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# The Process of Translating Family Nursing Knowledge Into Clinical Practice

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## Abstract

**Purpose:** To report on approaches that were used to assist with implementation of family systems nursing (FSN) at a university hospital level in Northern Europe.

**Design and Methods:** A quasi-experimental research design was used for the first phase of the study. For the second phase, a cross-sectional research design was used. Data were collected in the first phase of the study from 457 nurses in all except one of the divisions of the hospital regarding their attitudes towards involving families into their care before and after having participated in the education and training intervention (ETI) program in FSN. Furthermore, in the second phase, data were collected from 812 nurses, after FSN had been implemented in all divisions at Landspitali University Hospital, regarding the nurses' knowledge of FSN and their evaluation of the quality of the ETI program (i.e., theoretical lectures on FSN as well as the benefit of the skill lab training regarding applying FSN into their clinical practices). Graham and colleagues' Knowledge to Action framework was used as the conceptual framework for the research.

**Results:** Nurses who had taken a course in FSN reported a significantly more positive attitude towards involving families in their care after the ETI program compared to those who had not taken such a course. Furthermore, a majority of the nurses who participated in the ETI program reported that the program was a favorable experience and indicated readiness for applying FSN in clinical practice.

**Conclusions:** Further research is needed regarding the benefits of offering FSN at an institutional level, but focusing international attention on effective strategies to implement FSN into nursing practice may result in better health care for individuals and families around the globe.

**Clinical Relevance:** Providing clinically meaningful education and training in family nursing through programs such as the ETI program for practicing

nurses at a university hospital is essential in supporting nurses applying new knowledge, when providing evidence-based health care services, to individuals and their family members. Such training can facilitate integration of new and needed information in clinical practice.

Family systems nursing (FSN) is a phenomenon that is getting increased attention among administrators, and scientists in general, as well as advanced nurse practitioners. The reason is that stronger evidence is being reported in the literature regarding the benefits of involving families in healthcare services, both for patients and family members. Furthermore, recommendations put forward by the International Council of Nursing (2002) and World Health Organization (WHO; 2006) on the importance of involving families in health care, and numerous research findings on improved health outcomes following interventions for families dealing with chronic and acute illnesses, are promising (Bell & Wright, 2011; Chesla, 2010; Leahey & Svavarsdottir, 2009; Svavarsdottir, Sigurdardottir, & Tryggvadottir, 2014; Sveinbjarnardottir, Svavarsdottir, & Wright, 2012). In addition, because of findings from evidence-based research that supports benefits of psychosocial interventions in clinical practice (Svavarsdottir & Sigurdardottir, 2013; Warner et al., 2011), clinical guidelines are increasingly recommending effective family nursing involvement in health care to strengthen both the patient and the family (Registered Nurses Association of Ontario, Canada, 2006). Based on the increased evidence in the literature on positive outcomes of involving families in healthcare services, the Landspitali University Hospital Family Nursing Implementation Project was established in 2007 and was actively applied over a 4-year time period, until the end of 2011. The purpose of this research was to evaluate strategies that were used to facilitate implementation of FSN in general practices as well as advanced nursing practices at Landspitali University Hospital (LUH) in 2007–2011.

## Background

Recently, circularity between knowledge transfer and clinical practice has received attention from scientists and healthcare leaders worldwide. Among those who are responsible for knowledge translation at an institutional level, however, little is known about what strategies have been used when moving evidence into practice. Therefore, in today's societies, it is vital to understand the importance of relational practices between healthcare professionals and families. The quality of the relationship between healthcare professionals and family members is important in order to understand how relational practices or actions can be used to be of the most benefit to patients' health and well-being. One indicator for evaluating the quality of the relationship between healthcare professionals and family members is to evaluate healthcare professionals' attitudes towards involving families in their care, and to evaluate family members' feelings of receiving friendly, pleasant, and connected communications or behaviors versus unfriendly, hostile, or distanced behaviors or attitudes from healthcare professionals (Bell & Wright, 2011; Benzein, Johansson, Arestedt, Berg, & Saveman, 2008; Saveman, Benzein, Engström, & Årestedt, 2011; Simpson & Tarrant, 2006; Wright & Bell, 2009).

