

Impact of Self-Efficacy of Patients' with Epilepsy on Self-Care in Al-Najaf Al-Ashraf City

تأثير الكفاءة الذاتية على الرعاية الذاتية لمرضى الصرع في مدينة النجف الأشرف

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الخلاصة:

خلفية البحث: الصرع هو خلل عصبي شائع ومعقد مما يؤثر على الحالة الصحية ونوعية حياة المريض. والتي تميل إلى الظهور بأشكال مختلفة وفقاً لتكوين النشاط الكهربائي للمخ جزئياً أو كلياً.

الأهداف: تهدف الدراسة الحالية إلى تقييم الكفاءة الذاتية لمرضى الصرع وتقييم الرعاية الذاتية لمرضى الصرع، لمعرفة العلاقة بين الكفاءة الذاتية والرعاية الذاتية وإيجاد العلاقة بين الرعاية الذاتية والمتغيرات الديموغرافية والصحية للمريض التي تشمل العمر، الجنس، مستوى التعلم، المهنة، الحالة الزوجية والسكن.

المنهجية: أجريت دراسة وصفية مقطعية في الدراسة الحالية لتحقيق الأهداف المحددة. بدأت الدراسة للفترة من الثاني كانون الثاني 2018 وللعامة 20 أيار 2018. اختيرت عينة غير احتمالية "غرضية" من (50) مريض يعاني الصرع، والذين يراجعون مدينة الصدر الطبية / مركز الفرات الأوسط للعلوم العصبية. جمعت المعلومات من خلال استخدام استبانة المصممة والمكونة من أربعة أجزاء، الجزء الأول شمل المعلومات الشخصية ويحتوي (6) فقرات والجزء الثاني شمل المعلومات السريرية المكون من (8) فقرات والجزء الثالث شمل نشاطات الرعاية الذاتية المكون من (5) فقرات والجزء الرابع شمل الكفاءة الذاتية والمكون من (31) فقرة.

النتائج: أظهرت نتائج الدراسة الحالية أن التقييم العام للرعاية الذاتية للمرضى متوسطة وأن التقييم العام للكفاءة الذاتية للمريض كانت متوسطة. بالإضافة إلى ذلك، هناك علاقة معنوية بين (الرعاية الذاتية للمرضى) و (الكفاءة الذاتية).

الاستنتاج: استنتجت الدراسة إلى أن هناك تأثير مباشر للكفاءة الذاتية للمرضى على رعايتهم الذاتية، عندما تزداد الرعاية الذاتية للمرضى، تزداد كفاءتهم الذاتية وكذلك العكس.

التوصيات: أوصت الدراسة بتصميم برنامج تثقيفي وتطبيقه لزيادة معلومات المرضى حول أنشطة الرعاية الذاتية لعلاج الصرع من أجل: تقليل أو منع المضاعفات وإجراء دراسات أخرى على حجم عينة أكبر لإعطاء مزيد من البيانات حول أنشطة الرعاية الذاتية.

الكلمات المفتاحية: تأثير، مرضى، رعاية ذاتية، كفاءة ذاتية، الصرع.

Abstract:

Background: Epilepsy is a complex and common in neurological defects which effects on the health status and the quality of life, which tend to appear in different forms according to the construction the electrically activation of the brain partially or completely.

Objectives: to assess Self-Efficacy of patients with Epilepsy, To assess Self-Care of patients with Epilepsy, to find out the relationship between Self-Efficacy and self-care of patients with Epilepsy and to find out the relationship between Epileptic patients' Self-care and their demographic and clinical data.

Methodology: A Descriptive Cross-Sectional Design is adopted in the current study to achieve the early stated objectives. The study started from January 2nd, 2018 until May, 20th, 2018. A Non-Probability (Purposive Sample) of (50) epilepsy patients, those who Attended Al-Sadder Medical City / Middle Euphrates Neuroscience Center, are included in the study sample, Data collected through using of a well-designed questionnaire consist of four parts: **part I:** Demographic data that consists of (6) items including age, gender, level of education, occupation, marital status and residency, **part II:** Clinical data that consists of (8) items including Etiology of epilepsy, Duration of epilepsy, Time of occurrence of seizure, Reported seizure frequency in last 3 months, Do you visit neurologist, Do you have other chronic condition, Do you receive an education about epilepsy, If yes, from where did you get information, Do you smoker, If yes, type of smoking and gives duration and numbers of cigarettes, and **part III:** consists of patients' self-care activities comprised of (5) major domains, and part IV consists of self-Efficacy comprised of (31) items.

