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Explaining the dimensions of specific competence in training specialist nurses in multiple sclerosis: a qualitative study

Original Article

Banafshe Samari[a], Efat Sadeghian[b], Mahtab Sattari[c], Bahman Aghaie[d,*]

[a]*Hamadan University of Medical Sciences, Hamadan 6517838736, Iran*
[b]*Chronic Diseases (Home Care) Research Center, Hamadan University of Medical Sciences, Hamadan 6517838736, Iran*
[c]*Department of Midwifery, School of Nursing and Midwifery, Hamadan University of Medical Sciences, Hamadan 6517838736, Iran*
[d]*Department of Medical-Surgical Nursing, Faculty of Nursing, Qom University of Medical Sciences, Qom 3713649373, Iran*

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Abstract: **Background:** The complexity of multiple sclerosis (MS) due to psychological, emotional, physical, family, and social dimensions complicates the care of these patients. MS patients need hospitalizations and long-term care to treat and control the progression of the disease. Therefore, the competence of caring for MS patients is one of the important issues in clinical nursing.
Objective: To explain the dimensions of competence in caring for MS patients.
Methods: This study is a qualitative descriptive study using conventional content analysis method. Field notes and semi-structured face-to-face interviews were conducted on 12 specialist nurses of MS and 3 MS patients from the neurology ward. Participants were selected through purposeful sampling. Data analysis was performed using the approach of Zhang and Wildemuth by continuous comparison simultaneously with data collections.
Results: Data analysis led to the extraction of 2 categories with 5 subcategories. The first category is "unlearned care competence," with the subcategories as psychological–emotional resilience, psychological skills, and excellent communication skills. The second category is "specialized technical competence," with the subcategories as up-to-date pathological knowledge and expertise in clinical procedures.
Conclusions: Identifying the competencies of nurses of MS patients is important for educating nurses to provide qualified care and improve MS patient satisfaction. Nursing managers can empower nurses in non-technical areas such as in-service psychology courses and improve professionalism in caring for MS patients by promoting communication and specific clinical skills.

Keywords: *competence • multiple sclerosis • nurse • patients • qualitative study*

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1. Introduction

Multiple sclerosis (MS) is a chronic and degenerative autoimmune disease of the central nervous system that leads to neurological disorders at a young age.[1] More than 1 million people worldwide and 70,000 people in Iran suffer from MS.[2] The disease is on the rise in Iran. Iran has the highest number of patients with MS in the Middle

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* *Corresponding author.*
E-mail: bahman.aghai@gmail.com (B. Aghaie).

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East.[2,3] The increase in the number of people with MS in Iran has coincided with the increase in governmental and private care for these patients.[2] Therefore, providing quality care to MS patients by competent nurses in these centers has been considered. Clinical competence in nursing includes a combination of ethics and values and their reflection in clinical knowledge and skills, communication techniques, and clinical reasoning in clinical settings.[4] In nursing, clinical competence is a significant concern for patient care, and a proper understanding of its concept is important for the training of a competent nurse.[5]

Various factors affect the clinical competence of nurses, including cognition, individual skills, experience, environment, motivation, independence, personality, and individual characteristics.[6] Currently, clinical competence in nurses is one of the most important concerns of health managers.[7]

Nurses without the necessary skills in health centers can endanger the health of the community and individuals.[8] In addition, some studies have shown a direct relationship between the level of clinical competence and the rate of application of skills. The higher the nurse's competence, the higher the possibility for practical use of his skills in the clinic.[9]

The complexity of MS due to psychological, emotional, physical, family, and social dimensions complicates the acceptance of the disease for patients, prolongs the adjustment period, and reduces patients' quality of life.[1] Therefore, caring for these patients is complex and long-term. Also, MS patients require multiple hospitalizations to treat and control the disease progression.[10] Providing safe and quality care improves the treatment outcomes and satisfaction of MS patients with nursing services.[11]

Considering the increasing number of MS patients and the importance of training MS specialist nurses due to special conditions and sensitivities in the care of patients with MS, the researchers of this study considered it necessary to examine the views of nurses on the dimensions of competence in caring for MS patients.

