

Nurses' perceptions about a web-based learning intervention concerning supportive family conversations in home health care

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Abstract

Aims and objectives: To describe the perceptions that municipal primary healthcare nurses and municipal registered nurses had about a web-based learning intervention concerning supportive family health conversations in municipal home health care.

Background: Even though family health conversations are well grounded in theory with several reported benefits for patients and families, most working nurses have little or no training in practising family systems nursing including family health conversations. Continued learning is necessary for nurses, where web-based learning may be one answer of updating the professional skills and knowledge of nurses regarding supporting families.

Design: The study used a descriptive design and followed the “Consolidated criteria for reporting qualitative research” (COREQ) checklist.

Methods: Twenty-one nurses participated in an educational intervention that consisted of web-based learning and two face-to-face seminars about family systems nursing including family health conversations. The nurses were interviewed after completion, and the audio-recorded interviews were transcribed verbatim and analysed using qualitative content analysis.

Results: The findings consist of nurses' perceptions regarding the disposition of instruction, the prerequisites for learning and a changed approach when working with families. The findings are further reflected on through Illeris' theory concerning learning triangle.

Conclusions: The findings are encouraging for educating nurses in family health conversations at their workplace, with the purpose of supporting patients and families. However, it is important to be aware of the different dimensions of learning, in addition to the appraisal of social aspects and organisational circumstances when educating nurses as they influence the utilisation of the knowledge.

Relevance to clinical practice: This web-based learning intervention seems to be suitable for educating nurses in family health conversations and could be an

appropriate step towards implementing these conversations in home health care with the purpose of supporting families.

KEY WORDS

continuing professional education, education, family conversations, family health conversations, family nursing, home health care, learning, municipal care, online learning, support

1 | INTRODUCTION

In Sweden, most municipalities are responsible for providing home health care in the patient's home (EU, 2016). Being a municipal primary healthcare nurse or a registered nurse in municipal home, health care includes a wide range of nursing activities for supporting health. It differs from hospital care in that nurses are guests in the patient's own home and thereby enter a very private sphere where the nurses must be aware of and sensitive to the family's culture, preferences and values (Lindahl, Lidén, & Lindblad, 2011). Patients who receive home health care emphasise the importance of being supported by nurses through human-to-human communication and being recognised as persons (Holmberg, Valmari, & Lundgren, 2012). When a person experiences illness, it can be a situation that affects the whole family (Bell & Wright, 2015) entailing that family members may also need support (Linderholm & Friedrichsen, 2010). Moreover, a family's experiences with illness can negatively affect the members' ability to accurately realise their own strengths and resources, which can influence the family's struggle to regain and sustain health (Wright & Leahey, 2013). When caring for the ill person, family members often assume great responsibility characterised by selflessness and subordination of their own needs. However, this can negatively affect the health of the family members (Munck, Fridlund, & Mårtensson, 2008). Based on the above, there is a need for home health care to focus not only on the ill person but also on the family as a whole.

2 | BACKGROUND

Traditionally, the practice of nursing care focuses on individual patients. However, over the last decades, the importance of involving the whole family has been increasingly emphasised. The World Health Organization (WHO, 2011) highlights the importance of including and acknowledging family members in nursing care and, moreover, in understanding the impact of family dynamics and communication. Also, some nursing research supports the importance of involving families when caring for patients with both acute and chronic illness (Östlund, Bäckström, Saveman, Lindh, & Sundin, 2016; Persson & Benzein, 2014; Svavarsdottir, Tryggvadottir, & Sigurdardottir, 2012).

Family systems nursing (FSN) emphasises taking the whole family into consideration from a systemic perspective. When viewing

What does this paper contribute to the wider global clinical community?

- The identification of nurses' perceptions regarding an intervention of web-based learning concerning supportive family health conversations.
- Added knowledge about continued professional education and development regarding family systems nursing for the nurses at their workplace.
- A possible first step towards implementing supportive family health conversations in health care.

the family from a systemic approach, a patient should not be considered isolated, but instead as a part of a system where all the family members' behaviours and beliefs affect each other. A variety of practices based on FSN have been scientifically evaluated with positive outcomes on family health and well-being in different healthcare contexts both in Sweden (e.g., Benzein, Olin, & Persson, 2015; Persson & Benzein, 2014; Sundin et al., 2016) and internationally (e.g., Duhamel, Dupuis, Turcotte, Martinez, & Goudreau, 2015; Sveinbjarnardottir, Svavarsdottir, & Wright, 2013).

Family health conversations (FamHC) are an example of a FSN intervention with the purpose to maintain health and promote healing when creating a context for change in supporting families to find alternative ways to view their situation (Benzein, Hagberg, & Saveman, 2008; Östlund, Bäckström, Lindh, Sundin, & Saveman, 2015). Previous studies have pointed out that families prefer participating in FamHC early in the illness process (Benzein et al., 2015; Dorell, Bäckström, et al., 2016); even at home before the family member needs to move to a residential home (Dorell, Bäckström, et al., 2016). Thus, the context of municipal home health care seems appropriate for FamHC. Also from a nursing perspective, FamHC can be used as a professional tool when working with families by supporting family health (Dorell, Östlund, & Sundin, 2016).

