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Author(s): Karsikas, Eevi; Meriläinen, Merja; Koivunen, Kirsi; Kanste, Outi

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Health and social care managers' self-assessed competence in knowledge management: A descriptive cross-sectional study

Eevi Karsikas^{1,2}  | Merja Meriläinen²  | Kirsi Koivunen³  | Outi Kanste^{1,2} 

¹Research Unit of Health Sciences and Technology, University of Oulu, Oulu, Finland

²MRC Oulu, Oulu University Hospital, University of Oulu, Oulu, Finland

³Oulu University of Applied Sciences, Oulu, Finland

Correspondence

Eevi Karsikas, Research Unit of Health Sciences and Technology, University of Oulu, Oulu, Finland.

Email: eevi.karsikas@student.oulu.fi; eevi.karsikas@pohde.fi

Abstract

Aim: To describe health and social care managers' self-assessed competence in knowledge management and the factors associated with management competence.

Background: It has been shown that the performance of an organization is as good as the competence of its managers, so health and social care managers' competence in knowledge management should be assessed to improve organizational performance.

Design: A descriptive cross-sectional design.

Methods: A total of 116 managers participated from six Finnish public health and social care organizations. The data were collected in February and August 2022 using the managers' competence in knowledge management (MCKM) instrument and analysed using descriptive statistical methods.

Results: Health and social care managers rated their self-reported total competence in knowledge management as good. Among the dimensions of knowledge management competence, managing a culture of competence received the highest rating, while planning competence development and cooperation was perceived as the weakest dimension. The results indicate that background factors such as the healthcare setting, the number of units managed and the number of direct staff had a statistically significant association with the health and social care managers' self-assessed competence in planning competence development and cooperation.

Conclusion: Even though the health and social care managers' total self-assessed competence level in knowledge management was rated as good, the results underscore the significance of continuous competence development among these managers in all dimensions of knowledge management.

Impact: By enhancing and clarifying managers' tasks and competence in knowledge management, managers can increase staff retention, attractiveness and work well-being.

Implications: The results can be utilized to identify managers' strengths and weaknesses in knowledge management and, thus, effectively target their limited competence development resources.

Reporting Method: The STrengthening the Reporting of OBservational studies in Epidemiology (STROBE) checklist.

Patient or Public Contribution: There is no patient or public contribution.

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KEYWORDS

health and social care, knowledge management, manager, self-assessed competence

1 | INTRODUCTION

Efficient and systematic knowledge management (KM) is crucial for health and social care organizations to maintain their competitiveness and adapt to changing environments (Karamitri et al., 2015; Lunden et al., 2019). Proficiency in KM is therefore a vital competence that health and social care managers need to possess to successfully manage organizations. While there has been extensive research on managers' competence in general management (Miltner et al., 2015; Warshawsky & Cramer, 2019), there is a scarcity of evidence specifically addressing managers' competence in KM (Karsikas et al., 2022; Lunden et al., 2017). The knowledge gap is particularly noticeable in the context of managing nursing (Lunden et al., 2021). This study aims to describe health and social care managers' self-assessed competence in KM and the factors associated with management competence.

2 | BACKGROUND

The concept of KM is not well established, and its meaning is influenced by the study area in which it is applied (Dulipovici & Baskerville, 2015; Evans et al., 2015). In health and social care, KM is described as a process that includes anticipating, defining, sharing, transferring, diffusing, exchanging, developing, creating and generating knowledge (Karamitri et al., 2015; Lunden et al., 2019). It is often thought to be synonymous with or constitutive of human resource management (Sibbald et al., 2016). KM is closely tied to fostering an organizational culture that promotes learning, information sharing, active engagement, empowerment and collaborative learning (Andreasson et al., 2016; Lunden et al., 2017), with teams supporting each other (Erjavec & Starc, 2017). The definition of competence is also complex, but in this study, health and social care manager competence refers to the knowledge, skills, abilities and attitudes that are essential for managers to effectively perform their roles and responsibilities within health and social care settings (Kantanen et al., 2015; Pihlainen et al., 2016).