Families who are supporting their loved one at a hospital are often dealing with a very complex health situation. Wright and Bell (2009) have emphasized that behaviors of family members cannot be considered in isolation, but rather in the context of the family situation. Therefore, families who experience high-quality relationships with healthcare professionals are less likely to experience feelings of isolation or being vulnerable or uncertain in their caregiving role. Nurses' attitudes towards involving families in their care has been studied by nurses in Western societies (Saveman et al., 2011; Sveinbjarnardottir, Svavarsdottir, & Saveman, 2011). The attitudes of nurses are believed to influence the quality of clinical practice among family nurses. When establishing therapeutic relationships and offering families therapeutic conversations, where the goal is to offer support, facilitate change, and/or maintain or enhance family functioning and well-being, positive attitudes of nurses towards families are essential. According to nurse scientists who have conceptualized these beliefs in their models, such as in the Beliefs and Illness Model (Bell & Wright, 2011; Wright & Bell, 2009) and in the Calgary Family Assessment and Intervention Models (CFAM/CFIM) (Wright & Leahey, 2009), nurses' attitudes or beliefs towards involving families in their care are seen to be fundamental to the possibility of creating therapeutic change, leading to healing, and to decrease suffering among family members. In these models, while embracing change, it is important to identify constraining and facilitating beliefs when establishing involvement in therapeutic

relationships that nurses create in collaboration with the family.

Strong research evidence is now available of the importance of involving families in health care, where families have been found to be of importance both to the acute and chronically ill patient (Halldorsdottir & Svavarsdottir, 2012; Kamban & Svavarsdottir, 2013; Knafl, Deatrick, & Havill, 2012; Konradsdottir & Svavarsdottir, 2011; McClement, Fallis, & Pereira, 2009; Nelms & Eggenberger, 2010; Sigurdardottir, Svavarsdottir, Rayens, & Adkins, 2013; Svavarsdottir et al., 2014), as well as to general and advanced nurses who provide the care (McClement et al., 2009; Schulman-Green et al., 2012). According to Benzein and colleagues (2008) and Wright and Leahey (2009), when the needs of families are addressed and their suffering is acknowledged, the time for patient care is actually maximized and more efficient. This evidence must be of great value to the nursing profession, where time constraints in clinical practice are now of more concern than ever. Further, the growing emphasis on research evidence to direct practice focuses the attention on the education and training of nurses when applying family systems methods and research findings into clinical practice.

In order to improve the health of a population, both the WHO (2005) and Canadian Institute of Health Research (2005) have emphasized the importance of knowledge translation (KT) into clinical practice, where evidence-based information is incorporated into healthcare services (e.g., interactions among researchers and users) in such a way that it effects optimal healthcare outcomes and strengthens healthcare systems. The process of translating new knowledge into clinical practice has been conceptualized in the Knowledge to Action framework by Graham and colleagues (2006) and Straus, Tetroe, and Graham (2011). In this model, KT is seen as occurring in two interactive phases—the knowledge creation phase and the action phase—with fluid boundaries between the creation and the action components of the model. As knowledge is sorted out or refined, the resulting knowledge becomes more developed and useful to the users. In the action phase, knowledge can be implemented simultaneously, and the knowledge phase can influence the action phase at several points in the model.

Based on a review of the literature and the Knowledge to Action model, new knowledge regarding the attitude of the nurses at LUH towards involving families in their care, as well as creating knowledge about nurses' theories and confidence in their own clinical skills in offering FSN after having participated in the education and training intervention (ETI) program, were evaluated (**Figure** 1). Based on a review of the literature and the conceptual framework that guided the study, the following hypothesis was tested: Nurses' attitudes towards involving families in their care will improve significantly after the ETI program, compared to before the ETI program, as measured by the Family Importance in Nursing Care-Nurses' Attitude (FINC-NA) scale. The following research question was asked: What is the level of theoretical knowledge about the CFAM/CFIM and the level of competence in applying FSN, as introduced in the Calgary models, in clinical practice (e.g., using interviewing skills, assessments, interventions, relational interactions, identifying strengths, etc.) among nurses and midwifes at LUH after having participated in the ETI program in FSN?

## Methods

### Design and Sample

For the first phase of the research, a one-group pre and post quasi-experimental study design was used. Data were collected at two time periods from nurses working on all divisions except the emergency division at LUH through an electronic procedure, as well as through paper and pencil format. Nurses who met the inclusion criteria were introduced to the study by members of the research team. The eligibility criteria were being a registered nurse or a midwife who was employed at LUH at the time of the study and being able to read and write Icelandic at a minimum of a fourth-grade level. An exclusion criterion for participation was being involved in another study regarding attitudes or beliefs towards FSN at the hospital. At time one in the first phase of the study (pre-intervention), 457 nurses participated. At time two (post-intervention), which took place about 8 to 24 months later, 411 nurses answered the questionnaire. Information regarding the sample in the first phase of the study is distributed in **Table** 1. For the second phase of the study, the design was cross-sectional. In this phase, 812 nurses and midwifes consented and participated in the study over the 4 years that the data collection took place. Data were collected at one time after the nurses and midwives had participated in the FSN ETI program.