2. Methods

2.1. Design

This study is a qualitative descriptive study using conventional content analysis method in Qom, IR, Iran, in 2021. This method is suitable for explaining people's attitudes and perceptions and interpreting people's life experiences.[12]

2.2. Setting and participants

Participants included 12 specialist nurses from the neurology ward and 3 MS patients from 2 hospitals. Inclusion criteria included patients with a diagnosis of MS, history of hospitalization for the treatment of MS, and nurses with more than 1 year of care for MS patients. Participants were selected through purposeful sampling (Table 1). Exclusion criteria included having a degree in nursing assistance and incomplete interview.

2.3. Data collection

Semi-structured face-to-face interviews were conducted with 12 specialist nurses for MS patients and 3 MS patients from February to April 2021. The corresponding author conducted the interviews in Persian language in a comfortable environment. The time and place of the interviews were prepared with the opinion of the participants. The corresponding author conducted each interview after introducing the objectives of the study. The mean interview time was 45–55 min, and was based on the tolerance and desire of the participants. The interview guide was prepared using consultation with experts in qualitative studies and by conducting 2 pilot interviews. The interview began with an open-ended question entitled, "Tell me about caring for MS patients" and "How can nurses of MS patients take effective care of these patients?" Then, if necessary, probing questions were asked based on the participants' responses. Data saturation was obtained in the 11th interview. The authors also conducted an additional interview to ensure that data saturation was achieved. This was when no new information could be extracted from the data. To enrich the extracted categories, 3 interviews were conducted with 3 MS patients. Interviews were audio-recorded with the permission of the nurses and patients and transcribed verbatim as soon as possible. Also, the prepared field notes were used for data analysis.

2.4. Data analysis

Data analysis was performed using the method of Zhang and Wildemuth by continuous comparison,

Characteristics	Number
Position	
Head nurse	2
Staff nurse	10
Work experience (years)	
1–5	2
5–10	4
10≥	6
Types of hospitals	
Teaching hospital	5
Private hospital	7
Educational level	
Bachelor's degree	10
Master degree	2

Table 1. Characteristics of the participants (N = 12).

simultaneously with sampling. This method has 8 steps: (1) the recorded interviews were transcribed verbatim on the same day, (2) meaning units were determined and coded, (3) extracted codes were categorized according to their similarities and differences into initial subcategories and categories, (4) the research team constantly reviewed the extracted codes to achieve clarity and consistency, (5) data collection then continued until saturation was reached, (6) rechecking the accuracy and stability of the data by all authors and 2 external peer reviews, (7) finalization of categories and subcategories, and (8) finally, reporting all steps of the study.[13]

2.5. Trustworthiness

According to Lincoln and Guba,[14] credibility was obtained by allocating enough time for each interview and analysis, prolonged engagement with data and participants, and member check processes. For confirmability, 2 skilled faculty members in qualitative studies checked the quality of interviews, coding, and categories to reach a consensus. For dependability, all stages of the study were reported in detail. Finally, transferability was established through maximum variation sampling.

2.6. Ethical consideration

The Ethics Committee approved this study of Hamadan University of Medical Sciences, Iran (approval code: IR.UMSHA.REC.1399.909). All participants were informed about the study aim, voluntary participation, and the right to withdraw from the study. Also, individual informed consent was obtained from each of them for audio-recording.

3. Results

In total, 310 codes were extracted. After removing similar codes, 164 codes remained. These codes were classified into 12 initial subcategories. After the final analysis by the research team, subcategories with conceptual similarity were combined, and finally, 5 subcategories were extracted and classified into 2 categories. The first category is "unlearned care competence" with subcategories as psychological–emotional resilience, psychological skills, and excellent communication skills. The second category is "specialized technical competence" with subcategories as up-to-date pathological knowledge and expertise in clinical procedures (Table 2).