Effective implementation of KM in an organization requires that managers possess a diverse set of competences, including system management competence, professional development competence and the appropriate leadership behaviour and attitude. Additionally, they should have a deep understanding of the organizational culture that supports learning (Karsikas et al., 2022) and its importance in enabling the professional development of staff (Rahimghaee et al., 2010). This understanding enables managers to create an environment where knowledge is valued, encouraged and shared across a range of collaborations (Karamitri et al., 2020; Lunden et al., 2021). Moreover, managers should possess the ability to act as facilitators and organizers and foster collaboration and teamwork among employees from diverse backgrounds (Al

Saifi et al., 2016). They should have competence in the use of reward measures that align with the organization's practices, effectively incentivizing the professional growth of staff members (Alfuqaha et al., 2020; Karamitri et al., 2015).

There are various dimensions of KM, each of which requires different competence from health and social care managers. One of these dimensions involves the ability to anticipate and define competence, where managers must foresee both short- and long-term competence requirements, innovate, improve services and act as visionary leaders (Lunden et al., 2021; Miltner et al., 2015). Additionally, it necessitates managers to define competence possessed by their staff, potentially utilizing tools like competence maps (Lunden et al., 2019). The second dimension pertains to planning competence development and cooperation, which entails strategic, long-term planning for KM within the organization. Managers should align KM strategies with the organization's goals and foster cooperation, necessitating the establishment of internal and external networks (Karamitri et al., 2015; Sibbald et al., 2016). The third dimension focuses on competence development, requiring managers to select and apply various models and methods—such as job rotation, coaching and mentoring—to develop staff competence (Alfuqaha et al., 2020; Karsikas et al., 2022). The fourth dimension involves competence assessment, where managers extensively evaluate organizational competence. Effective evaluation enables the identification of strengths and weaknesses in the nursing team's competence, facilitating targeted development and performance improvement (Lunden et al., 2021). The fifth dimension is managing a culture of competence, whereby managers must promote and cultivate a learning-oriented culture within the organization (Lunden et al., 2021). Together, these dimensions constitute the total competence of managers in KM.

Previous research has demonstrated interesting insights into descriptions of managerial competence and its influencing factors. One noteworthy finding is that managers working in private hospitals tend to perceive themselves as significantly more competent in management than their counterparts in public hospitals (Kalhor et al., 2016). Another interesting observation relates to the perceived competence of nurse executives compared to head nurses. Nurse executives reportedly view themselves as significantly more managerially competent (Kang et al., 2012). Moreover, investigations into the managerial abilities of individuals in different positions have revealed intriguing trends. Strategic managers rate themselves as more competent in critical areas such as continuing education, career development and mentoring/coaching principles compared to middle and operational managers (Okonkwo et al., 2020). It is also important to highlight staff perceptions of their managers' competence in KM. Lunden et al. (2021) found that more than half of nurses perceived that their managers frequently demonstrated appreciation for their competence, supported their development and encouraged them to experiment with new approaches. Furthermore, nearly half of the nurses observed that their managers fostered a culture that promotes competence within the organization.

Although the effect of managers' competence regarding organizational performance has been established in previous studies, there is still a dearth of research on managers' competence in KM. A majority of KM studies have focused primarily on examining KM at the organizational level (Karamitri et al., 2015) rather than investigating the specific KM competences of managers (Lunden et al., 2021). Thus, the purpose of this study is to bridge this gap by investigating health and social care managers' self-assessed competence level in KM. Additionally, the study aims to identify the factors associated with these managers' management competence in KM. This research has the potential to generate valuable insights into the current state of KM competence levels among managers in health and social care, identify areas for improvement and develop various strategies to enhance health and social care managers' competence in KM.

3 | THE STUDY

3.1 | Aim

This research aims to describe health and social care managers' self-assessed competence in KM and the factors associated with management competence.

The research questions were as follows:

1. How do health and social care managers assess their self-reported competence levels in five dimensions of KM?
2. What background variables are associated with health and social care managers' competence in knowledge management (MCKM)?

4 | METHODS

4.1 | Design

This study employed a descriptive cross-sectional design (Polit & Beck, 2017). The reporting of the study followed the STrengthening the Reporting of OBServational studies in Epidemiology (STROBE) checklist (von Elm et al., 2008).

