

Nursing roles in the subacute rehabilitation of patients with stroke.

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Abstract

Objective: Nurses are the largest professional workforce working with stroke survivors in China. However, the study of nurses' role in subacute post-stroke rehabilitation is sparse. The objective of this study was to describe the experienced roles of nurses during subacute rehabilitation of stroke survivors in China.

Method: Twenty nurses working with post-stroke patients in subacute rehabilitation settings participated in in-depth semi-structured interviews from 2014 to 2015.

Results: Nurses integrate rehabilitation principles in routine care thus make an important contribution to post-stroke rehabilitation in subacute settings. However, nurses lack training in post-stroke rehabilitation in China, which limited their roles and functions in the subacute rehabilitation of patients with stroke.

Conclusions: In subacute settings of China, nurses make an important contribution to rehabilitation of stroke survivors by integrating rehabilitation principles in routine nursing care. Lack of training limited their roles and functions.

Keywords: stroke survivors, stroke rehabilitation, subacute rehabilitation, rehabilitation nurses.

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Introduction

Stroke is the largest cause of adult disability and third largest cause of death in the world, which represents a heavy health burden [1]. Epidemiologic data indicate that there are 5 million people suffering permanent disability from stroke worldwide each year [2,3]. Therefore, post-stroke rehabilitation is critical for stroke survivors' function recovery and quality of life. In Western countries, subacute post-stroke rehabilitation is provided by multidisciplinary teams (MDTs), which include nurses, physical therapists (PTs), occupational therapists (OTs), and speech therapist (SPTs). In China, MDTs practice in post-stroke rehabilitation has not been extensively adopted yet. Nurses are the largest professional workforce working with stroke survivors in China [4,5]. However, nurses' roles and functions in post-stroke rehabilitation are not fully identified and understood by patients, their family members, and other healthcare professionals [6,7]. Usually they are unable to identify examples where nurses made a contribution to post-stroke rehabilitation [8-11].

Previous studies [12-16] suggested three main nursing roles in stroke care in Western countries. The first is direct care which focused on carrying out medical advice and preventing of complications including injecting and administering medications, monitoring vital signs, positioning and moving to prevent pressure ulcers, and maintaining nutrition, etc. [12,13]. The second is co-ordination and management of care of MDTs [13,14]. The third is rehabilitation-related encompassing i.e. carry-over care, continuation care, or integrative care [15,16]. However, the study of nurses' roles and functions in subacute

post-stroke rehabilitation in China is largely sparse. This study aimed to identify and explore the experienced roles and functions of nurses during subacute rehabilitation of patients with stroke in China.

Methods

Settings

The present study was conducted in two subacute post-stroke rehabilitation settings in China. One setting was in the North region of China and another one in the South region of China. Each setting was staffed by nurses who had at least one year experience working with post-stroke patients.

Inclusion criteria

All staff nurses in both settings were eligible to participate in the study if they worked for more than three days a week in settings. The present study received research approval from each setting. All participants have provided written informed consent. Nurses with extensive and limited experiences working with post-stroke patients were recruited to provide for meaningful comparisons (Table 1) of motion and other qualitative perceptions the patient may face is necessary to elucidate how the intervention will work [15].

Table 1. Nurses' experiences in sample.

Nurses' Experience (y)	n (n=20)	Interviewed (n=20)
1-2	6	6
2-5	7	7
≥5	7	7

Data collection

In-depth semi-structured interviews were conducted between December 2014 and March 2015 in two post-stroke rehabilitation settings (Table 2). Each interview lasted between 60 to 120 minutes. Researchers were present to explain the whole process and guide the interviews. The interviews were audiotaped and transcribed for analysis.

Data analysis

The directed content analysis method was used to analyze interview data [17]. This method aimed to identify the experienced roles and functions of nurses during subacute rehabilitation of stroke survivors in China.

Results

Twenty nurses working with post-stroke patients in subacute rehabilitation settings participated in this study. The mean age of them is 29.5±5.7. All of them are females. From the data analyses, two major themes were identified which were: (1) integration of rehabilitation; (2) lack of training.

Integration of rehabilitation

Interview data indicated that all participants, regardless of previous experience, agreed that providing post-stroke rehabilitation in sub-acute settings is beneficial for stroke survivors. All participants did not agree that integrating rehabilitation principles in routine nursing care could only happen when staffing levels are high. However, they agreed that it was difficult when staffing levels were low. They pointed out that integration could still be achieved if nurses understood the importance and purpose of it. Some responses indicated:

We're doing it all the time anyway, just sitting a patient in the chair or putting an arm on a pillow, that's part of activities of daily livings (ADLs). Asking them to speak slowly if they've got aphasia.

