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A Study on the Effect of Self Care Plan on Activity Daily Living Status in Patient with Cerebro Vascular Accident

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Hemiplegy is a major complication of cerebro vascular accident that causes patient experiences various degree of dependency in activity daily living. This dependency encountered some struggles at home and society. It is proved that among health system personnel the nurses are suitable persons to change patients dependency to independency. This study was carried out to determine the ratio effect of self care plan on activity daily living status in patient with cerebro vascular accident. This research is a quasi experimental case-control study. Intervention was accomplished in case group but not in control group. Data gathering instruments were Chasteners and check lists. Sixty patients with CVA were selected through a non random sampling. This patient were assigned in two case and control group (30 per group). The results showed that there was no statistically significant difference on ADL score means in two groups in the pretest (p=0.51). But after intervention used in the case group Home setting we found a significant difference on ADL score means in two groups during the post test period (p<0.01). Finding showed that in post test ADL score means in case group were 32% higher than the control group. And finally the results indicated that there area statistically significant difference between the variables of age, sex, muscular weakness, motor disorder and ADL score means. And finally according to research findings, we emphasized on the importance of nurses role in home care in patient with chronic diseases and the importance of patient follow up in society too. Indeed we confirmed the community oriented nursing perspective.

Key words: Cerebro vascular accident, self care, hemiplegy

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INTRODUCTION

In spite of progress in the hygiene science and medical techniques, but it couldn't completely prevents human from taking diseases and today, chronic diseases are as a big challenge that human face with it (Ignata *et al.*, 1997). Chronic diseases are primary problem in the world.

Stroke is the common medical problem and after the cardiovascular problem and malignant neoplasm, stroke is the third cause of death in the world. It's annually occurring per thousand people is between 1.7-7.4 and it is in vacillation and it consists of 10-20% of all the world death (Wilson *et al.*, 1999).

Disability in daily life is related to the problem in the self-caring ability that in nursing system is called as a nursing diagnosis. Caring purpose of these patients is to maximize their ability for doing self-caring activities and to minimize their need for others help (Burell and Hacke, 2002).

The most basic needs of patients with hemipolgic stroke are related to self-caring needs and most of the them are about the relations with others, food, Personal hygiene, taking drugs and security of patients. (Cliney *et al.*, 2001).

Showaxy (2004) resulted that 96% of patients with stroke that dismissed from hospital have need for reability. Studying and planning of these programs is essential part of survey in nursing science.

Most of the people that suffer from stroke, after one month, become more disable and according to nursing, they need to full and intensive program at home and in society. There must be harmony between the self-caring programs at home in hospital and in society. The nurse is suitable persons for making this harmony. The sensitiveness of family members in helping to stroke patients, have the most importance. Family have responsibility for cooperation with care Team. But deficit of knowledge is the important problem that must be trained by nurses. undoubtedly, one of the most important rules of nurses is training and leading and this group can do this very well and they have important role in improving health, elision of dependence and take the patient to independent level in daily activities (Lewis, 2000).

Researchers with comparing nursing in hospital and at home resulted that there is difference between ability of patients who received self caring program and group that dismissed from hospital with hospital routine (program). (Jan Coleman, 2005).

MATERIALS AND METHODS

This is a Quasi Experimental case and control study and it's performance method contains four stages as follow:

First stage: sampling: In this study we chose 30 patients as case group and 30 patients as control group by none random (simple or available) sampling method. In order to match the two groups, choosing the samples were on the basis of factors such as age, gender, literacy, instances of CVA.

In this stage after introducing themselves to the patients, the researchers described the aims and the methods of performance and took their agreements for participating in the study. Then the demographic information questionnaire and the condition of ADL were described to the patients and completed them according to patients history and nurses own observations of the time of discharge.

Second stage: intervention or performing of planned self care program: This stage is in the form of 6-8 educational sessions that delivered at patient's home after their discharge time and includes 5 steps.

First step: After gathering demographic information and ALD related questionnaires we completed the standard SIS index in order to define self care needs of patients in case group according to the patients history, their families narration and our own observation at physico-mental and socio-affectional compasses. Finally the self care needs were classified in three above mentioned compasses.

Second step: Performing planned self care program in physical compass on the basis of self care needs obtained from SIS index and with paying attention to the nursing cares in nursing reference books the self care program were delivered in physical dimension and in the form of 1-3 sessions each lasts 90 min for patients and their families.

