

Original article

The integrated rehabilitation for disabled of movement persons in community of Kuchinarai Crown Prince Hospital, Kuchinarai District, Kalasin Province

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Abstract

In the current situation found around the world, approximately one billion people are affected by disability, due to the increasing of chronic non-communicable diseases and old age rising. In Thailand, people with disabilities were diagnosed with the most physical disability or movement. In Kalasin District of Thailand found mostly of physical disability or movement persons. Therefore, the researchers interested in studying the integrated rehabilitation for the disabled of movement persons in the community. The results of this research will be provided to managers and agencies involved in the mobility of people and staff to provide information for the rehabilitation of the disabled. To be useful as a guideline for further study. This study was the action research. The objectives were study about the effective of integrated rehabilitation for disabled of movement persons in community of Kuchinarai Crown Prince Hospital, Kuchinarai district, Kalasin province about Activity Daily Living: ADL, the complications from disability and quality of life among the 19 disabled of movement persons. Proceeded the integrated rehabilitation by health care team and collected data by questionnaires. The statistics used in the studying consist of quantitative analysis with descriptive statistics and Paired Sample t-test for find the difference in mean of Activity Daily Living: ADL and quality of life before and after the proceeding. Study results found that after proceeding the integrated rehabilitation, the disabled of movement persons had the average score of Activity Daily Living: ADL increased statistically significant 0.01 (p -value = 0.000), the complications from disability were decreased and had the average score of quality of life increased statistically significant 0.01 (p -value = 0.000).

The suggestions from the study: Should proceed the integrated rehabilitation continuously for the disabled of movement persons in the long run. In the success group should bring to apply for the other group of disabled persons and in community.

Keywords: Integrated rehabilitation, Disabled of movement persons, Activity Daily Living, Complications from disability, Quality of life

Article info:

Received: Jan 7, 2019

Revised: Apr 10, 2019

Accepted: May 9, 2019

Introduction

In the current situation found around the world, approximately one billion people are affected by disability, or about 15%, due to the increasing of chronic non-communicable diseases and old age rising. (World Health Organization, 2017). In Thailand, The last survey in 2016 found that 1,429,826 people with disabilities were diagnosed with the most physical disability or movement was 48.76%, cause from cardiovascular diseases most 34.4% (Ministry of Social Development and Human Security, 2017). According to the survey of people with disabilities in Kalasin province in 2017, there were 6,684 disabled people and there were physical disability 3,780 people or 56.55%. in Kuchinarai district, there were 1,910 disabled people, with the greatest number of physical disability 945 persons, or 49.48%. (Ministry of Social Development and Human Security, 2017). The cerebrovascular disease and bone diseases are the cause of the appearance of disability or defects such as make the arms and legs are atrophied and lead to paralyzed, causes difficulty in movement of the body and limited their daily lives (Stuart, et al. 2009). In addition, restriction of movement poses a risk of postoperative complications, physical side effects such as joint stiffness, arthralgia, pain and bedsores (Ehrlich-Jones et al. 2010). The disability may effect to increase the psychological stress and depression, decreased of self-esteem (Naylor, et al. 2007).

In the past, the primary care services focused on receptive services more than proactive services. Health service provision did not match the the real demand of people (Naylor, et al. 2007) and most did not know how to begin rehabilitation work, no goals clear of service guidelines. (Siwilai wanaratvijit, 2017) From these problems, the researchers interested in studying the integrated rehabilitation for the disabled of movement persons in the community by studied the real situation about physical rehabilitation or mobility for disabled of movement persons in community of Kuchinarai Crown Prince Hospital, Kuchinarai district, Kalasin province and developed a rehabilitation pattern for the disabled of movement persons in the community through participatory processes in the community by discussing groups with stakeholders in the community. There were 3 components; the first was the management included the policy formulation, responsibility determination and role and the team formation, the second was returning data to community about process definition include searching for physical disability of movement persons, assessing problems and needs of them, classification of disability taking, rehabilitation and referral system. and the third was the defining of outcome include the activities of daily living (ADL), the complications after a disability and the quality of life among the disabled of movement persons. The results of this research will be provided to managers and

agencies involved in the mobility of people and staff to provide information for the rehabilitation of the disabled and to be useful as a guideline for further study.

Aim

This study aimed to study the effect of integrated rehabilitation for the disabled of movement persons in the community of Kuchinarai Crown Prince Hospital, Kuchinarai district, Kalasin province.

