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Mentoring Professionals to Use Digital Tools in Home Care

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Abstract. Nurses use electronic information systems daily, and digital devices have been developed to enable patient to live at home as long as possible. This study aimed to test reverse mentoring for professionals working with digital tools in home care. An electronic survey was sent twice to nurses to collect their opinions about the tools they use. Based on the results from the first survey (N=184), the mentoring content focused on the use of information systems and digital tools. Respondents' experiences as information system users were more abundant than their experiences as digital tool users. Tools supporting independent living were seldom used, but safety devices and alarm monitoring were used daily. The mentoring meetings induced changes and encouraged participants to acquire skills related to the use of digital tools and to evaluate their work critically.

Keywords. Elderly care nurses, digital skills, client information system, digital tools, mentoring.

1. Introduction

Care services currently face diverse challenges worldwide. Due to demographic changes, developed countries are concerned about the future challenges aging populations will present to their welfare systems [1]. Digitalization [2] and assistive technologies (AT) have been introduced to meet these challenges. AT is currently used in various forms to support older persons and nurses [3]. Several factors have been demonstrated to affect nurses' intentions to use these new technologies [1,4]. In the relevant research, nurses' positive attitudes and moderate skills in relation to client information systems (CIS) did not eliminate the associated challenges [5,6]. CISs did not speed up documentation, and there was no integration between different information systems, which increased the possibility of errors in care [6].

In Finland's public sector, the rate of electronic health records (EHR) and CIS use in healthcare facilities is 100% [7]. CISs are essential for managing information in social work practices (e.g., with older clients). CISs are technological systems for processing, storing, and maintaining social welfare client information and documents [6].

Home care professionals require training in documentation and in how to support older persons' use of digital devices. Their competencies related to general digital skills, data protection, and ethical issues when using digital services are strong [8,9]. However,

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they frequently believe that training is not timely, and that point-of-care documentation should be emphasized [9]. Notably, home care nurses are interested in participating in CIS development [6,10].

A recent literature review revealed that a significant amount of time was spent recording and storing information in the CIS instead of spending time with clients [1,9-11]. Therefore, the role of information systems is crucial, as incomplete documentation impacts patient safety, hampers care team communication, and increases care costs [6,9,11, 12].

Mentoring offers a means to further promote learning opportunities and encourage multi-professional collaboration. At the same time, reverse mentoring has been used when early-career employees teach new skills to senior employees. Notably, the reverse mentoring relationship is characterized by a commitment to a shared goal of mutual learning and collaboration. Reverse mentoring participants (mentors and mentees) can determine the topics of meetings and discussions to find solutions for existing challenges [13].

This study aims to test a mentoring program for professionals working with digital tools in home care. A particular focus was placed on identifying how reverse mentoring influenced their competencies with CISs in elderly care services.

2. Methods

Reverse mentoring was used to strengthen the use of existing digital tools in elderly care services. The organizational approval of elderly care services departments was required twice. The starting point was a survey (n=184) utilizing the measurement tools used in a nationwide project organized by the Finnish Institute for Health and Welfare (THL) [7] and the WelTech project [4]. The electronic questionnaire was sent twice to departments (N =7) providing elderly home care during late autumn in 2022 and 2023. Based on the first survey's results, mentoring focused on these seven units; following the compilation of studies on nursing students who acted as mentors (n=14), 35 mentoring meetings were organized in the units (95 mentees). The discussion was focused on current working methods and information security. The data from the second survey was compiled two months after the mentoring meetings. The questionnaire included background and multiple-choice questions. A five-point (5) Likert scale (strongly agree-strongly disagree) was used to examine variations associated with the use of CISs. In both surveys, a link to the questionnaire was emailed to superiors, who forwarded the link to professionals.

The data on home care (2022 n=29, 2023 n=25) consists of quantitative content. A descriptive analysis using IBM SPSS 27 was conducted to explore the respondents' CIS and AT based on their experiences and changes after mentoring. The results are presented in percentages.

3. Results

In both surveys, over half (2022 n=18 62%, 2023 n=18 72%) of the respondents were licensed practical nurses (LPN), and about a fifth of the respondents were registered nurses (RN). A few other respondents were nursing managers, physiotherapists, and care assistants.

Compared with the first survey conducted after mentoring meetings, respondents indicated that they were slightly more experienced users of CIS (Table 1) when using a scale ranging from beginner (1) to experienced (5). A more significant change was evident in the documentation, in which paper use decreased (Figure 1). Paper documents, such as lists of medications or treatments, were used. At the mentoring meeting, the participants considered how CIS would better support their work.