FSN is well grounded in theory and been evaluated with positive outcomes regarding health and well-being (Dorell, Bäckström, et al., 2016; Dorell, Isaksson, Östlund, & Sundin, 2017; Östlund et al., 2016; Östlund & Persson, 2014). Yet most working nurses have little or no training in practising FSN and FamHC (Bell & Wright, 2015). The European Union highlight the need of continuing learning for nurses and the importance of providing opportunities for

nurses to preserve, develop and renew their skills in nursing care. A lifelong learning approach is thus central to the nursing professional practice (EU, 2013). Web-based learning can be one answer for keeping nurses' knowledge updated within the flexible schedule required in health care as it allows self-regulatory learning (Antonsson, Graneheim, Isaksson, Åström, & Lundström, 2016). Web-based learning is rapidly increasing (Chiu & Tsai, 2014) with advantages in healthcare learning in terms of accessibility, flexibility and cost-effectiveness (Smith, 2005; Ward, Stevens, Brentnall, & Bridson, 2008). George et al. (2014) state that web-based learning in health care could be as effective as traditional learning (i.e., classroom-based, face-to-face learning). Similar results were found in a review that explored the impact of web-based learning among nurses and nursing students where web-based learning was presented as being as good as traditional learning in terms of knowledge, skills and satisfaction (Lahti, Hätönen, & Välimäki, 2014). A study by Lindh et al. (2013) also shows that it is possible to teach nurses FSN and health-promoting conversations by using web-based teaching.

When considering the benefits of supportive FamHC and web-based learning in combination with the nature of educating nurses, it would be beneficial to receive knowledge in how web-based learning can be used when educating nurses in family support through FamHC. To our knowledge, no intervention including web-based learning in nurse-led FamHC based on FSN has been implemented or evaluated in the context of municipal home health care.

2.1 | Aim

Thus, the aim of this study was to describe the perceptions that municipal primary healthcare nurses and municipal registered nurses had about a web-based learning intervention concerning family health conversations in municipal home health care.

3 | METHODS

3.1 | Design

This study is a qualitative descriptive study, based on individual interviews, using qualitative content analysis to explore nurses' perceptions of having participated in a web-based learning intervention about conducting FamHC. Recommendations for qualitative research according to "Consolidated criteria for reporting qualitative research" (COREQ) were followed throughout the research process (Tong, Sainsbury, & Craig, 2007), see Supporting Information Table S1.

3.2 | The intervention

The content of the web-based learning intervention comprises information about and training in conducting FSN and FamHC. FamHC is developed in Sweden (Benzein et al., 2008) and is based on the

Calgary Family Assessment Model (CFAM), the Calgary Family Intervention Model (CFIM) (Wright & Leahey, 2013) and the Illness Belief Model (IBM) (Bell & Wright, 2015). FamHC emphasises a systemic approach with focus on the interactions and relationships between the family members. Narration and reflection are seen as essential tools to strengthen health and promote healing through making beliefs of the situation visible (Benzein et al., 2008; Östlund et al., 2015).

The structure of FamHC involves three conversations. In the first conversation, each family member is invited to share their stories about how each family member experiences the family's situation. These stories form the basis of the first conversation. The second conversation focuses on suffering, problems and beliefs. The purpose is to progress towards reducing the family's suffering by strengthening beliefs considered to facilitate and modify those beliefs that are considered to be constraining. The third conversation extends the focus to how to handle the future (Benzein et al., 2008; Östlund et al., 2015). The duration of each conversation is estimated to take approximately 30 min. Keeping in mind that each family and situation is unique, the intervention is flexible, for example, conducting more or less than three conversations with a family.

The research group designed a web-based education for RNs. The contents of the course are based on previous research on FamHC with an FSN foundation (Bell & Wright, 2015; Benzein et al., 2008; Östlund et al., 2015; Wright & Leahey, 2013). The course draws significantly from systems theory (Bateson, 2000), communication theory (Watzlawick, Weakland, & Fisch, 1974) and reflection theory (Ricoeur, 1992), all of which have been shown to be the key features of FSN (Wright & Leahey, 2013).

As a part of the education package, the online web-based learning also included two face-to-face seminars led by members of our research group. The first seminar was held at the start of the learning period, and the second was held at the end. Regarding the web-based learning, the nurses were provided access to online learning through the web-based learning management system, including video-recorded material and written documents. For an overview of the design of the educational package, see Table 1. Since the web-based learning could be accessed online, the nurses could choose where they preferred accessing the system, that is, at their respective workplaces or at home. The managers in the home healthcare settings approved that the nurses studied during working hours. The web-based learning had originally been designed to be completed in three months. However, this was extended to five months for two groups: Group 1 due to the heavy workload that in turn limited time for study; Group 2 due to initial technical complications with replacement of hard drives that delayed start-up.