### The Family Nursing Steering Committee and the Family Systems Nursing Implementation Teams at LUH

At LUH, the family nursing steering committee (FNSC) planned strategies over the 4 years of the study to implement FSN into clinical practice at the hospital, where the

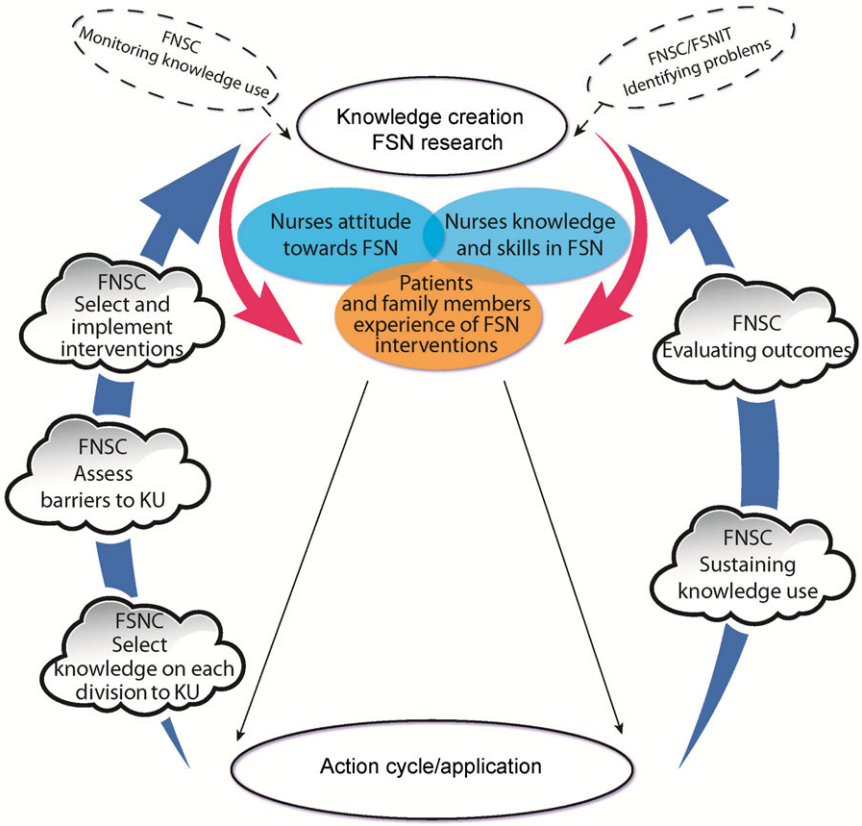


**Figure 1.** Phases of the family systems nursing (FSN) implementation project at Landspitali University Hospital based on the Knowledge to Action framework by Graham and colleagues (2006). FNSC = family nursing steering committee; FSNIT = family systems nursing intervention team; KU = knowledge use.

process of translating new knowledge into clinical practice was based on the Knowledge to Action framework of Graham et al. (2006). In this study, the knowledge creation phase consisted of two separate studies: (a) evaluating the nurses' attitudes towards involving families in their care, before and after having participated in the ETI program, and (b) evaluating the nurses' knowledge and competence in applying FSN in clinical practice. In the action phase of this model, the nurses in the FNSC, in collaboration with nurses in the family systems nursing implementation teams (FSNIT) on all divisions and units at the hospital, implemented simultaneously into clinical practice the new knowledge that had been created in FSN intervention research projects at the hospital (e.g., added benefit of offering short-term FSN interventions to families) and had been trained in the ETI program.