You've got to ask them to take their time. (Interviews)

Of course, low staffing level affects care. However, we provide rehab-based care regardless of staffing levels. (Interviews)

A lot of care can be done around patient's ADLs [. . .] It can be part of, washing and dressing and their initial personal care and

part of a patient's ADLs. (Interviews)

During interview, all participants discussed and identified a number of key areas where they felt the nurse provided a unique contribution to stroke survivors (Table 3). The example here demonstrates a number of unique areas from the nurses:

- Vital signs monitoring
- Medications management
- Skin integrity management
- Nutrition maintenance
- Continence care
- Record keeping

Lack of training

All participants believed that they did not receive appropriate and adequate training in post-stroke rehabilitation principles and techniques. All the training they ever received was informal and brief. Some responses indicated:

I do not think I had enough training in rehab. All the knowledge and skills I ever had were learned from nursing school, which are outdated and not enough. (Interviews)

These perceptions of not receiving adequate training reveal the barriers preventing nursing from making greater contributions to rehabilitation of stroke survivors. The consequences of maintaining this status quo would be lack of self-confidence and self-efficacy in integrating rehabilitation principles in routine nursing care.

Sometimes, I just do not know how to do it. I was worried I would do something wrong to hurt the patients. (Interviews)

We do not have physical therapists and occupational therapists on board. So sometimes, we lack guidance to perform rehab. (Interviews)

Lack of training makes it difficult for nurses to integrate rehabilitation in their daily routine work. It also makes stroke survivors at risk of not receiving appropriate rehabilitation services, which poses a threat to patients' prognoses and clinical outcomes.

Table 2. The interview guide.

	The following questions were only used to guide the interview, which may be asked in a different order according to the participants' responses
1.	Do you think you are deeply involved in post-stroke rehabilitation during your routine nursing care?
2.	Would you please tell me what rehabilitation services you provided during your routine work?
3.	Do you think you usually integrate rehabilitation principles and techniques in your routine nursing care?
4.	Do you have problems preventing you from integrating rehabilitation principles and techniques in your routine nursing care? What are they?
5.	What recommendations would you like to make in order to improve the integration?
6.	Do you think you have received appropriate and adequate training in post-stroke rehabilitation?
7.	What changes would you like to see regarding rehabilitation for stroke survivors in the future?

Table 3. Interview results showing nurses' role in post-stroke rehabilitation settings.

■ Carrying out medical advice, e.g. injections, wound care
■ Monitoring vital signs
■ Positioning and moving to prevent pressure ulcers
■ Maintaining nutrition
■ Continence care
■ Record keeping

Discussion

In developed countries, subacute post-stroke rehabilitation is provided by multidisciplinary teams (MDTs) including nurses, physical therapists (PTs), occupational therapists (OTs), and speech therapist (SPTs) [12,13]. In China, due to lack of PTs, OTs, and SPTs, the MDTs approach is not commonly adapted. Therefore, nurses are the largest professional workforce working with stroke survivors. The present study provided insight into viewpoints regarding their roles and functions among nurses working in subacute post-stroke rehabilitation settings in China. In the present study, participant numbers were relatively high and included nurses with a variety of experiences. However, there was no difference regarding their perceptions between experienced nurses and inexperienced nurses.

In contrast to previous studies on nurses' roles in stroke care which were conducted in Western countries [15,16,18-22], participants in our study did not believe that they had an independent rehabilitation role. Rather, the interview data demonstrated that nurses viewed themselves as supporting workforce for physicians.

It has been reached consensus that encouraging and facilitating independence of patients is critical to post-stroke rehabilitation [23,24]. In the present study, all participants agreed that this should be integrated into routine care. Some participants provided examples of these skills in routine care, such as washing and dressing. Despite time and workload pressures in subacute settings in China, most participants indicated that they understood the importance of integration and often perform it during routine nursing care.

The interviews also identified some issues that preventing nurses in China from integrating rehabilitation principles and techniques. First of all, all participants believed that they did not receive enough training to integrate rehabilitation principles in care. All the training they ever had was informal on-site training which was not enough. Secondly, due to increased workload demands, direct care had to be prioritized. All participants felt it increasingly difficult to perform it in daily practice. Failure to provide rehabilitation training for nurses may result in a growing separation between experienced nurses, who have less direct patient contact, and inexperienced nurses who have most patient contact and most need of rehabilitation knowledge and skills. The interviews provided some evidence that inexperienced nurses think nursing care to be something separate from rehabilitation. The present study found that inexperienced nurses lack ability to encourage and facilitate stroke survivors' independence. Post-stroke rehabilitation training is important for nurses who work in subacute post-rehabilitation settings. However, in China, there is no mandatory requirement for nurses to participate in such training [25]. Nurses in China may benefit from such training given that challenges in developing their rehabilitation skills are recognized and addressed.

Conclusion

Nurses actively participate in post-stroke rehabilitation in subacute settings in China. However, they do not routinely receive training in stroke rehabilitation skills, which limited their involvement in post-stroke rehabilitation.

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