The importance of allowing flexibility in learning has been emphasised in several studies. The Center of Applied Special Technology (CAST, 2018) explained that a flexible approach that is adaptable for personal needs is central in the universal design of learning. When designing the education package, including both the online web-based elements and the face-to-face activities, we strived to add flexibility to accommodate different individual preferences to

TABLE 1 Overview of the design of the educational package

Sections	Activities and content	Rationale
Seminar no.1 Face-to-face	An introduction lecture about family systems nursing (FSN) including family health conversations (FamHC) by two members from the research group Introduction of the content, set-up and goals of the course Introduction of the learning management system (Cambro) Discussions about the content and expectations of the course	Create conditions for learning by providing an overview of FSN including FamHC, as well as the syllabus and goal of the course Facilitate the use of Cambro Adjust the content in the seminar based on the nurses' preferences and questions
Web-based education	Video-recorded material consisted of: <ul style="list-style-type: none"> • Eight summaries of relevant scientific articles; six of these had supplementary audio recordings in Swedish (3–8 min long). • Two video-recorded lectures: one lecture about communication (7 min long) and one about FSN including FamHC (15 min long) • Three video-recorded examples of FamHC (each 16–20 min long) Text documents included the study guide with study goals and time schedule, contact details for the research group, summaries describing the background and structure of FSN and FamHC and a users' manual for the learning management system. Links to scientific articles in FSN and family conversations	Create a variety in the different elements and allowing multiple choices of knowledge acquisition. Increase the participants understanding of FSN
Seminar no. 2 Face-to-face	Discussions about the content and a summing and repetitive lecture of the content in the course by two members from the research group Practicing the FamHC in the form of role play by adapting different roles (conversation leader/nurse, patient, relative)	Summarise the content of the education and encourage discussions and questions Facilitate active learning and practical application of FamHC. Increase the understanding and experience of FamHC from different perspectives (as a nurse, as patient and as family member)

learning. The programme used the learning open-source software platform Sakai, that is, Cambro (Sakai, 2018). Cambro is a flexible learning platform that can be personalised to match the educational level and the students' preferences by choosing the tools and the quantity of said tools that should be included. It is one of the most popular learning management systems at Umeå University and is frequently used by other universities, both in Sweden and internationally. In the course designed for this intervention study, we chose to include only the most necessary functions (resources, roster, site information, messages, lectures and help) as an attempt to make it as intuitive and user-friendly as possible for the nurses. The nurses received a study guide with study goals and a suggested time schedule, but they were allowed to freely choose if they wanted to follow this time schedule or plan their own. All the material was available on the platform from the beginning of the course, and it was not required to be studied in a predetermined order. The nurses could access materials (audio, visual and written) in accordance with their own preferences. For example, the scientific articles in English included in the course were also presented as vernacular summaries in Swedish through short videos or in text documents with respect for the nurses' work situation and as a service to increase freedom of choice.

Blandford et al. (2018) described human–computer interaction and health research as two central areas of expertise for the development and evaluation of digital health interventions. However,

these two areas have some contrasting cultures and practises. Health research often focuses on the health outcomes, while the human–computer interaction primarily focuses on the process and user perceptions. It is valuable to be aware of and consider aspects of the two areas when designing and evaluating a digital health intervention, as they both are important in practice. In our study, our intention was to take different aspects from both areas into account, both in the designing phase and when evaluating.

3.3 | Participants and settings

Municipal primary healthcare nurses and municipal registered nurses from three different settings were enrolled in the study. The intervention was proposed to the municipality by the research group.

The first setting (Group 1) included nurses ($n = 13$) employed in municipal home health care from a middle-sized municipality in northern Sweden. The municipality welcomed the offer of the web-based learning intervention and further planned for an implementation of FamHC in which the research group offered to assist. As an implementation of FamHC in home health care was planned for, the instruction was mandatory for the nurses in this group. Home health care was municipalised about one year before the course started, meaning that the municipality took over responsibility for home health care from the county council. Thus, the organisation (municipal home health care) was fairly new. The nurses were

TABLE 2 Participants' ($n = 21$) characteristics

Gender Female/Male	Age median (range)	Number of years working as a nurse in home health care: number of nurses	Numbers of years working as a nurse: number of nurses	Nurses having a primary health- care degree in nursing yes/no
18/3	40 (24–64)	<1:9	<1:0	15/6
		1–3:4	1–3:1	
		4–6:3	4–6:5	
		7–9:1	7–9:1	
		10>:4	10>:14	

allowed to study during working hours, but did not have specific time to study, that is, they themselves were responsible for planning time for studying and trying to find someone who could substitute for them.

The second setting (Group 2) consisted of nurses ($n = 5$) working in municipal home health care in a middle-sized community in the south of Sweden. The nurses worked together in the same home healthcare district; going through the learning was a sacrifice and accepted voluntarily. The nurses were given time and a substitute while studying, which enabled the nurses to study together.

The third setting (Group 3) consisted of nurses ($n = 4$) working in municipal home health care in a middle-sized community in the north of Sweden. Participation in the course was voluntary. Similar to Group 1, the participating nurses themselves were allowed to study during working hours but they were responsible for planning their study hours and did not have anyone to substitute for them while studying.

In total, 22 nurses completed the course and 21 of these nurses were enrolled in the study. For an overview of the participants' demographics, see Table 2. The one person not included in the study was not able to participate in the interview due to long-term sick leave.