## The ETI Program

The main focus of the ETI program was on increasing nurses' knowledge and skills in FSN. The content of the ETI program was on training nurses in assessing families and offering families within their clinical settings appropriate educational and emotional support and interventions based on the Calgary models. By focusing on conducting family interviews, using therapeutic questions when interviewing families, and through drawing forward family strengths to handle health situations, nurses might maintain or increase the families' wellness and functioning. To fulfill the educational objectives of the ETI program, the nurses attended either a 1-day seminar of 8 hr or two half-day seminars of 4 hr (depending on the needs of the divisions) on the CFAM/CFIM and on family interviewing. Further, the participants were offered family skills lab training and workshops where the focus was on offering short-term family nursing interventions (e.g., conducting family trees and mapping relationships among family members and connection with society as well as training the nurses in asking intervention questions, drawing forward family strengths, and offering commendations). The nurses practiced FSN skills on each

**Table 1.** Phase One—Summary of the Demographics of the Sample of Nurses ($N = 457$), Before and After Participating in the ETI Program on All Divisions at Landspitali University Hospital, Who Responded to the Nurses' Attitude Questionnaire Regarding the Importance of Involving Families in Their Nursing Care

| Background variables | Time 1 ($N = 457$) *n* (%) | Time 2 ($N = 411$) *n* (%) |
|---|---|---|
| Age | | |
| <30 years | 49 (11.8) | 41 (11.3) |
| 31–50 years | 228 (55.1) | 214 (58.8) |
| >51 years | 137 (33.1) | 109 (29.9) |
| Working experience | | |
| <15 years | 175 (41.7) | 131 (46.3) |
| >15 years | 245 (58.3) | 152 (53.7) |
| General policy on unit to care for families | | |
| Yes | 315 (86.8) | 282 (91.9) |
| No | 24 (6.6) | 16 (5.2) |
| Don't know | 24 (6.6) | 9 (2.9) |
| Experience of serious illness and need for professional health care in own family | | |
| Yes | 366 (81.0) | 324 (79.2) |
| No | 86 (19.0) | 85 (20.8) |
| Completed formal education post BSc in nursing (diploma, midwifery, MSc, or PhD) | | |
| Yes | 122 (36.7) | 101 (31.3) |
| No | 210 (63.3) | 222 (68.7) |
| Have taken a course in family nursing | | |
| Yes | 142 (42.5.) | 180 (55.2) |
| No | 192 (57.5) | 146 (44.8) |
| Would be interested in taking a course in family nursing | | |
| Yes | 123 (55.2) | 74 (46.0) |
| No | 100 (44.8) | 87 (54.0) |
| Divisions | | |
| Women and children services | 134 (29.3) | 84 (20.4) |
| Mental health services | 80 (17.5) | 76 (18.5) |
| Surgical services | 82 (17.9) | 103 (25.1) |
| Internal medicine services | 161 (35.2) | 148 (36.0) |

*Note.* *n* varies due to missing data.

other in the clinical lab sessions and discussed clinical cases from their units regarding different aspects of family interviewing and in conducting and maintaining therapeutic conversations with family members. Depending on the needs and willingness of the nurses at the units and the divisions, in the ETI program emphasis was placed on offering regular supervision every week regarding implementation for a time period of 1 month up to 4 months. The supervision was offered when nurses started to apply FSN in clinical practice immediately following the lectures. It was recommended that each nurse attend three to five sessions of clinical supervision, or more, depending on her or his need for supervision on therapeutic conversations with families on their units.

## Measurements

Data were gathered from the nurses through demographic information, the FINC-NA questionnaire, evaluation of lectures on the CFNA/CFNI models, and evaluation of nurses' confidence in using these FSN skills in clinical practice via the Nurses' Knowledge and Confidence (NKC) scale.

## Background information

Nurses' demographic information was gathered in the first phase of the study using an eight-item scale developed by the members of the FNSC at LUH, regarding the nurses' age, education, length of nursing practice, having taken a course in family nursing, FSN policy on unit, etc. (LUH FNSC, 2007a).

**The Family Importance in Nursing Care-Nurses' Attitude Questionnaire.** The FINC-NA questionnaire is a 26-item scale (Benzein et al., 2008) that was originally developed in a sample of Swedish nurses, but has been translated and pilot-tested with a sample of Icelandic nurses. The psychometric properties of the Icelandic version were similar to those reported by the authors (Skuladottir, Konraðsdottir, & Agustsdottir, 2010). The scaling of the instrument is a 4-point Likert scale ranging from *strongly agree* to *strongly disagree*. For the whole instrument, the scoring range was 26 to 104. The higher the score, the more positive the attitude towards families reported by the nurses. Cronbach's $\alpha$ for internal consistency is 0.88 for the total scale. The FINC-NA instrument is composed of four factors: (a) family as a resource in nursing ($\alpha = 0.805$; e.g., the presence of family members eases my workload; it is important to spend time with families); (b) as a conversational partner ($\alpha = 0.785$; e.g., I invite family members to have a conversation with me at the end of the care period; I always find out what family members a patient has); (c) family as a burden ($\alpha = 692$; e.g., the presence of family members makes me feel stressed; I don't have time to take care of families); and (d) family as its own resource ($\alpha = 0.701$; e.g., I consider family members as cooperation partners; I encourage families to use their own resources in order to optimize their opportunities for coping with situations by themselves; Benzein et al., 2008).