4.2 | The MCKM instrument

The MCKM instrument, developed and validated by research group, was utilized in the self-assessment of managers' competence in KM. It comprises 43 questions covering five dimensions of KM, with the number of items per dimension varying between three and 16 (Table 1). The managers assessed their competence using a five-point Likert scale (1=poor, 2=fair, 3=good, 4=very good and 5=excellent), with a higher total score on the instrument indicating a higher level of competence in KM. Each of the five KM dimensions of the instrument and total KM competence were represented as sum variables, which were computed by adding the scores of the items

within each dimension and then dividing the total by the number of items in that dimension. Dimensions Cronbach's α values variable range .913–.966. Table 1 shows a detailed description of the MCKM instrument.

In addition to the competence assessment, the survey included nine questions about the background variables of the respondents: gender, age, highest education level, working experience in a health and social care management position, employment status, area of work, health-care setting, number of units managed and number of direct staff.

4.3 | Participants

The data were collected from six public health and social care organizations in Finland: one public university hospital offering specialized medical care, two public primary health and social care organizations, and three hospital districts whose entities provide a combination of public specialized medical care in central hospitals and public primary health and social care. The Finnish health and social care system is grounded in public healthcare services accessible to all residents of the country. Within this system, a diverse array of professionals from various fields are employed. However, it is notable that nurses constitute the largest professional group within these services (EU-healthcare.fi, 2023).

Convenience sampling was used to select the organizations (Polit & Beck, 2017). The inclusion criteria were managers of all levels (first-line, middle, and top management) responsible for managing social, health and rehabilitation units or organizations. Managers in information management, technical services, logistics and environmental health care were excluded.

4.4 | Data collection

The data were collected electronically using Webropol software for its resource efficiency, although it is known that online surveys still produced lower response rates than other methods (Daikeler et al., 2020). In February 2022, the designated contact person of the organizations sent an email to all 235 eligible managers working in one public university hospital and two public primary health and social care organizations. The initial response rate was low, with only 42 managers (18%) responding in the first round of invitations. To increase the sample size, the data collection was extended to August 2022 to include an additional three public hospital districts. In the second round, 74 (18%) of the 414 eligible managers contacted responded.

Overall, the survey achieved a response rate of 18% ($N=649$, $n=116$). The data collection period lasted 4 weeks, during which time the managers were given access to the anonymous survey. A reminder email was sent after 2 weeks to encourage participation. The decision to use an online survey was driven by cost-effectiveness and potential efficiency compared to paper surveys (McMaster et al., 2017; see Figure 1).

TABLE 1 Description of the managers' competence in knowledge management (KM) instrument: dimension, number of items, Cronbach's α and description of the dimension.

Dimension	Number of items	Cronbach's α	Description of the dimension
Anticipating and defining competence	8	.921	The manager's competence determines the future competence needs of the staff and anticipates development needs. The competence to determine the core competence, deep competence and supplementary competence of the personnel. Identifies the tacit knowledge and missing competence of the personnel
Planning competence development and cooperation	16	.913	The managers' competence to plan competence development in a strategy-oriented manner and utilize forecasting information. The competence to draw up a development plan and choose development methods and focus areas, use digital solutions in planning competence development and utilize cooperation in all phases of KM
Developing competence	8	.966	The managers' competence to utilize competence development methods, guidance methods, cooperation, expanding work and responsibility tasks, study and training, existing competence of personnel, tacit knowledge in competence development, and recruitment of personnel ensuring the unit's competence
Assessing competence	3	.936	The manager's competence to assess the factors that promote and hinder the development of the staff competence, as well as the commitment of the personnel to the development of the competence
Managing a culture of competence	8	.935	Managers' competence to support staff's professional growth, staff information sharing and open communication. The competence to motivate to participate in training, inspires to try new methods for skill development, promotes the introduction of good and operating methods. The competence to give constructive feedback and reward personnel
KM total competence	43		