3.4 | Data collection

To allow space to gather ample interviews, semi-structured face-to-face interviews were conducted individually with each nurse 1 to 4 weeks after they had completed the course. Each nurse selected a convenient interview time and date. Interviews were conducted during the period April–September 2015 and lasted between 11 min and 35 min with an average of 23 min. The interviews were conducted by three different interviewers (HA, CE and MB), one in each of the three groups. The setting of the interviews differed between the three groups with reference to nurses' preferences and the opportunity for an undisturbed location. The nurses in the first group were interviewed in a room at the university while the nurses in the second and third group were interviewed in a room at their workplace. The interviewers had little or no interaction with the nurses during the course. An interview guide was used to capture the nurses' perceptions of the learning with open-ended questions to give space for the nurses to narrate freely about their perceptions. Interviews began by asking "Can

you tell me about your experiences of participating in the web-based course in FamHC?". This was followed by questions covering the nurses' perceptions of the content, set-up, the utilisation and possible influence on learning and working. Additionally, emerging questions and follow-up questions were used for clarification and to gain more details. The individual interviews were recorded and transcribed verbatim, and these formed the unit of the analysis. Recordings were stored in a secure locker at the university. Access to recordings and transcripts was restricted to the research team.

3.5 | Data analysis

The unit of the analysis consisted of 71,556 words. An inductive qualitative content analysis of the content was used to analyse the text. In the preparation phase, the texts were read through several times to get an overall understanding of the content. In the next step, meaning units were identified in accordance with the study's aim and were derived from the data. Subsequently, the meaning units were condensed and labelled with codes. The codes were then grouped into subcategories based on differences and similarities, and further abstracted into categories (Elo & Kyngäs, 2008).

3.6 | Ethical considerations

Permission to conduct the study was given by the heads of the three home healthcare settings and by the participating nurses. The nurses received informed consent and were assured confidentiality in accordance with research ethics and full freedom to withdraw from the study at any point. Ethical approval was obtained from the Ethical Review Board (No 2014-235-31Ö).

4 | RESULTS

The nurses' perceptions of the web-based learning are presented in three categories and six subcategories. For an overview, see Table 3.

4.1 | Disposition

"Disposition" is a category with two subcategories including the nurses' perceptions about the theoretical and practical content of the learning and how they perceive the structure and set-up of the course.

TABLE 3 Categories and subcategories

Categories	Subcategories
Disposition	Instructive content
	A pedagogical structure for learning
Prerequisites	Influence of personal preconditions
	A need of support
A changing approach	An altered way of thinking
	An altered way of working

4.1.1 | Instructive content

Overall, the nurses perceived the theoretical content in the written, video-recorded and practical parts of the course to be adequate and instructive. The web-based learning was perceived to contain the parts required to learn what was expected and perceived to be on an adequate level in terms of learning level. The content was perceived as informative and vigorous, rich with an understandable language in both the recorded material and the written texts. The video-recorded material was highly appreciated and was considered essential for knowledge acquisition. Especially, appreciated and perceived important for understanding were the video-recorded examples of how FamHC can be carried out.

It is actually when one sees these filmed conversations. When one is sitting there and watching them because they are so well done and so worthwhile to watch. It seems as if it is these that one learns the most from how to act. (no. 450152)

Some nurses perceived the scientific articles as difficult and time consuming and used mainly the video-recorded vernacular summaries in Swedish to make the most of the content. Others preferred the articles and used the summaries as a kind of validation that they understood the content correctly. Furthermore, the content of the web-based learning was described by some nurses to have repetitious; however, this was also perceived to be an advantage as it validated and created increased understanding.

4.1.2 | A pedagogical structure for learning

Overall, nurses perceived the structure and set-up of the web-based learning as well-balanced, appropriate and understandable. It was felt that the structure and set-up facilitated a meaningful interface between written materials and video-recorded materials. Practice supported increased knowledge and understanding of the content. Furthermore, the structure and set-up were perceived as vital in the translation of theoretical knowledge and for the development of practical skills.

It has been good with variation and I think it's the best way to learn. When it's both recorded material so one

can listen and first and foremost get an understanding of what it's all about. Also watching examples and be like; 'ahh it's like this, yes...' mmm... I can then easier relate it to the text then when I both can see and hear instead of just reading throughout the course. (no. 115045)

The two seminars, at the beginning and at the end of the course, were described as providing opportunity for repetition, practicing and discussions of the content, which was perceived as central for understanding.

It was then (at the final seminar) when almost everything fell into place. It was really great that we could practice (the conversations) with each other face-to-face. It was a eureka moment. (no. 115045)

Even though some experienced the role play as sort of fictional, it provided practice and an enhanced impression of the methodology of the conversations. Furthermore, the role play contributed to reflections on their own level of knowledge and increased self-confidence for future conversations. Some experienced performance anxiety and stress before the role play; however, the nurses described how these feelings were proven to be unjustified.

The form and structure of the course, that included self-studies through the web-based learning and the two face-to-face seminars, were perceived as suitable form of learning for nurses to receive at their workplace. The options to choose how and where to gain knowledge were highly appreciated.

I think it's been good that I have been able to choose what parts to go back to and repeat. If I want to go back to the scientific articles or whatever I want to go back to or maybe I choose to go back to go back and see the conversations or the movies or just read the summaries. So one have a lot of choices where to go back and immerse yourself in. (no. 450153)

The learning platform, Cambro, used in the web-based learning was perceived as suitable and described as intuitive. Some nurses perceived it even easier to use than other learning platforms. It was perceived as an advantage for those who had studied web-based courses earlier and had experience of the same or similar learning platforms. Similarly, those nurses who considered themselves less technically knowledgeable or those who did not have previous experience of web-learning perceived the structure of the web-based learning and the learning platform as well-functioning and easy to operate.