**The Nurses Knowledge and Confidence Scale in Using Family Systems Nursing in Clinical Practice.** The NKC scale (LUH FNSC, 2007b) is a

**Table 2.** Phase One—Nurses' Attitudes Towards Involving Families in Their Care on All Divisions at Landspitali University Hospital, Before and After Having Taken the ETI Program ($N = 334$), Based on Whether the Nurses Had Taken a Course in Family Systems Nursing

| FINC-NA scale | | *n* | Mean (*SD*) | *t* | *p* |
|---|---|---|---|---|---|
| Taken a course in family systems nursing | | | | | |
| Pre–ETI program | | | | | |
| Fam-RNC | Yes | 142 | 33.50 (4.65) | | |
| | No | 192 | 33.82 (4.47) | −0.64 | 0.262 |
| Fam-CP | Yes | 140 | 25.18 (4.00) | | |
| | No | 187 | 25.02 (3.81) | 0.36 | 0.350 |
| Fam-B | Yes | 140 | 12.81 (2.20) | | |
| | No | 189 | 13.15 (2.12) | −1.39 | 0.083 |
| Fam-OR | Yes | 134 | 12.78 (2.40) | | |
| | No | 184 | 12.86 (2.15) | −0.31 | 0.377 |
| Fam-Total | Yes | 142 | 84.23 (11.21) | | |
| | No | 192 | 84.79 (10.53) | −0.47 | 0.319 |
| Post–ETI program | | | | | |
| Fam-RNC | Yes | 180 | 33.87 (4.87) | | |
| | No | 146 | 33.54 (4.26) | 0.65 | 0.257 |
| Fam-CP | Yes | 176 | 25.37 (3.69) | | |
| | No | 144 | 25.43 (4.02) | −0.15 | 0.442 |
| Fam-B | Yes | 177 | 13.20 (2.20) | | |
| | No | 143 | 12.76 (2.31) | 1.75 | 0.041[a] |
| Fam-OR | Yes | 170 | 13.11 (1.20) | | |
| | No | 142 | 12.97 (2.43) | 0.58 | 0.282 |
| Fam-Total | Yes | 180 | 85.40 (10.96) | | |
| | No | 146 | 84.61 (10.74) | 0.65 | 0.259 |

*Note.* Fam-RNC = family as a resource in nursing care; Fam-CP = family as a conversational partner; Fam-B = family as a burden; Fam-OR = family as its own resource; FINC-NA, the Family Importance in Nursing Care-Nurses' Attitude. [a]One-way hypothesis testing; independent *t*-tests, significance level of .05.

17-item scale with two factors: (a) knowledge about the Calgary models (11 items; $\alpha = 0.611$; e.g., Can you identify the assumptions and the theories that the CFAM and the CFIM are based on? Can you identify the main components that the Calgary models are based on? Responses were yes, no, and not sure) and (b) clinical skills lab training (6 items; $\alpha = 0.949$). Examples of items that belong to this factor are presentations on cases, discussions about FSN, role play, etc. The items were evaluated on a 5-point Likert scale ranging from not good to excellent.

### Procedure for Data Collection

The nurses in both phases were introduced to the study by members of the FNSC at LUH and or the nurses who belonged to the implementation team at each of the divisions. If the nurses agreed to participate, they answered a package of questionnaires either electronically or through the paper and pencil format (e.g., background questions and the FINC-NA questionnaire; pre-intervention). After the nurses in the first phase of the study had participated in the ETI program they were asked again to answer the FINC-NA questionnaire. In the second phase of the study, the nurses who had finished the ETI program were asked to fill out the NKC scale in using FSN in clinical practice only at this one time after the ETI program. By agreeing to participate in the study and by filling out the questionnaire, the nurses were told that they were willingly agreeing to participate in the study. Approval to conduct the study was received from the Scientific Committee at LUH (No. 28/2008, 16/2009, and 02/2009); from the Staff Ethical Board (No. 01/2008); and from the Chief Executive of Nursing and Medicine at LUH. The study was reported to the Data Protection Committee in Iceland (No. S3739/2008, S4471/2009, and S4189/2009). Data were collected at all phases from January 2007 until December 2011.