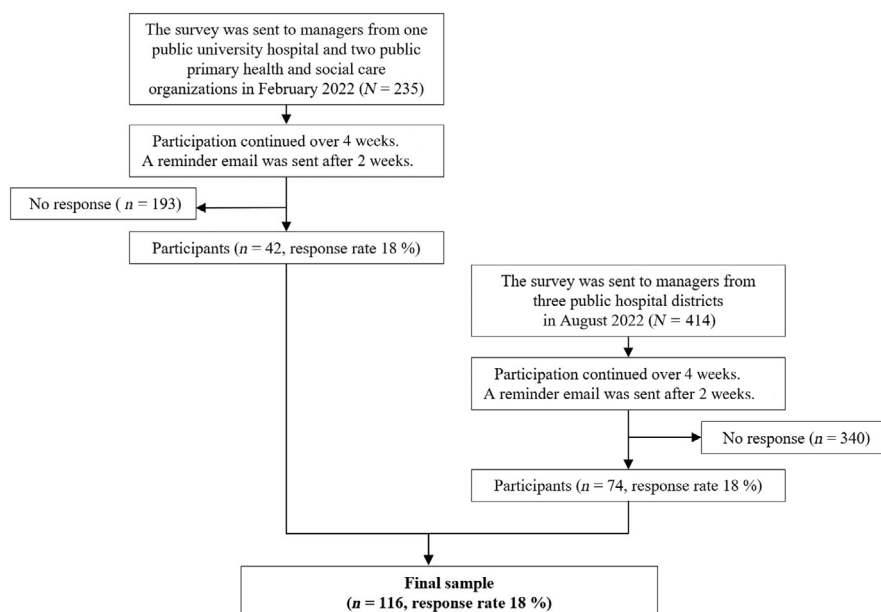


FIGURE 1 Data collection.

4.5 | Data analysis

The data were analysed using descriptive statistical methods. The health and social care managers' KM competence level was described using medians and ranges and means and standard deviations. Additionally, the variables measuring the managers'

KM competence were recoded into a three-category variable. This was achieved by combining classes 1 (poor) and 2 (fair) and 4 (good) and 5 (excellent). As a result, a new three-point variable was created (fair = 1–2.499, good = 2.5–3.499, very good = 3.5–5) and used for the analysis. The results were presented using percentages and frequencies.

The association between the variables was examined using the nonparametric Mann–Whitney and Kruskal–Wallis tests due to the skewness of the distributions. The results display the means, ranges and *p*-values. A *p*-value of <.05 was considered statistically significant. The data were analysed using IBM SPSS Statistics 27. No missing data were identified in this study.

4.6 | Ethical considerations

The study was conducted following the guidelines of the Finnish National Board on Research Integrity (TENK, 2021). Permission to conduct the research was obtained from all participating organizations. The study did not require ethics committee approval under Finnish legislation, legislation, as it did not involve minors, direct or indirect physical or physiological harm to the participants, or clinical trials (Medical Research Act 488/1999, 1999). Additionally, the use of the MCKM instrument did not require permission, as it had previously been developed by the research group. The study participants were informed about the study through email and were assured that participation was voluntary. By completing the questionnaires, the participants were considered to have provided consent. The questionnaire did not collect personally identifiable information, and all data were securely stored and accessible only to the researchers. Furthermore, in reporting the results, individual respondents were not identifiable, as per the TENK (2021) guidelines. European Union data protection legislation, such as the General Data Protection Regulation 2016/679, was adhered to in the collection and processing of personal data (GDPR, 2018).

5 | RESULTS

5.1 | Characteristics of managers

Table 3 shows that most of the participants (83.5%) were female. The mean age of the managers was 50.21 years, ranging from 31 to 65 years. Most managers worked full-time in their managerial

positions (89.7%), with over three-fourths of them in health care (76.4%). More than half of them had two or more unit to manage.

5.2 | Health and social care managers' self-assessed competence in KM

Table 2 shows that the health and social care managers' total self-assessed competence level in KM was reported as "good," with a median of 3.029 and a range of 3.80. Among the different dimensions of KM competence, planning competence and cooperation received the lowest rating, with a median of 2.719 and a range of 3.63. In this specific dimension, 38.8% of the managers felt that their competence level was "fair," 42.2% "good" and 19.9% "very good." Conversely, the highest dimension of KM competence was managing a culture of competence, with a median of 3.188 and a range of 4.00. In this dimension, the competence level was perceived as "good" or "very good" by 90.5% of the managers, with 9.5% considering it "fair."

5.3 | The association between the background variables and MCKM

The healthcare setting, the number of units managed and the number of direct staff showed statistically significant differences in the managers' competence in planning competence development and cooperation. The managers from public specialized medical care, such as university hospitals, demonstrated higher competence compared to those in public primary health and social care settings, such as health clinics (*p* = .036). Additionally, managers responsible for three or more units exhibited higher competence compared to those managing only one or two units (*p* = .035). Those with 50 or fewer direct staff demonstrated weaker competence in planning competence development and cooperation compared to those with over 50 direct staff (*p* = .028). No statistically significant associations were found between the other background variables and the dimensions of KM or total KM competence (see Table 2).