...and then... I was not so positive to web learning because I'm not a computer geek in everyday life so... not really used to working that way. But it worked really well after all... Yes everything went well. (no. 140046)

The nurses perceived that the technique worked well overall except for some minor complications and due to some technical problems in one setting where the onsite hardware was replaced and delayed start-up. The nurses experienced many advantages with the form of learning, that is, web-based, and preferred it in favour of conventional classroom learning. One of the perceived benefits with the web-based learning was associated with the perceived flexibility. Due to their intensive workload and difficulties in being physically absent from work, the nurses perceived the structure of course well suited as it enabled them to take part of it whenever their work and energy level allowed them to. Additionally, the web-based design was perceived to allow reflection and enabled the nurses to study at a pace they chose and to pause and rewind. Furthermore, this set-up was perceived to be time saving as it reduced travelling to classes and the set-up did not require a specific time and place to study.

Close to hand. Everybody has a computer and then it's quite easy... So that's quite a big difference really, one don't have to adapt to a fixed schedule or spend time to travel or long days when one can't listen any more without turning off. So now one can just turn it off when wanted and then start up again when having the strength. So it has many benefits.
(no. 115046)

However, some nurses experienced the design of web-based learning to be a little bit lonely when not being able to just put up their hand and ask questions. But, overall, the form of learning was perceived as suitable as it allowed the nurses to plan and structure their studies based on their goals and circumstances. Taking one's own responsibility and studying on their own or with their colleagues were perceived as positive.

Spontaneously, it's a very easy way to learn because you can study whenever you want. Eh... you can choose to sit with headphones or you can choose to study with someone else.
(no. 141734)

The research group's attempts to facilitate for the nurses, by for instance summarising the scientific articles in video summaries in vernacular Swedish, and providing a clear study guide with the time schedule was appreciated by the nurses. It was perceived to be facilitating, timesaving and sometimes also a prerequisite for completing the course. The nurses suggested some future improvements of the web-based course; an additional seminar in the middle of the course, specific information about expected time for taking the course and additional information about what was expected during the final seminar.

4.2 | Prerequisites

This category consists of two subcategories that describe the nurses' perceptions about taking the course and aspects that influenced their learning.

4.2.1 | The influence of personal preconditions

The nurses described the course as important as they perceived a need for more knowledge about this form of conversations and described feeling motivated as the topic was vital and interesting. Additionally, the nurses described that their engagement and motivation have increased since they through the course acknowledged the usefulness and benefits with the FamHC as they believed the course could help them support patients and relatives.

Well, I feel that both me and colleagues have been motivated to complete the course. As we think it's a good tool.
(no. 115043)

However, as this course was mandatory for the nurses in one setting, feelings of not having the opportunity of free choice if they wanted to take the course led to a decreased level of motivation.

... to feel that often you may choose to learn by yourself and then you are more motivated. In this case, we were obligated to take the course. We didn't choose.
(no. 115047)

Overall, the nurses perceived their knowledge level to be adequate for taking the course. The knowledge level in FSN varied among the nurses due to variation in working experience and because some of the nurses had previously taken courses in the subject. However, all nurses perceived their knowledge level to be adequate for taking the course regardless of the variation of experience and previous courses in the topic. The course was perceived to be adapted to different levels of knowledge and having previous knowledge in the subject enhanced and reinforced learning.

Some of the nurses planned and studied together, while some studied by themselves since they had no opportunity or because they preferred studying by themselves. Some used the time schedule included in the course, while some made their own planning and time schedule. The place of study also varied greatly, from doing everything at their workplace during working hours to studying the whole course at home in their spare time.

Moreover, the nurses perceived taking responsibility and having self-discipline as important in order to plan and carry out the course. However, the planning was constantly changing due to the nature of their job and needed to be replanned. A few experienced personal barriers for utilisation, such as sick leave. Their personal demands and their energy level also governed how much time and resources the nurses invested.

And it's up to everybody how confident you are about the task. And how much energy you want to put in or your demands on yourself. How much you want to put into this course. How much do I want to learn to accomplish this task? It's really... it's individual for us all.
(no. 450153)

4.2.2 | A need of support

Support from colleagues during the course was described as important and sometimes crucial for sufficient learning. The amount of cooperation and support among colleagues differed between the three settings and sometimes between smaller working groups in each separate setting. Having the opportunity to study together was described as inspiring, motivating and experienced as being beneficial since it enabled mutual support and learning.

Because I think you're more pleased to be able to sit and talk to the others and have a dialogue about how you perceive things. Or that we can ask someone when we don't understand. Just like when you are in a regular school you can have the opportunity to share. You get very inspired when you do it together with someone compared to when you have to sit (and study) by yourself. (no. 141734)

Support among colleagues included technical support and discussions about content of the learning, schedule and the methodology of the conversation. The nurses often sought to study together; however, when this was not possible, it was described as problematic to support each other during the course and was experienced as stressful. Sometimes contradictions between the nurses taking the web-based course arose due to personal relationships or when the cooperation did not work. This was perceived as a hinder and gave rise to having a bad conscience, distrust and jealousy which at times resulted in nurses choosing to study at home instead of at work.

Support from the research team (which was responsible for the web-based course) was generally considered to be sufficient, and it was clear how, where and whom to contact if they needed support in different situations.