Objectives

The objectives of the study were to compare the effect of integrated rehabilitation for the disabled of movement persons in the community of Kuchinarai Crown Prince Hospital, Kuchinarai district, Kalasin province before and after research in the following variables :

- 1) The activities of daily living (ADL)
- 2) The complications of disability
- 3) The quality of life

Methods

The study was the action research, studied in the community of Kuchinarai Crown Prince Hospital, Kuchinarai district, Kalasin province, conducted between August to November 2017. Selected the sample by purposive selection, among 19 disabled of movement persons who consented to participate in research, over 45 years old, had chronic diseases such as stroke or bone disease before the disability, could speak to communicate and had no other repetitive disabilities. Collected data by 4 parts of questionnaires consisted of

- 1) The general information questionnaire.
- 2) The activities of daily living (ADL) assessment with the Thai version of the Modified Barthel Index. (Busakorn Loharnchun et al. 2010).
- 3) The complications from disability questionnaire.

- 4) The quality of life assessment with the Thai version of World Health Organization (WHOQOL-BREF-THAI). (Department of Mental Health, Ministry of Public Health, 2017)

The statistics used in the studying consist of quantitative analysis with descriptive statistics and Paired Sample t-test for find the difference in mean of Activity Daily Living : ADL and quality of life before and after the Proceeding.

The activities of integrated rehabilitation for the disabled of movement persons was proceeded by the health care team consisted of the doctors, nurses, physical therapists, pharmacist and 30 persons of the village health volunteers participated to take care of the disabled of movement persons in community. The description of activities consisted of the following activities:

- 1) Established working group of the health care team and made the division of responsibilities.

- 2) Searched for physical disability of movement persons in community
- 3) Assessed the problems and needs.
- 4) Planned meeting for take care of the disabled of movement persons.
- 5) Proceeded the training course to 30 persons of the village health volunteers and the care givers about the disabled of movement persons caring.
- 6) Visited home in each case at least 3 times a week for 15 weeks by the health care team and worked with the care giver to assess the patient before and after the proceeding integrated rehabilitation for the disabled of movement persons about the activities of daily living (ADL), the complications from disability and the quality of life.

Result

The general information: the study found that most of the disabled of movement persons were male 57.89%, they were over 60 years old 63.16%, had married 68.42%, had primary education 89.47%, did not work 63.16%, had underlying disease 84.21% and 56.25% were the hypertension disease most, had an illness duration less than 3 months 42.11% and had the care giver were related as their child, Table 1.

The activities of daily living (ADL): the study found that before participating in the integrated rehabilitation for the disabled of movement, people had their activities of daily living at level 4 (could help themselves totally) were 47.37% and after participating the integrated rehabilitation, they had their activities of daily living at level 4 increased 89.47 percent. And the disabled of movement persons had the average score of Activity Daily Living: ADL increased statistically significant 0.01 (p -value = 0.000), Table 2,3.

The complications from disability: the study found that all of the complications from disability were decreased, Table 4.

The quality of life: the overall quality of life was found before participating in the integrated rehabilitation for the disabled of movement, people had the quality of life in moderate 52.63 %, and poor 47.37%. After participating the integrated rehabilitation, they had the quality of life in well 47.37 and moderate 52.63%. The disabled of movement persons had the average score of the quality of life increased statistically significant 0.01 (p -value = 0.000), Table 5,6.

Discussions

From this study found that the disabled of movement persons had the average score of Activity Daily Living: ADL increased statistically significant 0.01, it was from the effect of the Proceeding the integrated rehabilitation by health care team, according to the research by Wachareekorn Pimarn et al. (2011) studied the development of the model of community-based rehabilitation services has found that after the development of the service model the ability to perform the Activity Daily Living : ADL increased significantly $p < 0.01$ and according to the research of Jirapan Pothong et al. (2014), the effectiveness of the rehabilitation model for the physically disabled or integrated movement in the community was found after rehabilitation. The average score of Activity Daily Living: ADL increased significantly at the 0.05 level.

The disabled of movement persons had the complications from disability decreased after participating in the integrated rehabilitation that according to the research results of Jirapan Pothong et al. (2014), the effectiveness of the rehabilitation model for physical disability or integrated movement in the community was found after rehabilitation, physical disability or mobility has been associated with reduced disability.

The disabled of movement persons had the average score of the quality of life increased statistically significant 0.01, according to the research by Jirapan Pothong et al. (2014) studied the effectiveness of the rehabilitation model for physical disability or integrated movement in the community was found after rehabilitation found that the average score of quality of life in all aspects increased significantly at the 0.01 level.

Suggestions

The suggestions from the study were

1. Should be proceed the integrated rehabilitation continuously for the disabled of movement persons in the long run.
2. In the success group should bring to apply for the other group of disabled persons in community.
3. Should study in the mobility group on additional factors that affects the rehabilitation of the disabled to solve the problem rightly.