Categories and subcategories	Example of coding
Unlearned care competence	
Psychological-emotional resilience	High self-control in the patients aggressive behaviors; good manners; being patient
Psychological skills	Be compassionate; having mental health; psychological resilience
Excellent communication skills	Good skills participating in teamwork; humanitarian communication with the patient; detecting the patients hidden fears and anxieties; active listening; high emotional intelligence; being physically and mentally supportive of the patient; building trust in the patient
Specialized technical competence	
Up-to-date pathological knowledge	Knowing the specialized information of the disease; having complete pharmacological information; proper knowledge of injecting MS drugs
Expertise in clinical procedures	Accurate knowledge of injectable and oral MS protocols; information on the side effects of MS drugs; high skill in venipuncture and catheterization; skills in performing invasive procedures without causing more pain

Note: MS, multiple sclerosis.

Table 2. Subcategories and categories.

3.1. Unlearned care competence

3.1.1. Psychological–emotional resilience

From the perspective of nurses of MS patients, one of the most important characteristics of these nurses is to have psychological–emotional strong resilience and high mental health. Nurses should be very resilient and kind in the face of the patients' disturbed mental state. In addition, they should have adequate psychological resilience in the face of these patients' variable behaviors, such as aggressive behaviors and crying.

MS patients also have very sensitive personalities, and the nurse should not be upset and nervous about these patient behaviors ... Nurses for MS patients should be very patient.(p.2)

The novice nurse was crying at the nursing station after being admitted to a young woman who had suffered from hemiplegia following an acute MS attack, and the head nurse was talking to him. (field note1)

Nurses of these patients should have high psychological control to provide useful care for patient satisfaction.

In my opinion, the most important need of a nurse caring for these patients is to have mental health and high ability to manage their mental emotions ... MS patients have a serious disease at the best age of their life, that is, the peak of youth, and that is why they are very nervous. They are irritable and often aggressive with their nurse, but MS nurses need to control themselves. (p.6)

Also, nurses of MS patients should have a high level of mental health. Nurses with mental health problems

will face many challenges in providing effective care to these patients and will be exposed to increased job stress.

One of the most important factors in nursing MS patients is high mental health ... If the nurse does not have this factor, he cannot teach the patient relaxation methods, which will have negative effects on patients, and he may suffer from burnout very soon. (p.9)

3.1.2. Psychological knowledge and skills

One of the essential competencies of nurses of MS patients is developing high skills and psychological knowledge in MS nurses. These nurses should have a high level of psychological knowledge to provide appropriate psychological support to the patient. In addition, having a high level of psychological knowledge in these nurses leads to the patient's trust in her nurse, which creates an effective nurse–patient relationship.

MS patients have a disturbed mental state; the nurse of an MS patient should have a high level of psychological knowledge to provide appropriate psychological care to the MS patient before providing physical care. (p.8)

In my opinion, these patients need more support and emotional care, empathy, and sympathy than physical care in the beginning ... Proper mental care makes physical care more effective. (p.6)

Nurses of these patients should have good psychological knowledge to identify the hidden mental disorders of these patients and education about the coping mechanisms and self-care strategies. For example, many of these patients suffer from varying degrees of anxiety and depression but hide their symptoms. To discover the hidden mental problems of these patients, these nurses need to be aware of the symptoms of common mental illnesses in these patients, be active listeners, and carefully monitor patient behaviors.

The nurse of the MS patient should be like a psychiatric nurse; they must listen actively to the patients. because these patients have mental disorders such as anxiety and depression due to their youth and non-acceptance of their illness, but they try to hide them. (p.3)

3.1.3. Excellent communication skills

Nurses of MS patients should have excellent skills in communicating with the patient. Failure to establish a proper nurse–patient relationship will have negative consequences, such as patient dissatisfaction with the nurse and non-acceptance of planned care by MS patients.

