | **0.002** |
| Competence in collaboration and societal aspects | 3.18 (0.48) | 3.23 (0.53) | 0.299 |
| Competence in subject and curriculum | 3.60 (0.42) | 3.62 (0.47) | 0.335 |
| Competence in mentoring students in professional competence development | 3.78 (0.30) | 3.70 (0.36) | 0.110 |
| Competence in student-centred pedagogy | 3.58 (0.30) | 3.67 (0.34) | **0.002** |
| Competence in digital collaborative learning | 2.83 (0.69) | 3.16 (0.61) | **< 0.001** |
| Competence in cultural and linguistic diversity | 3.09 (0.62) | 3.26 (0.54) | **0.024** |

[a]*M*: mean (*SD*: standard deviation).
[b]Mann-Whiteny test.
$p < 0.05$ (marked in bold).
Likert scale 1–4.

profiles revealed important information about educators' self-assessments of their competence as well as the characteristics that can influence education competence. The first important finding was that social, health and rehabilitative care educators generally provided good self-assessments of the competences necessary for their role. The results of this study demonstrated that educators in each of the three identified profiles show an overall satisfactory level of social, health and rehabilitation care education competence. Profile A educators reported strong levels of competence in all of the investigated aspects of education competence, while profile B educators reported strong levels of subject and curriculum, mentoring students in professional development, and student-centred pedagogy competence. The only weak aspect of education competence identified was based on digital collaborative learning competence and competence in cultural and linguistic diversity, as profile C educators reported lacking adequate competence in this area. In previous studies, educators have reported deficiencies in several areas of education competence (Ramsburg & Childress, 2012; Salminen et al., 2013; Zlatanovic et al., 2017) while this study only found that some educators have a lack of expertise in matters related to digitalization. The need for digital competence among educators has been highlighted in several recent studies (Oprescu et al., 2017; Zlatanovic et al., 2017). Digital technologies are now strongly involved in the social- and health care sector, including teaching environments, so educators are expected to develop this aspect of their competence. To ensure high levels of digital competence among educators, a European Digital Competence Framework for Educators (DigCompEdu) has been developed. This framework consists of six different areas of expertise, including 22 distinct sections of competence, and describes the knowledge and skills which constitute a digitally-qualified educator (Redeckeriin, 2017). The European Digital Competence Framework for Educators can be used to support the development of educator competences and/or identify ways in which digital technology can improve education (Redeckeriin, 2017).

In additional questions, educators were asked relating to their ability to do teamwork with colleagues, of which each profile group evaluated their skills highly. In recent study conducted by Koskenranta et al. (2022), it was shown that educators find collegiality and mentoring an important aspect to carry their work successfully and find safety in the work. All of the educators in this study actively participated in development work; however, profile C educators evaluated their know-how to take the principles of sustainable development into account of their practice the lowest. Sustainability understanding and involvement in the daily work of an educator is an essential criterion for developing social and healthcare for a "better and more sustainable future for all", as stated in the Sustainable Development Goals of the United Nations (2015). We further suggest that sustainability needs to be imprinted and discussed at educational institutions, as well as educators need to have the skills to share those values with their students.

Recent years have provided extensive empirical evidence that an educator's competence is critical to their success in mentoring students, while Hyvärinen et al. (2017) reported how perceived satisfaction with professional competence and the opportunities to utilize this competence are related to an individual's work well-being. Oprescu et al. (2017) recently demonstrated that educators involved in social services, health care, and rehabilitation have a generally positive attitude towards professional development and continuous education, which suggests that they will proactively maintain their education competence, for example, by developing their digital skills.

Personal and professional characteristics that were found to significantly influence self-assessed competence included current employment, work organization and work experience both as an educator and in a field related to social, health and rehabilitation services. Educators belonging to profile A reported strong self-assessed competence in all of the eight investigated aspects of education competence. Educators belonging to profiles B and C provided intermediate scores to most areas of education self-assessed competence. Previous European studies have yielded similar results (Mikkonen et al., 2018; Ramsburg & Childress, 2012; Salminen et al., 2013). For example, both studies by Ramsburg and Childress (2012) – performed across nine western European countries – and Salminen et al. (2013) – which concentrated on Finnish nurse educators – reported

that health care educators value and trust their own competence and knowledge base. The present research also indicates that Finnish social, health and rehabilitative care educators are confident in their own expertise, as only one of the three educator profiles showed low average scores for a single area of competence – digital collaborative learning. Oprescu et al. (2017) found that Australian nursing educators are not satisfied with their expertise. This variation in the evaluation of competence – as seen in both the current study and previously published research – may reflect the multidisciplinary nature of education competence, as social, health and rehabilitative care educators must possess practical, organizational, and pedagogical competence.