Results: The findings of the present study indicate that the overall assessment for patients' self-care are interdependent and overall assessment of the patients' Presented that the self-efficacy domain items is fair. In addition, that there was a significant association between the (patients' self-care) and their (self-efficacy).

Conclusions: The study concludes that there was a direct effect of the patients' self-efficacy on their self-care, when patients' self-efficacy increases, their self-care increases as well and vice versa.

Recommendations: The study recommends epileptic patients need education guidance, such as published materials with regard to self-care activities, and an educational program should be designed and applied to increase patients' information about self-care activities for epilepsy to reduce or prevent complications.

Keywords: Impact, Patient, Self-Care, Self-Efficacy, Epilepsy.

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INTRODUCTION

Epilepsy is a complicated and common neurological defect that effects on the state health and the quality of life ⁽¹⁾. Depending on the construction the electrically activation of

the brain, Epilepsy is the fourth position in the United States among common neurological defect and the migraine, stroke, and Alzheimer disease⁽²⁾. Partly or entirely tends to appear in different forms⁽³⁾. Epilepsy is viewed through recurrent attacks of seizure. The seizure states to the activity of motor, psychologically, or sensory, or all of these characteristics of mixed activity that happen as a result of electrical discharge more than usual in the brain⁽⁴⁾. The most common cause is idiopathic or primary epilepsy (caused by unknown cause), while the other causes are secondary epilepsy (caused by meningitis, brain tumor, head injury, or other causes)⁽⁵⁾.

Epilepsy is the most common neurological disease in the world after headache, with an annual increase in the population with epilepsy of around 2.4 million new cases. The prevalence of epilepsy considers highest percentage in developing countries that form 3\4 in the worlds. The production situation that lowering or even failure for patient with epilepsy that reaching caused by adverse effect on activity of daily living, psychosocial, and the economic status⁽⁶⁾.

Self-care is considered the most important factors in controlling chronic diseases like stroke⁽⁷⁾. The self-care concept has evolved over the years. It is associated with autonomy, independence and individual responsibility for healthy behaviors as well as for the development of activities required to manage and monitor health conditions^(8,9).

Self-management in patient with epilepsy is influenced by an individual's believes about health, including self-efficacy. Self-efficacy is a person's belief in his/her ability to successfully organize, control his/her health habit, and achieve valuable health outcomes. The results of the studies on chronic disorders have shown that the individuals with high self-efficacy are more successful in management of self-care responsibilities. So, self-efficacy is an effective factor on patients' ability to control the disease, coping with illness and drug control of epilepsy⁽¹⁰⁾. Self-efficacy is defined as "one's belief in one's capabilities to enact a certain behavior" and according to Bandura, is the most influential variable of the self-system. Over the years, Self-efficacy has become an important variable predicting health-related behaviors, such as smoking cessation, weight reduction, maintaining exercise programs, etc. the Epilepsy Self Efficacy Scale and found that this scale showed a high positive correlation with epilepsy self-management behaviors⁽¹¹⁾.

Self-efficacy in management of epilepsy refers to personal opinion about the ability to initiate and successfully accomplish the tasks related to daily management of epilepsy. Patients with chronic diseases such as epilepsy should apply methods and practices that contribute to managing disease symptoms, slowing down disease progression, and ultimately maintaining quality of life. Self-management behaviors associated with epilepsy include the use of medications according to prescriptions, lifestyle modification in order to lessen seizures, control of seizures and their subsequent side effects, doctor visits, and information gathering about the disease, its treatment and management⁽¹²⁾.

Globally, Epilepsy may lead to death; occur about 0.9-2.3 / 1000 individual each year, increasing about to 1.1-5.9 / 1000 persons annually in individuals with chronic stubborn epilepsy⁽¹³⁾.

METHODOLOGY

Study Design: A Descriptive Cross-Sectional Design in the current study is adopted to achieve the early stated objectives. The study started from January 2nd, 2018 to May, 20th, 2018.

Study Setting: The study is conducted in Al-Najaf City/Al-Najaf Al-Ashraf Health Directorate / Al-Sadder Medical City, at Middle Euphrates Neuroscience Center.

Study Sample: A Non-Probability (Purposive Sample) of (50) patient with epilepsy, those who was visited Al-Sadder Medical City / Middle Euphrates Neuroscience Center, are involved in the sample.