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Table 1 The general information of the disabled of movement persons in the community of Kuchinarai Crown Prince Hospital, Kuchinarai district, Kalasin province

General information	Number (n=19)	Percentage
Sex		
Female	8	42.11
Male	11	57.89
Age		
45-50 years old	1	5.26
51-55 years old	3	15.79
56-60 years old	3	15.79
More than 60 years old	12	63.16
Marital status		
Single	2	10.53
Married	13	68.42
Widow	4	21.45
Education		
Primary education	17	89.47
Bachelor's Degree or higher	2	10.53
Occupation		
Government employees	3	15.79
Farmer	4	21.05
Do not work	12	63.16
Underlying disease		
Yes	16	84.21
No	3	15.79
Diabetes mellitus	1	6.25
Hypertension	9	56.25
Diabetes mellitus & Hypertension	6	37.50
Duration of illness (disability)		
Less than 3 months	8	42.11
3-6 months	5	26.31
7-11 months	2	10.53
1-2 years	1	5.26
3-4 years	1	5.26
More than 5 years	2	10.53
Care giver		
Child	10	52.63
Relatives	2	10.53
other	7	36.84

Table 2 Number and Percentage of the activities of daily living (ADL) of the disabled of movement persons in the community of Kuchinarai Crown Prince Hospital, Kuchinarai district, Kalasin province

The activities of daily living (ADL)	Before	After
	Number (Percentage)	Number (Percentage)
Level 1 could not help themselves totally, depend on all others	4 (21.05)	-
Level 2 could not help themselves hardly, have to rely on others hardly	1 (5.26)	-
Level 3 could help themselves Moderately, have to rely on others	5 (26.52)	2 (10.53)
Level 4 could help themselves totally	9 (47.37)	17 (89.47)
Total	19 (100.00)	19 (100.00)

Table 3 Compared mean of Activity Daily Living (ADL) of the disabled of movement persons in the community of Kuchinarai Crown Prince Hospital, Kuchinarai district, Kalasin province

The activities of daily living (ADL)	\bar{x}	S.D.	Min.	Max.	T	p - value
Before	10.00	5.21	0	17	8.380	.000**
After	15.53	3.50	9	20		

** Statistical significance was less than 0.01

Table 4 Number and Percentage of the complications from disability of the disabled of movement persons in the community of Kuchinarai Crown Prince Hospital, Kuchinarai district, Kalasin province

Complications from disability	Number (Percentage) (n=19)			
	Before		After	
weak of left arm	yes	5 (26.32)	better	5 (100.00)
	no	14 (73.68)		
weak of left leg	yes	7 (36.84)	better	7 (100.00)
	no	12 (63.16)		
weak of right arm	yes	11 (57.89)	better	10 (90.90)
	no	8 (42.11)	stable	1 (9.10)
weak of right leg	yes	13 (68.42)	better	11 (84.62)
	no	6 (31.58)	stable	2 (15.38)
paralyze of left arm	yes	5 (26.32)	better	5 (100.00)
	no	14 (73.68)		
paralyze of left leg	yes	5 (26.32)	better	5 (100.00)
	no	14 (73.68)		
paralyze of right arm	yes	1 (5.26)	better	1 (100.00)
	no	18 (94.74)		
paralyze of right leg	yes	1 (5.26)	better	1 (100.00)
	no	18 (94.74)		
bedsore	yes	1 (5.26)	none	19 (100.00)
	no	18 (94.74)		
retain urinary catheter	yes	1 (5.26)	normal	1 (100.00)
	no	18 (94.74)		
retain NG tube	yes	2 (10.53)	none	19 (100.00)
	no	17 (89.47)		
joint stiffness	yes	2 (10.53)	none	19 (100.00)
	no	17 (89.47)		

Table 5 Number and Percentage of the quality of life of the disabled of movement persons in the community of Kuchinarai Crown Prince Hospital, Kuchinarai district, Kalasin province

Quality of life	Before			After		
	poor	moderate	well	poor	moderate	well
1. Physical	12 (63.16)	7 (36.84)	-	-	15 (78.95)	4 (21.05)
2. Psychological	7 (36.84)	12 (63.16)	-	-	8 (42.11)	11 (57.89)
3. Social	15 (78.95)	4 (21.05)	-	-	17 (89.47)	2 (10.53)
4. Environmental	5 (26.32)	14 (73.68)	-	-	9 (47.37)	10 (52.63)
Overall quality of life	9 (47.37)	10 (52.63)	-	-	10 (52.63)	9 (47.37)

Table 6 Compared mean of the quality of life of the disabled of movement persons in the community of Kuchinarai Crown Prince Hospital, Kuchinarai district, Kalasin province

Quality of life	\bar{x}	S.D.	Min.	Max.	T	p – value
1. Physical						
Before	15.32	3.99	10	22	12.404	.000**
After	24.05	2.46	20	28		
2. Psychological						
Before	15.74	3.18	11	20	11.859	.000**
After	22.79	2.49	20	25		
3. Social						
Before	5.16	2.09	3	9	8.988	.000**
After	9.63	1.16	8	12		
4. Environmental						
Before	20.42	3.95	13	26	9.879	.000**
After	29.74	2.90	25	34		
Overall quality of life						
Before	59.84	12.36	42	78	46.757	.000**
After	93.53	8.93	79	108		

** Statistical significance was less than 0.01