Well, it has been really good that she (the support person from the research team) has e-mailed; How is it going? That she has shown that she has been available for us, I think it has been great. Just an e-mail and ask, just enough too. So I think that's been really great. (no. 450153)

The reminders and support from the people responsible for the web-based learning contributed to that the nurses felt motivated to study and their contact person was described as engaged and committed. However, a few nurses desired additional support and pepping from the research team in order not to lose focus and commitment.

Experiencing support from their managers was described as essential for the completion of the course. Having time allocated for the course was perceived as very important and often crucial for the utilisation of learning, as well as creating opportunities for the nurses to study together. If there was no allocated time or anyone

who could substitute for them, the nurses described it as stressful as everyday work hindered planning and utilisation of learning. Furthermore, the nurses experienced it difficult, and at times almost impossible, to study during working hours and chose to study at home in their free time instead. Thus, they desired improved terms and premises from the organisation in form of allocated time to facilitate for learning.

I think that if you have this kind of learning that is important from a managerial point of view, and if it's going to be obligatory for us to take a course, it requires that you have specific time allocated for it from the employer, which we did not really receive. We have tried to plan it ourselves and it has not worked... in the work situation and heavy workload we have had. (no. 115040)

The nurses described that they did not want to burden their colleagues which hindered them from asking if they could cover up so that they would be able to study. The lack of time resulted in that some nurses did not study as much as they wanted, resulting in stress and feelings of guilt and disinclination.

Furthermore, it was considered important that the manager was involved and interested in the course in order to obtain support. Having access to an undisturbed study environment was perceived as very important, but that possibility varied for nurses. Moreover, in the setting where the organisation (municipal home health care) was fairly new, the nurses described the organisation as unstable and wanted the course to be given at a later stage.

4.3 | A changing approach

This category includes perceived value and learning due to the content in the web-based course with a changed way of thinking and working.

4.3.1 | An altered way of thinking

The nurses reported that the course affected both how they perceived their role as nurses and how they now regarded the families they met during their workdays. It emerged that the nurses' perceptions and thoughts had been challenged and also in some ways changed. Instead of viewing themselves as a kind of a problem-solver, they perceived that to identify or provide solutions and answers were not necessarily part of their role.

And that sometimes by awakening someone's thoughts, it might lead to something else... so you don't always have to say 'I think this would be good for you'... one is pretty quick at making decisions. It has given me...well, thoughts about how I don't always have to be the one to come up with suggestions or solutions. (no. 450152)

The nurses had developed an outlook towards having a more supporting role rather than an advising role. The nurses expressed a changed view where they acknowledged the strength of family interactions. The families were seen as one unit of power that together finds solutions and makes possible changes.

Yeah, one discovers that that they actually have an incredible capacity to come up with solutions themselves. I think that's really great. (no. 450153)

4.3.2 | An altered way of working

The nurses described a role change and an adjusted way of working with a more inclusive approach towards families. They perceived that they more frequently asked about the experiences and feelings of patients and family members with increased receptiveness and responsiveness to the families' stories.

Yes, it's clear that I might have begun to think in another way about how I'm asking questions and maybe listening in another way. There is a lot that can be seen between the lines sometimes that... they may not say straight out but... but in a way I have a greater receptiveness now. (115042)

The nurses had begun to communicate in a different way, asking more reflective questions and embracing the positive impact of silence on the reflection process. Moreover, they perceived that their role was extended further beyond the patient and described working more family-centred. They perceived that they were more considerate of the different roles within the family and they were more aware of the impact of family relationships and interactions. Moreover, the nurses perceived the conversations to be a key to involve and support the relatives in a more sufficient way and some who had already started to use conversation techniques in their work with families experienced great value and utility for the families.

... and in this situation I've been mainly her support through the conversations. This has helped her. Because she did not want a counsellor, she did not want a psychologist's help, but these conversations have worked out well. So I had to find some way of working to help her and these conversations have been the key. (no. 450153)

Using FamHC was assumed to have many positive outcomes, partly for the family's well-being and sense of security, as well as, in a longer perspective possible to be facilitating and timesaving. FamHC acknowledged the families and promoted autonomy by allowing the families to tell their story and be listened to.

It has always been such a formal relationship for those older people when meeting with their physician or nurse that they almost curtsied. Many of them had that respect. And now suddenly...they are allowed to tell their story...in another way...It's obvious that they're not used to this and this is really positive. (no. 450153)

Moreover, the nurses reported positive consequences of the web-based course regarding communication with an increased transparency both on a private level, within their own family, and when communicating with colleagues.

5 | DISCUSSION

The aim of the study was to describe what perceptions municipal primary healthcare nurses' and municipal registered nurses' had about an intervention of web-based learning concerning FamHC in municipal home health care. The main finding was that the nurses were satisfied overall with the content and structure of the course. It was perceived as instructive, pedagogical, well-balanced and suitable. Prerequisites for taking the course were due to personal preconditions such as motivation and due to social interactions including a well-functioning social climate and support. Being able to interact and support each other during the studies and support from their managers and the people responsible for the web-based learning were perceived as important. Furthermore, the findings show that the nurses due to the content in the web-based course developed a changed approach that altered their way of thinking and working regarding family support. They became more supportive towards the families than advising with an enhanced family systems approach.