Study Instrument: An assessment tool is adopted and developed by the researcher to assess the impact of patients' Self-Care on Self-Efficacy with Epilepsy. The complete instrument of the study contains of (4) parts:

- **Part 1:** Demographic data that contain on (6) items, including age, gender, level of education, occupation, marital status and residency.
- **Part 2:** Clinical data that contain on (8) items, including Etiology of epilepsy, Duration of epilepsy, Time of occurrence of seizure, Reported seizure frequency in last 3 months, Do you visit neurologist, Do you have other chronic condition, Do you receive an education about epilepsy, If yes, from where did you get information, Do you smoker, If yes, type of smoking and gives duration and numbers of cigarettes.
- **Part 3:** Patient's Self-Care: This part was comprised of (5) domains, that assesses frequency of use of epilepsy self-management practices, and including the Information management domain, which measures through (6) items, Lifestyle management domain is comprised of (5) items, Medication management domain, which consists of (10) items, Safety management domain consist of (8) items and the Seizure management domains are comprised of (5) items. The study instrument is structures based on previous studies, One of these studied conducted by ⁽¹⁹⁾.
- **Part 4:** Patient's Self-Efficacy that contain on (31) items, the items include assessing patients' that measures the different aspects of efficacy in the self-management of epilepsy. The study instrument is structures based on previous studies, One of these studied conducted by ⁽¹⁴⁾.

Validity of the Instrument: A content validity of the study instrument conducted through a group of experts who have more than 10 years of experience in nursing field.

Collection of Data: The collection of data is performed by using of the developed questionnaire (Arabic version of the questionnaire) with aid of structured interview technique with the subjects as they are individually interviewed. The process of data collection began from March, 1st, 2018 to March, 29th, 2018.

Statistical analysis: The data were analyzed using descriptive and inferential methods of data analysis, including

- Frequency, percentage, mean and standard deviation.
- Measures of central tendency: Mean, Mean of scores (MS)
- Chi-square: to test independency distribution of observed frequencies, and for measuring the association between the studies variables according to its type.

RESULTS:

Table (1): Demographic data of the study sample

Demographic data	Rating and intervals	Frequency	Percent
Age / Years	<= 24	27	54.0
	25 - 29	8	16.0
	30 - 34	4	8.0
	35 - 39	3	6.0
	40+	8	16.0
	Total	50	100.0
Gender	Male	25	50.0
	Female	25	50.0
	Total	50	100.0

Level of Education	Illiterate	6	12.0
	Able to Read and Write	12	24.0
	Primary School Graduate	12	24.0
	Intermediate School Graduate	7	14.0
	Preparatory School Graduate	4	8.0
	Institute Graduate	3	6.0
	College or Post Graduate	6	12.0
	Total	50	100.0
Occupation	Not Working	23	46.0
	Free Working	8	16.0
	Employee	8	16.0
	Housewife	8	16.0
	Retired	3	6.0
	Total	50	100.0
Marital Status	Single	31	62.0
	Married	16	32.0
	Widowed	3	6.0
	Total	50	100.0
Residency	Urban	35	70.0
	Rural	15	30.0
	Total	50	100.0

Table (1) shows that the highest percentage of the sample (54%) are within (≤ 24) years old. Regarding gender, the study results revealed that there an equal percentage between male and female. In addition, the study results present that (12%) of the sample are able to read and write and primary school graduated. Additionally, the study results was (46%) of the sample are not working. Concerning the marital status, (62%) of the study sample is single. Also (70%) are urban area.

Table (2): Clinical Data of the Study Sample

Clinical data	Rating and intervals	Frequency	Percent
Etiology of epilepsy	Genetic	8	16.0
	Trauma CNS	14	28.0
	Infection CNS	3	6.0
	Status post stroke	1	2.0
	Unknown	24	48.0
	Total	50	100.0
Duration of epilepsy	1-3	21	42.0
	4 - 6	7	14.0
	7 - 9	7	14.0
	10 - 12	5	10.0
	13+	10	20.0
	Total	50	100.0
Time of occurrence of seizure	Day	6	12.0
	Night	21	42.0
	Any time	23	46.0
	Total	50	100.0
Reported seizure	0	15	30.0
	1-10	27	54.0
	more 10	8	16.0
	Total	50	100.0

Do you visit neurologist	Yes	45	90.0
	No	5	10.0
	Total	50	100.0
Other chronic condition	Yes	5	10.0
	No	45	90.0
	Total	50	100.0
Receive health education	Yes	30	60.0
	No	20	40.0
	Total	50	100.0
Sources of education	No education	20	40.0
	Nurse	2	4.0
	Doctor	14	28.0
	Internet	6	12.0
	doctor & internet & friend	1	2.0
	Nurse& doctor	3	6.0
	Doctor &friend	1	2.0
	Doctor &internet	2	4.0
	Nurse &doctor &internet	1	2.0
	Total	50	100.0
Smoking	Yes	16	32.0
	No	34	68.0
	Total	50	100.0
Type of smoking	No smoking	34	68.0
	Pipe	4	8.0
	Smoke	12	24.0
	Total	50	100.0
Duration of smoking	No smoking	34	68.0
	1 - 10	10	20.0
	11 - 20	4	8.0
	21 - 30	1	2.0
	31+	1	2.0
	Total	50	100.0
Quantity of smoking	No smoking	34	68.0
	1 - 10	7	14.0
	11 - 20	5	10.0
	21 - 30	2	4.0
	31+	2	4.0
	Total	50	100.0