TABLE 2 Health and social care managers' self-assessed competence level in five dimensions of knowledge management (KM).

Dimension	N	Median (range)	Mean (SD)	Fair ^a % (n)	Good ^b % (n)	Very good ^c % (n)
Anticipating and defining competence	116	2.875 (3.88)	2.994 (.706)	24.1 (28)	44.8 (52)	31.1 (36)
Planning competence development and cooperation	116	2.719 (3.63)	2.745 (.783)	38.8 (45)	42.2 (49)	19.0 (22)
Developing competence	116	3.125 (4.00)	3.129 (.754)	14.7 (17)	47.4 (55)	37.9 (44)
Assessing competence	116	3.000 (4.00)	2.799 (.746)	30.2 (35)	54.3 (63)	15.5 (18)
Managing a culture of competence	116	3.188 (4.00)	3.234 (.703)	9.5 (11)	56.0 (65)	34.5 (40)
KM total competence	116	3.029 (3.80)	2.980 (.643)	24.1 (28)	54.3 (63)	21.6 (25)

^aFair = 1–2.499.

^bGood = 2.5–3.499.

^cVery good = 3.5–5.

TABLE 3 The relationships between background variables and managers' competence in knowledge management (KM).

Background variables	%	n	Anticipating and defining competence		Planning competence development and cooperation		Developing competence		Assessing competence		Managing a culture of competence		KM's total competence	
			Median (range)	p	Median (range)	p	Median (range)	p	Median (range)	p	Median (range)	p	Median (range)	p
Gender														
Female	83.5	96	2.875 (3.88)		2.781 (3.63)		3.125 (4.00)		3.000 (4.00)		3.186 (4.00)		3.044 (3.80)	
Male	16.5	19	3.000 (1.88)	.444 ^a	2.625 (2.38)	.624 ^a	3.000 (2.25)	.961 ^a	3.000 (2.00)	.610 ^a	3.250 (2.75)	.528 ^a	3.033 (1.89)	.740 ^a
Age (years)														
<40	13.8	16	2.938 (1.75)		2.594 (2.75)		3.063 (2.13)		3.000 (2.67)		3.125 (2.00)		2.898 (1.89)	
40-49	33.6	39	2.875 (2.88)		2.813 (2.75)		3.00 (3.50)		3.000 (3.00)		3.250 (3.75)		3.000 (2.79)	
50-59	32.8	38	3.00 (2.28)		2.719 (3.00)		3.125 (2.50)		2.833 (3.00)		3.250 (3.00)		3.067 (2.33)	
≥60	19.8	23	2.875 (2.88)	.772 ^b	2.875 (3.63)	.819 ^b	3.375 (3.88)	.925 ^b	3.000 (4.00)	.686 ^b	2.875 (3.00)	.394 ^b	3.100 (3.63)	.854 ^b
Highest degree														
Master's degree or higher	64.7	75	3.000 (2.63)		2.813 (3.62)		3.00 (4.00)		3.000 (4.00)		3.250 (2.50)		3.100 (2.26)	
Bachelor's degree or lower	35.3	41	2.875 (3.88)	.137 ^a	2.563 (3.25)	.915 ^a	3.250 (2.25)	.553 ^a	3.000 (3.00)	.175 ^a	3.125 (4.00)	.837 ^a	2.950 (3.80)	.499 ^a
Working experience in health and social care management position (years)														
<5	26.0	22.4	2.688 (2.25)		2.563 (2.38)		2.938 (2.75)		3.000 (3.00)		3.125 (2.75)		2794 (2.08)	
5-10	31.0	26.7	3.000 (2.88)		2.938 (3.31)		3.375 (3.25)		3.000 (3.00)		3.125 (3.75)		3.188 (2.79)	
10-19	40.0	34.5	2.875 (3.88)		2.816 (3.63)		3.188 (8.88)		3.000 (4.00)		3.250 (2.88)		3.081 (3.63)	
≥20	19.0	16.4	2.750 (2.13)	.130 ^b	2.750 (2.88)	.488 ^b	3.000 (2.13)	.520 ^b	3.000 (2.00)	.749 ^b	3.000 (2.75)	.686 ^b	3.013 (2.01)	.453 ^b
Employment status														
Full time	89.7	104	2.875 (3.88)		2.781 (3.63)		3.125 (4.00)		3.000 (4.00)		3.250 (4.00)		3.029 (3.80)	
Part time	10.3	12	3.188 (1.88)	.859 ^a	2.531 (2.56)	.237 ^a	2.938 (1.88)	.243 ^a	3.000 (2.00)	.503 ^a	3.000 (1.63)	.405 ^a	2.904 (1.55)	.397 ^a
Area of work														
Health care	76.4	81	2.875 (3.38)		2.688 (3.63)		3.125 (4.00)		3.000 (4.00)		3.125 (4.00)		3.013 (3.80)	
Social care	23.6	25	3.000 (2.88)	.679 ^a	2.875 (2.88)	.456 ^a	3.375 (3.13)	.674 ^a	3.00 (3.00)	.248 ^a	3.000 (2.38)	.768 ^a	3.125 (2.53)	.473 ^a
Healthcare setting														
Public specialized medical care (e.g. university hospital, central hospital)	52.9	55	3.000 (2.38)		2.938 (3.31)		3.125 (3.25)		3.000 (3.00)		3.125 (3.88)		3.033 (2.95)	
Public primary health and social care (e.g. health clinic, home care)	47.1	49	2.875 (3.28)	.725 ^a	2.438 (3.44)	.036 ^a	3.000 (3.88)	.688 ^a	3.000 (4.00)	.730 ^a	3.250 (3.13)	.414 ^a	3.013 (3.31)	.643 ^a