Third step: In this stage patients self care needs in psychiatric dimension were defined on the basis of SIS index and according to planned self care program, the problems preceded and the best possible solution specified and self care intervention in the form of 1-2 session (s) each lasts 90 min.

Fourth step: In this stage paying attention to the self care needs in social dimension and on the basis of planned self care program, the patients social problems preceded and

possible solutions for solving them were delivered and the best solution was chosen. Finally on the basis of self care program and in the form of 1-2 session (s) each lasts 90 min the educational interventions were carried out.

Fifth step: The end stage evaluation of self care program: In this stage the self care program delivered to patients and their families are assessed and criticized and the weaknesses and strengths of the program were specified, new and suitable solutions proposed and some strategies for performing of the best solution and promotion of self care program efficacy offered.

Since active participation of patient and his family in this program was very effective, we used their proposals during the sessions, so that they follow the self care program with feeling of effectiveness in a absence of researcher at home.

Third stage: After finishing the second stage we gave a 45 days opportunity to patients so that they carry out the rained self care methods at home in the form of a self reporting check lists. It is necessary to mention that the researcher referred to their home two times weekly during that period and they inform the researcher of their possible problems.

Fourth stage: After finishing the 45 days time period the ADL questionnaires were filled for both case and control groups on the basis of patients history and researchers' observations and after delivering self care program the generated changes in case group are compared with the results obtained from control group that hadn't received the above mentioned program were statistically analysed. In this study the data gathering tool was questionnaires. The questionnaires used in this study are included:

- The questionnaire pertained to patients' demographic information.
- Stroke Impact scale questionnaire relates to self care needs in socio-physicomental dimensions.
- The questionnaire to appointing the ADL rate in both case and Control groups (the standard Modified Barthlel Index).

All of the Hemiplegic CVA patients hospitalized in neurologic ward of selected Hospital of Urmia University of Medical Sciences were formed the Statistical Society and the study population was chosen among them that in addition to have inclination to participate in the study, must possess these particularities:

- Must pass the acute phase of the illness (must be at the point of dischargement).
- Must not be at Complete Bed Rest (CBR) state.
- Must be executable and have the ability of self care.
- Must have the minimum ability of reading and writing.
- Must not have a precedent of hospitalization due to psychiatric disorders.
- Must be from both genders (male and female).
- Must be between the 45-65 years age limitation.

We used the nonrandom sampling method (available or easy sampling) in this study. The samples were chosen on basis of researchers' desired specifications. So that the samples were chosen in two male and female groups with their referral orders and with odd numbers as case and even numbers as control group. It is necessary to mention that the samples were matched according to factors such as age, gender, education level, lacking or having attendants and the times of CVA appearance. After execution of the self care program and data gathering in two stages before and after execution of self care program they analyzed by means of descriptional and inferential statistics. We used Independent T, Event T, X^2 and lever tests for data assessing.

RESULTS

After analyzing of obtained data, they have delivered in the forms of tables and their explanations. Considering that matching of case and control groups had effects on obtained ADL scores, therefore, for unifying the both groups from the view point of age, gender, smoking, educationlevel, hospitalization period, times of previous hospitalization (s), cautiousness disorder, indicator of muscular weakness, indicator of movement disorder, indicator of secondary disorder and chronic previous antecedent we used leven test for equalizing variances, t-test for quantitative and x^2 test for qualitative variables. the results showed that there weren't any meaningful differences between both groups from the view-point of dispersion of these variables (p>0.05 in all cases).

For determine planned self care program effect on samples' ADL scores the obtained informations were compared in two groups before and after delivering self care program.

The patients' mean ADL scores were nearly equal in two groups before delivering the program also the mean ADL changes of the patients weren't equal in two groups after intervention and Independent t-test showed meaningful difference among the patients mean ADL

Table 1: The comparison of patients ADL score mean change in test and control groups

Testing on the basis of independent t-test			Leven test for determination of variance equality	Standard deviation	Mean ADL scores	Number	Indicator Group	Inter-venation
p-value	d f	t-value	p-value	18.7	31	30	Case	Before
0.51	0.58	0.65	0.41	23	27	30	Control	
p<0.001	0.58	5.6	0.7	25.7	74	30	Case	After
				23.4	38	30	Control	

Table 2: The comparison of patients score mean change on ADL several compass in test and control groups