Table (2) shows that the etiology of epilepsy, the majority of the study objects are unknown. Regard to duration of epilepsy, the highest percentage (42%) is between (1-3) years. Relative to time of occurrence of seizure, (46%) of the study subjects are any time and about (42%) the time of occurrence at night. Concerning reported seizure (54%) of the study subjects are (1-10) time's frequency in last 3 months. In addition, the study results reveals that (90%) of the sample are visiting the neurologist. Relative to the other chronic condition, the highest percentage (90%) of the study subjects are not suffering from chronic conditions. Concerning health education toward epilepsy, the study results show that (60%) of the study sample are receiving education, and about (28%) of the patients receive their health education from the doctor. Finally this table shows that more than half of the study sample is nonsmoker (68%).

Table (3): Overall Assessment for Patients' self-care

Main Domains	Rating	Frequency	Percent	M.S	Assessment
Overall assessment for patients' self-care	Independent	13	26.0	1.78	Interdependent
	Interdependent	37	74.0		
	Dependent	0	0		
	Total	50	100.0		

Cut off point (0.66), M.S (mean of scores), Independent (mean of score 1-1.66), Interdependent (mean of score 1.67-2.33), Dependent (mean of score equal or more than 2.34)

Table (3.3) shows that the overall assessments for patients' self-care are interdependent.

Table (4): Overall Assessment for Patients' Self-Efficacy Domain Items

Main Domains	Rating	Frequency	Percent	M.S	Assessment
Overall assessment for patients' self-efficacy	Low	1	2.0	2.11	Fair
	Fair	37	74.0		
	High	12	24.0		
	Total	50	100.0		

Cut off point (0.66), M.S (mean of scores), low (mean of score 1-1.66), fair (mean of score 1.67-2.33), high (mean of score equal or more than 2.34)

Table (4) reveals that the overall assessment of the patients' responses to the self-efficacy domain items is fair.

Table (5): Relationship between Patients' Self-Care Domains and their Self-Efficacy

Main domains	Rating	Patients' self-care		Total	R	Sig.
		Independent	Interdependent			
Overall patients' self-efficacy	Low	0	1	1	0.564	Chi-square value (8.713) d.f. (2) p-value (0.013) S
	Fair	6	31	37		
	High	7	5	12		
Total		13	37	50		

S: significant at p-value less than 0.05

Table (5) reveals that there is a significant association between the (patients' self-care) and their (self-efficacy) at p-value <0.05.

Table (6): Relationship between Patients' Self-care and their Demographic and Clinical Data

Demographic Data	Chi-Square Value	D.F.	P-Value
Age / Years	5.605	4	0.231 NS
Gender	2.599	1	0.107 NS
Level of Education	13.556	6	0.035 S
Occupation	3.674	4	0.452 NS
Marital Status	2.122	2	0.346 NS
Residency	0.599	1	0.439 NS
Clinical Data			
Etiology of epilepsy	3.099	4	0.541 NS
Duration of epilepsy	1.168	4	0.883 NS

Time of occurrence of seizure	3.922	2	0.141 NS
Reported seizure	6.341	2	0.042 S
Do you visit neurologist	1.952	1	0.162 NS
Other chronic condition	.104	1	0.747 NS
Receive health education	4.435	1	0.035 S
Sources of education	14.533	8	0.069 NS
Smoking	2.229	1	0.135 NS
Type of smoking	2.662	2	0.264 NS
Duration of smoking	3.008	4	0.556 NS
Quantity of smoking	2.711	4	0.607 NS

NS: Non-Sig. at $P > 0.05$, S: Sig. at $P < 0.05$, HS: high significant at p-value less than 0.01.

This table reveals that there is a significant association between the patients (self-care) and their (level of education, reported seizure and health education), at p-value < 0.05 , while there is a non-significant relationship with remaining demographic and clinical data.