The findings in our study could be understood through Illeris' (2015) learning triangle (Figure 1), which is a structure of learning including three dimensions; the *content* dimension, the *incentive* dimension and the *interaction* dimension. The *content* dimension is connected to human capacities such as knowledge, skills, beliefs, behaviour and competencies. The *incentive* dimension is about a driving force with mobilisation of mental energy and involves motivations, emotions and volition. These two dimensions are internal processes interacting concurrently in the acquirement of knowledge and skills. This process is shown in the learning triangle as a horizontal double arrow. The *interaction* dimension involves external interaction with the social and material environment including participation, communication and cooperation. The learning process combines an interaction between the individual and its material and social environment, showed as a vertical double arrow in the learning triangle. Furthermore, the learning situation is located on several different levels, from the nearby social level (e.g., in the working group) and all the way to the overall social and global level. Thus, learning always includes both an individual and a social element. Illeris states that all human learning includes these three dimensions and that no learning process can be fully understood without considering them all. For

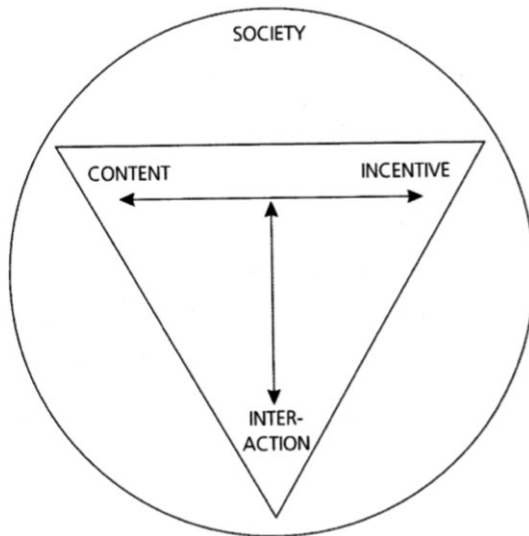


FIGURE 1 The learning triangle (Illeris, 2007, p26)

an overview of the dimensions and interactions between them, see Figure 1, the learning triangle from Illeris (2007, p26).

When viewing the findings in our study through the lens of Illeris' learning dimensions, all three dimensions are visualised. First, according to Illeris (2015), the *content* dimension includes understandings, skills, abilities and attitudes. Through the *content* dimension, the insight, understanding and capacity of the learner develop. The findings in our study show that the nurses perceived the content in the web-based course such as the simulated video-recorded FamHC, the video-recorded lectures and summaries and the practice in form of role play, as instructive. This is consistent with a review by Bluestone et al. (2013) that identified case-based learning, clinical simulations, practice and feedback as effective learning techniques regarding continuous professional learning for healthcare professionals.

Furthermore, the findings in our study show that the nurses have learned a way of thinking and working with families that developed as the nurses adopted a more inclusive and family-centred approach. In a study by Voltelen, Konradsen, and Østergaard (2016) with the purpose to examine nurses' experiences of engaging in family conversations in a heart failure outpatient clinic, the nurses took part in a learning intervention to learn the theory and practice of family conversations. Similar to our study, the findings show that the nurses discovered new approaches for collaborating with the patients and their families and that they had to learn new skills. The nurses in their study experienced that to be able to engage in family conversations they needed to work in an altered way where they changed their communication skills from individual-based communication towards communicating with the family as a unit of care. Furthermore, the findings in our study show that the web-based learning resulted in perceptions that the FamHC were a key to involve and support families in a more sufficient way. This is consistent with other studies that reported positive experiences from nurses where the FamHC were seen as a professional tool to reach a deeper understanding for the family (Dorell, Östlund, et al., 2016) and to be powerful in

engaging with the families and creating a strong connection with families with better communication (Voltelen et al., 2016).

Illeris' second dimension, the *incentive* dimension including emotions, motivation and volition and additionally interacts with the content dimension (Illeris, 2015). This could be connected to the findings in our study where the nurses' motivation for taking the course was influenced by a perceived need for knowledge in giving more support to families. The nurses acknowledged the usefulness of working and thinking in this manner. This could further be linked to a study by Shahhosseini and Hamzehgardeshi (2014) that found high motivation for nurses to update their knowledge and professional skills was an important and common facilitator for participation in continuing education programmes. Motivation to learn and its relationship with training outcomes has also been studied in a meta-analysis by Colquitt, LePine, and Noe (2000) which showed that motivation to learn was positively correlated with knowledge, skill acquisition and performance at work.

The third dimension, the *interaction* dimension, the interaction with the environment can create a meaningful setting for the individual and, in turn, facilitates the learning process. The individual, in turn, can invest in involvement in the interaction, thus increasing the opportunity of a valuable learning outcome (Illeris, 2015). The findings in our study show that using online web-based learning and interacting through the educational platform were perceived by the nurses as user-friendly, as the programme was intuitive, easy to operate and suitable for the intended purpose. All of these are important aspects in a well-functioning human-computer interaction (Cf Carrol, 2013). Additionally, due to the online learning format, the nurses in our study perceived the design of the course to be flexible regarding the possibility to choose when, what, where and how to study based on their own needs and preferences, for example, the inclusion of both original articles and vernacular summaries. This could be connected to the principle of providing multiple means of presentation (CAST, 2018), as learners differ regarding how they perceive and comprehend information. Thus, providing options for representation is essential, as there is not a single, one-size-fits-all solution.