Testing on the basis of independent t-test			Leven test for equality of variances testing	Standard deviation	Mean ADL scores	Number	Group	r ADL compass
p-value	df	t-value	p-value	1.27	3.8	30	Case	Individual Hygiene
0.001	58	3.6	0.14	1.54	2.5	30	Control	
0.003	58	3.1	0.007	1.40	3.6	30	Case	Bathing
				1.58	2.4	30	Control	
p<0.001	58	4.6	0.31	2.5	7.7	30	Case	Feeding
				2.7	4.6	30	Control	
p<0.001	58	4	0.49	2.9	7.1	30	Case	Water and closet
				3.2	3.9	30	Control	
p<0.001	58	5.8	0.75	2.2	8.7	30	Case	Hair combing
				2.6	5.0	30	Control	
p<0.001	58	4.6	0.98	2.8	7.4	30	Case	Wearing clothes
				2.6	4.1	30	Control	
p<0.001	58	5.7	0.62	3.0	7.6	30	Case	Bowel control
				2.6	3.3	30	Control	
p<0.001	58	3.8	0.76	3.5	7.1	30	Case	Bladder control
				3.2	3.7	30	Control	
p<0.001	58	1.9	1	3.9	11.3	30	Case	Moments
				4.5	5.4	30	Control	
p<0.001	58	6.15	0.34	4.20	10.5	30	Case	Moving from bed to chair
				3.6	4.2	30	Control	

scores, supposing that the variances were equal (p<0.001).finally according to the results, the ADL scores increased 32% in case group in comparison with control group (Table 1).

For determine influence of planned self care program on different dimensions of activity daily living we used independent t-test and the results showed that after intervention there were meaningful difference between two groups from the view points of individual hygiene, bathing, feeding, water and closet, hair combing, wearing clothes, bladder and bowel control, movement, removing from bed to chair and vice versa (Table 2).

For determine relation between demographic variables and ADL scores we used statistical independent t-test and correlation test and it is defined that there were meaningful relation among the variables such as smoking, previous hospitalization history, orientation disorder, sensory disorder, lacking or having other chronic diseases and acquired ADL scores. But there weren't meaningful relation among Gender and movement disorder with patients' ADL score with p = 0.003 and 0.008, respectively. In order to study of the relation between the age and final ADL scores we used pierson correlation coefficient and the results showed that the correlation ratio between the age and the final ADL scores after the intervention was 0.319 that there were meaningful relation with the level of p = 0.03.

Finally it is defined that:

- There weren't meaningful differences among the final mean ADL scores of the patients before performing the program (p = 0.51).
- We observed meaningful differences among the final mean scores of the patients ADL after performing the program (p<0.001).
- The difference between the mean ADL scores in control group was 11 and in case group was 43.
- After delivering the planned self care program there was a 32% progression in case group ADL scores in comparison with control group.

In other words from general point of view the planned self care program was considerably effective and useful in promotion of life quality and the condition of CVA patients ADL.

Suggestions for future researchers
We suggest:

- To carry out this study in a larger and palmated population, with more possibilities.
- To carry out a study with different self care program and comparing it's results with the present study.

- To plan a self care program about other chronic diseases such as diabetes me litus, renal failure and haemodialyse, heart and respiratory failured patients and assessing their efficacy.
- To carry out a study about the methods of life quality promotion in CVA patients.

DISCUSSION

The results of studies showed that, in spite of progress in medical, but one of the complication of Stroke is hemipelegy, debility and dependency and most of the patient face with challenge in life style. it seems that nursing staff are responsible for harmonizing patients with new life style. Several studies like (Showayy, 2004; Ciney *et al.*, 2001) emphasize this responsibility of nurses.

According to this results, in the chronic diseases, taking responsibility of caring to their family is consuming in caring cost, to free the time of doctors and nurses, reduce percent of used beds in hospital .studies proved that families have suitability in caring of chronic patients. (Brown and Ranson, 1999).

The another important point is paying attention to nurses responsibility when the patients dismissed from hospital. It is considered that when the patients dismissed from hospital their relation with hospital is stop, but nurses have responsibility of improving health even after the dismissing from hospital. It seems that hospitals must be planned to connect the dismissing to after dismissing service and patients always feel nurses beside themselves.

Finally, results showed that hospital is not only place for nursing service and nurses must help improving the peoples health out of the hospitals and in society.

Little percent of society patients hospitalized and most of the patients remain unknown. Paying attention tothis subject and strategic planning in nursing management specially in developing countries, is very important. In other hand, it is the time to take up the walls and fences of hospitals and the nurses must prepare themselves for servicing in large hospital that is called society.

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