**Data Analysis.** Data were summarized using descriptive analyses, including means, standard deviations, and frequency distributions. When the data met the assumption for normal distribution, comparisons of demographic characteristics and main study variables of nurses' attitudes towards involving families in their care and regarding the nurses' knowledge and confidence in applying FSN in clinical practice were made using the independent samples *t* test and one-way analysis of variance (ANOVA). Data analyses were conducted using SPSS for Windows version 18.0 (SPSS Inc., Chicago, IL, USA); $p < .05$ was used throughout (Kinnear & Gray, 2011).

## Results

### Sample

Nurses from all divisions, except the emergency division, participated in the first phase of the study. Over half of these nurses ranged in age from 31 to 50 years, and most of them had over 15 years of working experience. A majority of the nurses believed that there was a policy on their unit about caring for families, and over two thirds of them indicated that they had themselves experienced serious illness in their families and needed professional health care in their own family. One third of the nurses had finished diploma or graduate education after their BSc degree in nursing, and around half of them had taken a course in FSN. When these nurses were asked whether they wanted to take a course in FSN, around half of them wanted to take such a course.

### Nurses' Attitudes Towards Involving Families in Their Care

Nurses' attitudes towards involving families in their care, on all the divisions except the emergency division at LUH, were evaluated before and after having participated in the ETI program. Interestingly, when the data from the hospital were evaluated all together, no significant difference was found on the nurses' attitudes towards involving families in their care at LUH after having participated in the ETI program compared to before participating in the ETI program. When the data were further evaluated based on the responses from the nurses on each division, no significant differences were found in the nurses' attitudes towards involving families in their care after these nurses had participated in the ETI program compared to before they had participated. Nevertheless, when the data were evaluated based on the nurses' background information, a significant difference was found after the ETI program on the nurse's attitudes towards involving families in their care, based on if the nurses had taken a course in FSN compared to the nurses who had not taken such a course. The nurses who had taken a course in FSN reported significantly lower burden towards involving families in their care after the ETI program, compared to the nurses who had not taken such a course in FSN (pre–ETI program = 13.20, post–ETI program = 12.97, $t = 1.75$, $p = .041$; **Table** 2), partly supporting the hypothesis.

### Nurses' Knowledge on FSN and Confidence in Using It in Clinical Practice

ANOVA was used to test differences in means on the knowledge about FSN based on the lectures about the Calgary models and on family interviewing, and on the family nursing skills lab training, regarding the nurses' confidence in applying FSN into clinical practice after having participated in the ETI program. Even though all the data were scored considerably high (the content of the Calgary models ranged in scoring from 12 to 30 [mean scoring ranged from 25.0 to 27.6; possible scoring ranged from 6 to 30] and the confidence in applying FSN in clinical practice ranged in scoring from 0 to 11 [mean scoring ranged from 6.6 to 9.4; possible scoring ranged from 0 to 11]), there was a significant difference found based on the division in which the nurses worked. The nurses at LUH who worked in the surgical division scored significantly higher on the knowledge and content component than the nurses who worked in the women and children division, internal medicine division, and emergency division. Further, the nurses who worked in the emergency division scored significantly higher on the theoretical knowledge and content component of the Calgary models than did the nurses who worked in the women and the children division. In addition, the nurses in the internal medicine division scored significantly higher on the knowledge and content component of the Calgary models than did the nurses in the women and children services (**Table** 3).

Similarly, when the clinical skills and confidence component was evaluated, the nurses in the mental health division were found to score significantly higher on the clinical skills and confidence component than did the nurses in the internal medicine division and surgical division. Nurses in the women and the children division were found to score significantly higher on the clinical skills and confidence component than nurses in the internal medicine services and surgical division. Furthermore, nurses in the internal medicine services were found to score significantly higher on the clinical skills and confidence component of the scale than did the nurses in the surgical division (see **Table** 3).