From the perspective of nurses and the therapeutic relationship, they should have a patient–nurse relationship that is healing and compassionate. From this perspective, the condition for MS patients to trust nurses is to have a kind and deep patient–nurse relationship. MS patients need a friendly and supportive atmosphere.

An MS patient will not cooperate well in her treatment until she/he trusts their nurse. (p.4)

Sometimes it is difficult to communicate with an MS patient because of the tremendous stress they have, and the nurse should be skilled in establishing a proper relationship with the patient. (p.9)

The head nurse and expert nurse calmed the fourth bed, which had aggressive behaviors, after presence at the patient's bedside. (field note2)

Also, these nurses need to have appropriate teamwork skills and establish professional communication with the physician and other nurses to complete care programs for these patients.

One of the necessary competencies in the nurses of these patients is to have appropriate skills in establishing a strong and stable nurse–patient relationship in the shortest time ... A nurse who is unable to communicate well with an MS patient is often unsuccessful in establishing appropriate work relationships with the physician and other colleagues. (p.10)

3.2. Specialized technical competence

3.2.1. Up-to-date pathological knowledge

Nurses of MS patients should have a lot of up-to-date information about MS. Up-to-date knowledge leads to patient trust and a good nurse–patient relationship. MS nurses need to be up-to-date due to the ongoing advances in the treatment and diagnosis of MS. In addition, because MS patients are young, they study a lot to be aware of their disease. They have a lot of up-to-date information, so the nurse of these patients, with up-to-date information, can answer patients' questions appropriately.

MS patients have a lot of information about their disease, and if a nurse does not study and cannot answer their patients' questions correctly, patients do not trust their nurses. (p.9)

MS nurses should have accurate pharmacological information about MS medications, including training on using them properly and their common side effects. They should also be aware of the latest treatment protocols for these patients. In addition, the nurse of an MS patient should know and educate the patient about the dangerous side effects of MS medications such as Fingolamide, which may cause bradycardia.

The nurse of an MS patient should know the correct way to inject drugs for this disease, such as Rituximab ... In addition, the patient's nurse should be aware that a high-speed injection of this drug causes tachycardia, so they should closely monitor the patient's heart. (p.11)

3.2.2. Expertise in clinical procedures

The nurses of these patients should be experts in neurological assessment and impose treatment and diagnostic procedures on MS patients with the least amount of pain and in the shortest time. Novice nurses can cause aggression and discomfort if they do not have the necessary skills to perform medical procedures such as vascular access or catheterization with minimal pain and in the shortest time.

These patients are very emotionally sensitive and have low pain tolerance, so in aggressive procedures, it should be with the least amount of time and minor pain; otherwise, they will be upset. (p.8)

The patient became angry with her nurse for the vascular access and asked to speak with the head nurse. (field note3)

Also, these nurses should have high electrocardiogram (ECG) interpretation and magnetic resonance imaging (MRI) skills to be fully aware of the progress or control of the disease. In this way, they can play an effective role in the treatment team of these patients.

An MS nurse should be fully aware of cardiac arrhythmias to identify possible arrhythmias of the patient being treated and perform prompt treatments ... In addition, the nurse of an MS patient should be diagnosed with sinus tachycardia or prolonged QT interval on the ECG, which is a side effect of MS medications. (p.5)

The head nurse was teaching the novice how to measure QT interval on ECG and emphasized its importance.(field note4)

4. Discussion

As nurses cite in their perspectives, they have a range of skills that are interpreted as unlearned competencies in caring for MS patients. Unlearned competencies are those skills that are inherent in nurses. These competencies are reflected in psychoemotional, communication, and resilient skills. However, nurses provide comprehensive care to MS patients, which is organized by understanding the pathophysiology, medical management, and nursing diagnosis.[15] In this study, nurses are trying to maintain their psychological resilience in the acute events of MS. These experiences reflect the nurses' knowledge gained from their experience in clinical work with emotionally fragile patients.