TABLE 3 (Continued)

Background variables	%	n	Anticipating and defining competence		Planning competence development and cooperation		Developing competence		Assessing competence		Managing a culture of competence		KM's total competence	
			Median (range)	p	Median (range)	p	Median (range)	p	Median (range)	p	Median (range)	p	Median (range)	p
Number of units to be managed														
≤1	44.8	52	2.875 (2.38)		2.625 (3.19)		3.188 (3.25)		2.833 (3.00)		3.000 (3.88)		3.123 (2.95)	
2	34.5	40	2.875 (3.38)		2.594 (3.56)		2.938 (3.39)		3.000 (4.00)		3.250 (3.00)		2.879 (3.21)	
≥3	20.7	24	3.063 (3.63)	.686 ^b	3.094 (3.31)	.035 ^b	3.375 (3.38)	.299 ^b	3.000 (3.00)	.386 ^b	3.188 (2.13)	.375 ^b	3.250 (2.83)	.232 ^b
Number of direct staff														
≤50	66.4	77	2.875 (3.38)		2.563 (3.63)		3.000 (4.00)		3.000 (4.00)		3.250 (4.00)		3.000 (3.80)	
>50	33.6	39	3.000 (3.63)	.817 ^a	3.000 (3.31)	.028 ^a	3.375 (3.38)	.508 ^a	3.000 (3.00)	.725 ^a	3.125 (2.38)	.749 ^a	3.075 (2.83)	.447 ^a

Note: Bold values denote statistical significance at the $p < .05$ level.

^aMann-Whitney U test.

^bKruskal-Wallis test.

6 | DISCUSSION

Health and social care managers play a crucial task in establishing a conducive work environment that fosters learning and competence while harnessing the full potential of all staff members to improve organizational performance. This study produced information about these managers' self-assessed competence in five KM dimensions and identified the background variables associated with managerial competence. The study also helped highlight the potential competence gaps in KM among the manager in nursing and healthcare.

The results of this study showed that three-fourths of the managers assessed their competence in anticipating and defining short- and long-term competence requirements as good or very good. This result contradicts previous findings where nurse managers' competence anticipating was identified as one of the weakest management dimensions in KM (Lunden et al., 2021). One explanation for this difference could be a shift in management culture. There has been a realization that the temporal focus of management should be more on proactive activities than reactive activities (Madsen et al., 2016). Additionally, the emphasis on long-term visionary management and support for service renewal (Lunden et al., 2019) might have gained more attention in recent times. Therefore, managers' competence in this dimension has also developed to meet more needs.