## Discussion

In order to facilitate implementation of FSN into nursing practice at LUH, the nurses' attitudes towards involving families in their care was evaluated. This evaluation was conducted on all divisions except the emergency division at the hospital, because of specific situations in the emergency division at the time. In the Calgary models (Wright & Leahey, 2009) and in the Illness Belief model (Wright & Bell, 2009), emphasis is placed on the fundamental assumption that a positive attitude of nurses towards involving families in health care is essential to facilitating a therapeutic change, leading to healing and decreasing suffering in families. Knowing the nurses' attitudes towards the importance of involving families in their care is therefore critical, because nurses' attitudes towards FSN can determine the quality of the therapeutic conversations with families and determine the level of involvement that the nurse can create in harmony with families in the therapeutic process. Interestingly, however, in this study at LUH, nurses' attitudes towards involving families in their care did not change after having participated in the ETI program, neither when the data was evaluated by the nurses at the whole hospital, nor by the nurses' evaluations on the women and children, mental health, surgical, or internal medicine divisions at that hospital.

One explanation for the lack of significant findings can be based on the fact that the nurses scored high (86.3) on the FINC-NA instrument (the highest possible score is 104 for the whole instrument) before participating in the ETI program, and the nurses also scored similarly high

**Table 3.** Phase two– One Way Analysis of Variance (ANOVA) (post–tests) of differences in means on a) clinical nurses knowledge about family system nursing (FSN), based on lectures about the CFAM/CFIM; and b) on family nursing skill lab training, focusing on developing a short term family system nursing interventions. Nurses (N=812) evaluation from all divisions at Landspitali University Hospital, who received the ETI–program

| | Post ETI-program | Mental health | | Wom/childr | | Medicine | | Surgical | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean (SD) | MD | p | MD | p | MP | p | MD | p | F | p |
| **Content of the CFAM/CFIM** | | | | | | | | | | | |
| Emergency services (n=105) | 25.02 (3.43) | | | 2.00 | .000 | −2.55 | 0.604 | −2.55 | .000 | | |
| Women/children (n=140) | 23.01 (3.68) | | | | | −1.51 | .000 | −4.55 | .000 | | |
| Internal medicine services (n=144) | 24.53 (3.11) | | | | | | | −3.04 | .000 | | |
| Surgical services (n=197) | 27.57 (2.36) | | | | | | | | | | |
| Mental health services (n=0) | | | | | | | | | | | |
| Total (N=586) Sum of Squares=7417.22 | 25.28 (3.28) df=585 | | | | | | | | | 63.96 | .000 |
| **F(3,582)=63,96, p=0.000** | | | | | | | | | | | |
| **Clinical skills lab training** | | | | | | | | | | | |
| Emergency services (n=137) | 8.61 (2.19) | | −0.75 | .371 | −0.37 | 0.617 | 0.55 | .126 | 2.02 | .000 | |
| Mental health services (n=33) | 9.36 (1.29) | | | | 0.38 | .371 | 1.29 | .010 | 2.77 | .000 | |
| Women/children services (n=130) | 8.98 (1.80) | | | | | | 0.92 | .001 | 2.39 | .000 | |
| Internal medicine services (n=229) | 8.07 (2.22) | | | | | | | | 1.48 | .000 | |
| Surgical services (n=283) | 6.59 (2.27) | | | | | | | | | | |
| Total (N=812) Sum of Squares=5374.87 | 7.84 (2.35) df=811 | | | | | | | | | 42.62 | .000 |
| **F(4,807)=42,62, p=0.000** | | | | | | | | | | | |

*Note.* MD = Mean Difference n varies due to missing data.

(86.5) after having participated in the ETI program. Also, because of the design of this version of the FINC-NA instrument (a 4-point Likert scale), a lack of variability of the scores in the instrument may have contributed to the difficulty in capturing change after the ETI program, compared to before the ETI program. Yet, the authors of the FINC-NA instrument have recently (i.e., after this study took place) worked on refining and revalidating the instrument regarding the scoring distribution, which has resulted in an improved 5-point Likert scale instrument (Saveman et al., 2011).

Nevertheless, a significant difference was found on the nurses' attitudes towards involving families in their care after having participated in the ETI program, based on whether the nurses had taken a course in FSN. These nurses reported a significantly lower burden towards involving families in their care compared to the nurses who had not taken such a course. These findings emphasize that education in FSN had an influence on the nurses' attitudes towards evaluating families that they cared for at LUH (i.e., families were viewed as significantly less burdensome). In addition, these findings are in harmony with the theoretical underpinnings in the Calgary and the Illness Beliefs models (Wright & Bell, 2009; Wright & Leahey, 2009), where nurses' attitudes are believed to have an impact on

nurses' cognition or behavior when practicing in clinical settings.