Another unlearned competence of nurses is to communicate well with the patient and other caregivers. In this regard, nurses consider building trust in patients with MS as an important component of effective communication. As nurses point out, the result of such trust is establishing deep patient–nurse communication that brings about patient cooperation during treatment. In this regard, Saunders et al.[16] suggest that health care providers who encounter MS patients may have to overcome a rocky beginning and work even harder to gain patients' trust. The importance of establishing a trusting relationship is due to the vulnerability of patients with MS, which is why trust-assisting communication is necessary to create a greater willingness to adhere to the treatment and recommendations of the physician. Active listening is another aspect of excellent communication skills provided by clinical nurses. Experiences expressed for this skill include helping alleviate psychological pain such as anxiety and trying to align the patient with the diagnosis, prognosis, and treatment of MS. Inconsistent with this finding, Alroughani[17] emphasized that interrupting active listening to MS patients may break the order of thinking, resulting in patient frustration. In this study, nurses present that teamwork and good relationships with other health providers can help to establish nurse–patient communication. In any case, the nurses in this study do not explain the clear aspects of the lack of teamwork success in interventional approaches with MS patients. Suddick and De Souza,[18] in an exploratory study, determine the perceptions and experiences of teamwork in neurological rehabilitation and found therapists' experiences of teamwork implications for the team, the patient, individual team members, and the neurological rehabilitation service. As the findings of this study show, most nurses were aware of the importance of addressing the psychological needs of MS patients, so they were very willing to study and intervene as a psychologist. However, in this study, the nurses do not have professional competence for psychological counseling or have a qualified degree such as psychiatric nursing. Regarding teamwork in caring for MS patients, Carolan and Gournay[19] say MS patients suffer very common mental health consequences. Nurses, alongside other professionals in the spirit of teamwork, can provide holistic care for this population.

Academic care competence emerges from nurses' experiences in clinical work with MS patients. Having accurate knowledge about the pathophysiological process of the disease, pharmacology of MS drugs, and strong technical skills for injecting and prescribing medicines are presented as the factors shaping the academic care competencies of nurses in the care of MS patients. In line with this finding, Halper[20] discussed the role of nurses in caring for MS patients and state that in the evidence-based understanding of MS, the role of the nurse has evolved from a supportive, educative role to that of a highly skilled, knowledgeable, and specialized professional. In explaining the professional role of nurses caring for MS patients, Meehan and Doody[21] in a systematic review, investigate the family and patient

perspectives of the role of nurses and show that nurses in long-term care of these patients are leading health care specialists to meet the needs of the patient and the family. Researchers in this study believe that nurses' perceived experiences of academic competence in working with patients with MS reflect their knowledge of the psychological fragility in their patients, such as anxiety and distress from the prognosis of the disease, which makes them committed to know and apply their maximum clinical skills in tasks such as venipuncture or drug injections without aggravating the patients' pain and suffering.

5. Conclusions

The results of this study indicate a combination of unlearned and academic care competencies that both nurses and MS patients have experienced in clinical encounters. Identifying these competencies could be important to develop expertise care and the patients' satisfaction in the nursing practice in the long-term clinical settings. Also, nursing managers can benefit from the study findings to empower nurses in non-technical areas, such as providing in-service training courses for psychological counseling and communication and clinical skills required for nurses of MS patients. Finally, trying to shift from non-academic to technical and evidence-based skills in the nursing care of MS patients is of particular importance.

Limitations and strengths

One of the strengths of this study was the sampling of all clinical nurses, head nurses, and patients, including clinical nurses from various wards and nursing managers from different levels of management. This sample variation leads to a comprehensive understanding of the dimensions of competencies required in MS specialist nurses.

Ethics approval

The study protocol was approved by the Ethics Committee of Hamadan University of Medical Sciences, Iran (approval code: IR.UMSHA.REC.1399.909). All participants were informed about the study aim, voluntary participation, and the right to withdraw from the study. Also, individual informed consent was obtained from each of them for audio-recording.

Conflicts of interests

None of the authors disclose any potential conflict of interest.

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