The study respondents identified the planning of competence development and cooperation as the weakest dimension of KM. According to Andreasson et al. (2016), this weak assessment can be influenced by the challenges faced by managers in teamwork and organizational development, especially with doctors. The investigation revealed how managers struggled to actively engage physicians in cooperation and encountered resistance to new ideas. Additionally, the current state of low morale in hospitals potentially points to a barrier to open cooperation, resulting in information being accessible only to a few, where "legacy" often comes with little procedural explanation (Sibbald et al., 2016). Furthermore, the time-consuming nature of planning competence development likely contributed to the managers' competence weaknesses (Madsen et al., 2016). Responding to these challenges is crucial to promoting managers' abilities in planning competence development and fostering cooperation.

The managers' competence in competence development also had an impact on the implementation of total KM in their organization. It is noteworthy that a significant number of the health and social care managers (85%) in our research assessed themselves at a good or very good level in developing competence, which indicates a good level of competence in using different methods to enhance staff competence. Despite the lack of research on managers' ability to use various competence development methods, research has shown the positive impact of certain methods on staff competence improvement. For instance, Al Saifi et al. (2016) found that managers' effective implementation of job rotation can foster knowledge sharing among employees and broaden their perspectives. Similarly, Lunden et al. (2017) highlighted the benefits of using mentoring and role-modelling as a method to improve nursing staff competence development. A combination of these methods and potentially others can create a robust

approach to staff competence development. However, organizations need to ensure that managers have the necessary resources and competence to effectively implement their methods.

According to our results, one-third of the managers reported only a fair assessment of their competence, although Lunden et al. (2019) previously revealed that in the context of daily KM, the key task of nurse managers is to be verifiers of minimum competence in organizations. This competence gap has also been supported by Lunden et al. (2021), who observed that nearly 40% of nurses occasionally and over 10% often felt that they performed tasks for which their competence was insufficient. These findings indicate that there might be a disconnect between managers' self-assessment of their competence and the actual experiences of their staff. However, in our study, more than half of the managers rated their competence in assessing competence at a good level, indicating the potential tendency to overestimate their competence. It is known that nursing personnel do critically assess their managers' competence (Seljak & Kvas, 2015). In any case, it appears that a person's competence cannot be reliably assessed solely from their self-assessments. Therefore, the development of additional methods beyond self-assessment is necessary to obtain more trustworthy information about managers' competence in KM.

The managers' highest competence self-rating was in the dimension of managing a culture of competence. It is gratifying to observe that the managers positively evaluated their competence in this area. As previously observed, when managers use a supportive or coaching leadership model, they can better support and reinforce staff to be active, empowered and engaged in organizational development (Andreasson et al., 2016). Additionally, it has been shown that managers' support, encouragement and constructive criticism can lead staff to provide better care and be more precise in their jobs (Rahimghaee et al., 2010). Therefore, all managers should recognize their task in creating a sustainable KM culture (Karamitri et al., 2020). By nurturing a culture of learning and competence, managers can ensure that their staff remain competitive and equipped to tackle future challenges.

In terms of total KM competence, the results of this study do not correspond to previous findings on managers' competence. Here, the managers' self-assessed total KM competence was found to be at a good level. Conversely, previous studies on managers' self-assessed general competence did not reach a satisfactory level (Okonkwo et al., 2020; Pihlainen et al., 2016). It is difficult to explain why the observed total KM competence was higher than the managers' self-assessed management competence. Despite the contradictory nature of the previous results, valuable insights can be extracted from them regarding the factors influencing the development of managers' competence. Previous research has indicated that the lack of training (Pihlainen et al., 2016) and time (Miltner et al., 2015) poses challenges for management in health and social care organizations. Additionally, it appears to be an accepted practice to entrust middle management responsibilities to clinicians rather than recruiting new managers (Pratici et al., 2023). Therefore, it can be argued that dedicating more time to the development of management competence, providing additional

training opportunities for managers and recruiting additional managers might also increase managers' competence in KM.