The three educator profiles were found to differ significantly based on the current work of the educator. This may reflect that certain roles include a comprehensive description of the competence requirements within the job description (Mikkonen et al., 2018). In this study, social, health and rehabilitative care educators in profile A, in which most of the educators act as lecturers or head teachers, showed the strongest competence levels. A closer inspection of the collected data reveals that profile A has the highest share of educators with doctoral degrees, an academic qualification which Koivula et al. (2011) have found to be related to a more science-based teaching approach. Furthermore, this study found a positive relationship between working at a university of applied sciences – in comparison to a vocational college – and self-assessed competence across all of the investigated areas of education competence. This result is in line with what was reported by Hyvärinen et al. (2017), i.e., educators in universities of applied sciences and vocational education institutions differ in their competence strengths and weaknesses. It is important to take into account that the competence needs of educators may vary across different educational institutions. The competences of students taught at universities of applied sciences reflect level six competence and at vocational colleges level five defined in the European Qualifications Framework (EQF), which means that students pursuing higher levels of academic qualification, e.g., a doctoral degree, may require additional competences than the former students (European Commission, 2020). Thus, depending on their position and employer, educators with the same educational and professional background may perceive their competences and need for continuous development differently. It is essential to emphasize that vocational college educators require further support and continuous education to strengthen their professional profile and competence development. The results can be further explained that Finnish continuous education is regulated by the employers created possibilities rather than systematic continuous self-development and formal education.

The longest-serving social, health and rehabilitative care educators who worked as educators and in the field of education were highly represented in the group of educators with the strongest self-assessed competence (profile A). It should not be assumed that the educators who have worked for the longest will report the strongest self-evaluations of competence, as Koskimäki et al. (2021) found that experienced educators felt their competence in continuous education and further development to be lacking. Nevertheless, other studies have found working experience to positively impact educator competence (McAllister & Flynn, 2016; Ramsburg & Childress, 2012). In their research, Koivula et al. (2011) stated that work experience, among other things, is related to the utilization of research work in nursing teaching, which is one of the aspects of educator expertise. Evidence-based teaching is an essential relevance for social, health and rehabilitative care future professionals, for which reason educators need to have high competence. Evidence-based practice ensures the high quality of patient care and safe-organizational healthcare structures (Jordan et al., 2019).

### Strength and limitations of the study

The presented research represents a national study of the competence of Finnish social, health and rehabilitative care educators. The study included several inherent limitations that should be considered when reviewing and applying the study results. First, the study was part of a larger research project and thus presents one perspective on the material obtained. Nevertheless, it is important to state that the analysis was performed by two researchers separately and together, which reduces the

possibility of human error, and thus, increases the reliability of the study. The impartiality of the research process and results was also enhanced by the distant relationship between the participants and researchers.

The response rate in the present study was low (18%) and may have impacted the quality of the study. The response rate may have been influenced by, among other things, the busy working life of educators, the choice of using an electronic survey and the fact that employees at educational institutions are constantly exposed to various surveys. In addition, the response rate may have been affected by the length of the survey. However, the questionnaire was designed in such a way that it would be as easy as possible to answer, i.e., the respondent was provided with a limited choice of ready-made answer options. Any interpretation of the research results should also take into account that the respondents may have a particularly positive or negative attitude towards the research topic, which could be expected to show in their answers to the questionnaire. The collected data represent educators' self-assessments of their own competence, which could potentially bias the research results.

## Conclusion

The results indicate that Finnish social, health and rehabilitative care educators have generally positive perceptions of their education competence. However, the present study revealed certain aspects of education competence that need to be strengthened to ensure that the social, health and rehabilitative care educators can prepare students for their professional careers. Based on the research results, educators should pay special attention to their digital collaborative learning competence. This is because – in recent years – digital competence has become expected of educators working in the realm of social, health and rehabilitation services. Hence, social, health and rehabilitative care professionals who are planning to work as educators should be assessed for their digital competence. In work-related learning environments – such as hospitals – networking and collaboration are crucial to maintaining and developing the digital competence of social, health and rehabilitative care educators.

Assessments of educator competence should consider diverse work experience and interests as positive aspects which support education expertise. This is because long, diverse work experience in education contains valuable tacit knowledge which can be crucial to enhancing students' learning outcomes and helping mentor younger, less experienced educators. The results of this study suggest that each educational institution should specifically consider which competences educators need to help students transition to their professional roles. The institutions should also consider how to support educators in maintaining these competence through continuous education. Students at universities of applied sciences and vocational colleges are trained in all of the competences that will be required in working life, which inevitably affects the competence needs of educators. The evaluation of educator competence should include the diverse skills involved in training students to ensure that education competence is adequately measured. Furthermore, it is the responsibility of the educational institution to determine which competences are most relevant to the job description of employed educators. Vocational college educators need more support in continuous education and competence development.

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## Disclosure statement

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