Table 1. Change in digital skills through mentoring

	Beginner	**	***	****	***Experienced***	Percent
2023 (n=25)	0	16	44	40	0	100
2022 (n=29)	4	0	48	38	10	100

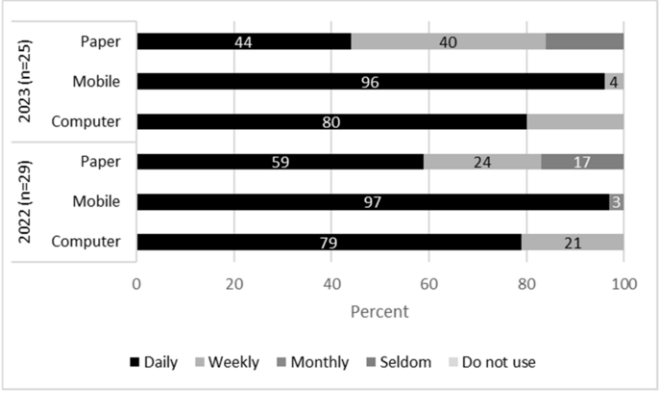

Figure 1. Documentation tools and changes in their use

Respondents evaluated their motivation to develop their digital skills. Their motivation to develop digital skills (2022 - 85%, 2023 - 89%) was higher after mentoring. The motivation to utilize digital tools at work did not develop notable (2022 - 82%, 2023 - 84%). Change in the daily use of tools was significant (Figure 2), but it raised awareness of digital tools.

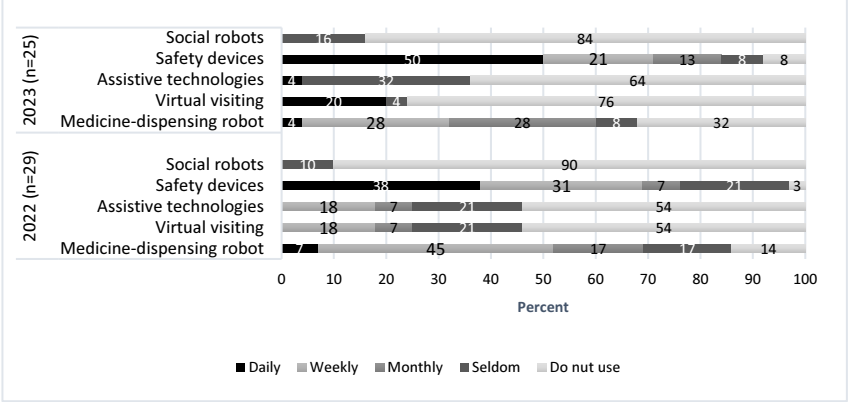

Figure 2. The digital tools used in home care

4. Discussion

Most of the respondents were LPNs, and they primarily worked in home care in elderly care services. Their levels of experience as CIS users were high, reflecting the comprehensive implementation of electronic information systems in Finnish social and health care [4,6,7]. They used different digital tools and were confident with AT (e.g., medicine-dispensing robots). Digitalization [2] and an increasing number of technologies [5,6] aiming to support citizens' ability to live at home have raised concerns about care professionals' digital skills and attitudes toward them [1,5,8]. The findings revealed that mentoring considerably enhanced home care professionals' digital skills.

Positive empowerment increases a mentee's commitment to developing work [13]. A positive indicator of this was the professionals' motivation to use digital tools and seek solutions to increase their use. For example, those unable to use mobile recordings expressed a desire to learn to use mobile devices. Respondents used paper documentation alongside CIS documentation almost every day. This "double documentation" takes time and endangers clients' safety because the information is scattered [6,8].

LPNs' knowledge of data protection and ethical issues is critical in the context of significant challenges, including costs, the interoperability of information systems, and existing care service infrastructure [6,9,11,12]. A decrease in paper recording can be regarded as a positive impact of mentoring meetings.

The timing of the data collection was challenging due to the newly established Well-being Services County with 19 municipalities. The organizational approvals of departments were required twice due to organizational changes. Despite the circumstances, the timing of the developments was conducive to productivity. The number of respondents was small in both data collections but was sufficient for this test to be carried out. This study also enabled us to systematically collect the assessments of the digital skills of elderly care professionals with the possibility of using previously developed questionnaires on the topic [4,6,7]. The cooperation between the mentors and mentees was highly successful, creating a positive atmosphere.

5. Conclusions

Reverse mentoring proved to be a successful method to strengthen the use of existing digital tools in elderly care services. Digital skills related to the utilization of electronic systems or technologies were developed through mentoring. Our findings revealed that the professionals working in home care were motivated to use digital tools. Thus, it is now a suitable time to support training and encourage the acquisition of digital skills and the use of existing tools. More research should examine professionals' role in supporting, and guiding clients and their caregivers in using digital services.

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