Three background variables—the healthcare setting, the number of subordinates and the number of units managed—demonstrated a statistically significant association with the KM dimension of planning competence development and cooperation. This result is not surprising. For example, managers responsible for three or more units tend to perceive themselves as more competent than those responsible for only one unit, possibly due to their higher status and confidence in their competence. These findings align with previous reports on the relationship between different background variables and managers' competence. For instance, Erjavec and Starc (2017) found statistically significant associations between healthcare organizations, management level, sector and management competence, while no significant associations were found with human resource variables. Kalhor et al. (2016) and Warshawsky and Cramer (2019) revealed an association between managers' competence scores and managerial experience. Additionally, Kang et al. (2012) examined the association between competence and managers' position and found that position affected competence. Therefore, while background variables may not exhibit a significant association with managers' competence in KM in this study, it is likely that they did exert an impact on managers' competence.

6.1 | Limitations

Some study limitations need to be acknowledged. First, the use of convenience sampling to select organizations may impact the generalizability of the results. Employing random sampling might have improved generalizability (Polit & Beck, 2017). Second, the data collection period in 2022 coincided with staff strikes in Finnish public health and social care organizations, which may have led to increased workload and busyness among the managers. This could have impacted their ability to participate in the survey and potentially affected the response rate (18%), which may have limited the generalizability of the findings. Third, the results were based on subjective self-assessments of KM competence, which are more susceptible to influences such as bias, emotional decisions and personal preferences than objective measures. Self-assessment requires managers to be able to evaluate their objective measures critically and honestly. Thus, managers' assessment is always a personal and individual view of their competence level. Fourth, self-reported answers may be influenced by social desirability bias, where managers might have a tendency to underreport socially undesirable attitudes and behaviours while overreporting more desirable attributes (Latkin et al., 2017). Fifth, the managers who chose to participate in the study could have been more interested in KM than their non-participating peers, and we lack information about the non-respondents. Sixth, the study focused on Finnish managers from public health and social care, which restricted its geographic and cultural scope.

6.2 | Further research

In the future, it would be beneficial to conduct a more extensive examination of KM involving a diverse sample of managers from different organization, countries, and health and social care systems and sectors, including the private sector. More research is needed to explore the state of managers' KM competence, for example, by having managers' KM competence assessed by their colleagues or staff. This type of multi-person assessment could provide a richer, more comprehensive and objective assessment of the state of managers' KM competence in the organization. It would also be important to gather qualitative feedback from health and social care staff regarding their experiences with managers' competence in KM in different healthcare environments. Moreover, it would be valuable to investigate the effects of implementing the MCKM instrument on the development of managers' competence in KM and its broader organizational impact. In addition, comprehensive studies are needed to understand how KM relates to other managerial competences, as nurse managers' activities in KM remain relatively unknown (Lunden et al., 2019). One contributing factor to this lack of understanding is the often narrow approach taken in KM (Karamitri et al., 2015; Sibbald et al., 2016).

7 | CONCLUSION

In conclusion, health and social care managers demonstrate a good level of self-assessed competence in KM. According to the managers' assessment, their weakest KM competence dimension was planning competence development and cooperation, while the strongest was managing a culture of competence. These findings underscore the need to improve the development of planning competence and cooperation among health and social care managers, including nurse managers. According to the results, some background variables (e.g. the healthcare setting, number of units managed and number of direct staff) were significantly associated with managers' competence levels in planning competence development and cooperation.

7.1 | Implications for practice

It is essential to recognize that KM and managers' competence in KM are critical factors in ensuring an adequate availability of nursing staff in the social and health sector, particularly in challenging situations such as a pandemic. Identifying these factors, it enables health and social care organizations to leverage their managers' existing capabilities in KM and effectively allocate limited resources for competence development to improve KM dimensions. For instance, nurse managers play a central role in anticipating and effectively responding to the needs of nursing staff. Consequently, this study has shed light on a competence gap

among managers that necessitates attention from organizations. Moreover, there is a pressing need to allocate more resources and effort towards developing planning and collaboration competencies for managers within the organization. The results of this study can be utilized for education planning by managers and in the recruitment of health and social care managers. Furthermore, they can serve as a foundation for further research in the field of KM in nursing and healthcare.

AUTHOR CONTRIBUTIONS

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

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Data not shared outside of research group.

ORCID

Eevi Karsikas  <https://orcid.org/0000-0002-1558-6441>

Merja Meriläinen  <https://orcid.org/0000-0003-4758-4771>

Kirsi Koivunen  <https://orcid.org/0000-0002-4399-8451>

Outi Kanste  <https://orcid.org/0000-0001-8634-0628>

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