The nurses perceived the structure including both web-based learning and face-to-face seminars as suitable and rewarding. They described the two seminars as supportive and central for understanding, furthermore suggested an additional seminar be added in the middle of the learning process. A recent RCT study by McCutcheon, O'Halloran, and Lohan (2018) showed that blended learning adds pedagogical value compared to pure online learning. The group receiving blended learning (both online learning and supervised skills training) scored significantly higher in terms of motivation, attitudes and knowledge compared to the group receiving only online learning.

One aspect of support in our findings was that the nurses perceived studying together with colleagues as important, rewarding and inspiring as it resulted in supporting and learning from each other. Similar results have been reported previously (e.g., Prah, Krook, & Fagerberg, 2016). In our study, some nurses preferred to

study by themselves while others often sought to study together; however, the possibility of studying together differed and some of the nurses for whom it was not possible to study together perceived it as stressful. Additionally, being supported from a managerial level, mainly from their closest manager, was perceived as essential. Also, a study by Voltelen et al. (2016) shows that logistic planning and support from the managers are crucial when implementing family conversation. It is known that social and cultural aspects influence learning at the workplace (Skår, 2010). Säljö (2010) describes that learning should not be understood only, either first or foremost, as anything external that moves into our inside. As an alternative, having a socio-cultural approach, learning is a natural part of what people do and in our relationships with others we share knowledge. Everyday interaction between people is an important learning environment as communication processes are central to human learning and development.

Overall, the nurses were satisfied with the content of the course and the findings indicate that this web-based learning can deepen their knowledge of FSN and encourage nurses to support families through FamHC. Further, the findings and the discussions have pointed out the importance of being aware of different aspects of learning such as the content and structure of the course, social environment and influence and the personal preconceptions of the students, when planning and carrying out a web-based learning intervention.

5.1 | Methodological considerations

The qualitative content analysis used in this study is a well-suited method for understanding the content of a text. To enhance trustworthiness, the categories and interpretations are discussed among the authors. As researchers our preunderstandings influence the interpretation of data, the researchers discussed their possible influences on the result to reduce the risk of misinterpretation. Moreover, we have critically examined our own roles during the joint analysis, including our role as researchers and our experiences of working in different healthcare contexts (cf. Elo & Kyngäs, 2008). Most of the researchers has ample knowledge and experience of the used method.

Three different interviewers conducted the interviews, whereof one had no interface with the nurses before the interviews while the other two had some interaction with the nurses during the course. However, the interaction was not seen as significant and thus not considered to have major influence on the results. Respecting each nurse's possibility to fit an interview into his/her work schedule resulted in differing time intervals (one to four weeks) between course participation and being interviewed. In light of the findings, this variation is seen as reasonable and not considered to influence overall trustworthiness. Since there were three different interviewers, the interview technique could differ somewhat; however, all interviewers followed the same interview guide and they all asked follow-up questions to minimise the risk for misunderstandings and to encourage narration and elicit additional explanations. The

interviews were fluent and held in an open climate with few verbal interruptions. In qualitative studies, the sample size depends on the aim of the study and the quality of the data (Graneheim, Lindgren, & Lundman, 2017). In our study, the sample size of 21 nurses consisted of over 70,000 words and was ample and detailed, thus considered to be sufficient.

When interpreting the results, the fact that most participants are female should be noted (18 vs. 3 males). However, this reflects the general gender distribution in Sweden among nurses as nursing is a female-dominated profession (SCB, 2010). Furthermore, the variation of participant's characteristics includes different ages, number of years working as a nurse, number of years working in home health care and having a primary healthcare degree or not. In qualitative research, researchers strive for variation in experiences when selecting participants (Elo & Kyngäs, 2008). Thus, it is seen as positive that the participants were recruited from three different cities, one in southern Sweden and two in northern Sweden, additionally, that the participants in the three different settings had diverse conditions and prerequisites when learning (e.g., voluntary, mandatory, having a substitute when studying, or not having a substitute). However, possible contextual differences should be considered when valuing the transferability to other contexts.

6 | CONCLUSION

Overall, this web-based intervention seems to have been suitable for nurses in home health care as it apparently met most of their working conditions and needs in an adequate way. But a third seminar in the middle of the learning period is a recommendation for the future that would improve practicing and enhance the social aspect. Additionally, the organisational circumstances and conditions are important factors that affect the utilisation of learning. For instance, having time allocated and experiencing support and commitment from the organisation were perceived as essential parts. Thus, when educating nurses, also through web-based learning, in how to support families, it is important to take into consideration that learning consists of several dimensions and that appraisal of the social aspects also has great influence. Traditionally, the focus on learning in everyday life and in education research is primarily on the individual's understandings, skills and knowledge. However, it is important to emphasise that other aspects, as incentive and interaction, are similarly involved in learning.

7 | RELEVANCE TO CLINICAL PRACTICE

This web-based learning seems to be applicable for educating nurses in FSN and could be an appropriate step towards implementing FamHC in home health care. Moreover, the findings enhance the understanding of educating and giving nurses adequate resources through web-based learning with the purpose

of supporting families in home health care, additionally, contribute to what aspects to be aware of when educating working nurses at their workplace. Thus, the findings of this study are clinically relevant, both on a national and global level, and ready to be applied in nursing health care.

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CONFLICT OF INTEREST

The authors declare no potential conflict of interest regarding the research, authors and/or publication of this study.

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SUPPORTING INFORMATION

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