On the other hand, training nurses in FSN in clinical settings took place through lectures and through family skills labs. The goal of the training program was to increase the nurses' knowledge and skills in FSN within their clinical settings. The main emphasis in the learning process was on stimulating ideas of applying FSN in clinical practice through discussions and dialogue among the clinical instructors and clinical nurses. In this learning environment, the nurses in the general practices got the opportunity to respond to theoretical and conceptual issues regarding FSN and to reflect on their own clinical experiences when working with families. Even though there was no significant difference found at the hospital on the nurses' attitudes towards involving families in their care after having participated in the ETI program, the content and components of the ETI program were evaluated favorably by the nurses who took it over the 4 years of the study. That is, the scoring was much skewed towards the positive end of the scale on the NKC measure after the ETI program. The nurses scored on average 25 out of the highest possible score of 30 in the knowledge and content factor of the NKC scale, and the nurses' mean score was 7.8 out of the highest possible scoring of 11 on the factor regarding using FSN in the clinical practice part of the NKC scale.

Interestingly, however, in the knowledge and content factor of the NKC scale, the nurses in the surgical division were found to score the highest, followed by nurses in the emergency division, when compared to the nurses in the other divisions at the hospital. The nurses in the women and children division scored the lowest on the knowledge and content component of the Calgary models, significantly lower compared to the nurses in the other divisions. However, the nurses in the mental health division were found to score the highest on the clinical skills and confidence component of the NKC scale, followed by the nurses in the women and children services at LUH, who scored the second highest on the clinical skills and confidence component of the scale. Nonetheless, the nurses in the surgical division were found to score the lowest or significantly lower than the nurses in the other divisions at the hospital on the clinical skills and confidence factor of the NKC scale. This finding is new and has not been reported previously in the literature. A possible explanation is that the nurses in mental health services and in women and children services are trained in working with families on a regular basis and because of that might be more skilled in interviewing families than the nurses working on units at the hospital dealing in general with more physical diseases among their patient population. Nevertheless, having the nurses in the emergency services scoring the third highest on the clinical skills and confidence component in applying FSN in clinical practice was surprising but may stress the need for a family nursing perspective in the nursing practice in the emergency division of the hospital.

## Limitations of the Study

The findings from the study need to be interpreted within the context of the site and the country in which it was conducted. It also needs to be interpreted within the context of the overall purpose of the study, which was to evaluate knowledge translation at an institutional level. In addition, the measures were newly developed, which creates a limitation within itself in that they had not been previously tested or evaluated within a variety of different cultures or clinical settings.

## Conclusions

The strategies that have been used at LUH to implement FSN into general as well as advanced nursing practices are encouraging. Through meetings and support group activities, the implementation process on each of the divisions was evaluated and the research findings adapted based on specific needs from the divisions and units. However, what is still needed in the years to come and what future research needs to focus on is to specifically evaluate the benefits of the ETI program and the FSN interventions with valid and reliable scales. It is also important to assess barriers to using FSN on the divisions, to further monitor the outcomes of the implementation as well as sustain the knowledge use, and to specifically select knowledge to use on each division. In addition, evaluating implications to practice is of major importance.

Nurses in general practice and advanced practice at LUH who have been trained in FSN within clinical settings have reported the ETI program to be a favorable experience. In addition, nurses' attitudes at the hospital towards family nursing are in general positive. Since nurses on all units at LUH have now received training in FSN in general and advanced nursing practices, the most critical point from an administrative and implementation perspective will be to continue to offer the ETI program to the nurses who still have not taken it, and to continue to support nurses who have already taken the ETI program, in offering short-term FSN interventions to families. Such support and encouragement will be needed to facilitate the implementation.

Strategies that might be of help to build up confidence in family nursing and to smooth out the process of

further implementing, maintaining, and sustaining FSN in nursing practices at LUH might be to (a) offer all nurses in general practices further educational support in FSN in clinical settings, (b) offer clinical consultation to nurses in advanced practices, and (c) support nurses in further developing their skills in working with families. By continuing to build and support a strong partnership between nurse scientists within academia and clinicians, we may be more likely to succeed. One vignette for such a partnership is through the newly established Center of Family Nursing Research and Development at LUH, and through participation in programs of research and teaching, and application of FSN in clinical practice at the hospital.

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### Clinical Resources

- World Health Organization: http://www.who.int/kms/WHO_EIP_KMS_2006_2.pdf
- Canadian Institute of Health Research: http://www.cihr-irsc.gc.ca/e/29418.html
- The Center of Family Nursing Research and Development at LUH: http://www.landspitali.is

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