DISCUSSION:

Part-I: Discussion of the Demographic and Clinical Data Related to epileptic Patients:

(Tables 1 and 2) Shows that there were about fifty four among epileptic patients of sample was less than or equal to 24 year. This finding is supported by a study done by Mcewan, *et al.*, (2004) who concluded in their results that the dominant age of the study sample are 24 years old and less ⁽¹⁵⁾. Concerning gender, the outcomes reveal, that there an equal percentage between male and female. Both studies Baldin, *et al.*, (2017) and Kartal and Akyıldız (2016) mentioned that males and females that equal for patients with epilepsy ^(16, 17). Concerning educational levels, the higher percentage (12%) are able to read and write and primary school graduated. This result is in agreement with other studies Kartal and Akyıldız (2016) and Kolahi, *et al.* (2017) in their studies found that the majority of the study subjects are able to read and write and primary school graduated ^(17,18). Regarding occupational status, the highest percentage is not working. This result is in agreement with the results which are obtained from Baldin, *et al.*, (2017) in their studies found that the majority of the study subjects are not working ⁽¹⁶⁾. Concerning to marital status, majority of subjects (62%) were single. This result is in agreement with the results of the present study Aliasgharpour *et al.*, (2013) in their studies they found that the highest results of their studies samples were single patients ⁽¹⁹⁾. Regarding residency, the current study results show that most of the samples (70%) are urban area. This result in agreement with Kartal and Akyıldız (2016) they indicated that the majority (70.1%) of the epileptic patients is living in urban area ⁽¹⁷⁾. Regarding duration of disease, the higher percentage (42%) is for those who are suffering from the disease for period from 1-3 year. The finding is consistent with results of Hussein and EL-Qaderi, (2002) and Wagner, *et al.*, (2012) ^(10,20).

The present study shows that in regards to reported seizure, the higher percentage (54%) is for those who are reporting seizure from 1-10 times per month . The outcome is consistent with results of Hussein and EL-Qaderi, (2002), Mcewan, *et al.*, (2004) and Wagner, *et al.*, (2012) ^(10, 15, and 20). Concerning visit neurologist, the study results indicate that (90%) of the study sample are visiting the neurologist. This result comes along with the results of further studies which are carried out by Johnson, *et al.*, (2012) in their studies ⁽²¹⁾. Concerning the results of the item which are involved they receive health education regarding epilepsy, the results shows that most of the sample (60%) did received education, about (28%) of them have health education from doctor, and for the remaining sample (30%) did not received any education. The finding is consistent with results of Al-Ameri and Khudair, (2017) ⁽²²⁾.

Part-II: Patients' Overall Responses to the Self-Care Domains Items:

The study results reveal that the overall assessment of the patients' responses to the self-care domain items is interdependent. This result comes consistent with the findings of another study (Ali and Ali, 2016) ⁽²³⁾.

Part-III: Patients' Overall Responses to the Self-Efficacy Domain Items:

The study results reveal that the overall assessment of the patients' responses to the self-efficacy domain items is fair. This result is supported with the Akbarbegloo, *et al.*, (2015) in their study suggesting that all the participants have a fair level of self-efficacy ⁽²⁴⁾.

Part-IV: Discussion of the Association between the Patients' Self-Care Domains and their Self-Efficacy:

The researcher employed the statistical analysis methods to exam whether there is relation between patients' self-care and their self-efficacy or not, and reinforced with most essential statistical considerations, and the p-values as it shows in (Tables 5) which found that there is a significant relation between the patients self-efficacy and the self-care. The study results specifying the direction of the relationship between the patients' attitude and their self-care activities as a direct relationship, so when the patients' self-efficacy increase their adherence to self-care is also increase and vice versa. These outcomes are reinforced by Wagner, *et al.*, (2012), the outcomes of their study indicated that there is a significant effect of the patients self-efficacy on their adherence to self-care ⁽¹⁰⁾. Also Gramstad, *et al.*, (2001), and Akbarbegloo, *et al.*, (2015), reveals in their studies that their impact of patients self-efficacy on their adherence to self-care ^(24, 25).

Part-V: Discussion of the Association between Patients' Self-Care and their Demographic and Clinical Data:

(Tables 6) show that there is a significant relationship between the patients self-care and their (levels of education, Reported seizure, and health education), and there is a non-significant relationship with other demographic and clinical data. These study results are supported by the Rahimi, *et al.*, (2014) They indicated that there is a significant effect of education level of the patients on their self-care, in addition, Current study is in agreement with the previous studies Mohebi, *et al.*, (2014) and Freitas, *et al.*, (2014), founds that there is a non-significant effect of the patients' age on their self-care activities ^(26, 27). Also Arulmozhi and Mahalakshmy (2014) and Kueh, *et al.* (2014), founds that there is a non-significant effect of the patients' gender on their self-care activities ^(28, 29). In addition to that Albikawi and Abuadas (2015) and Berhe, *et al.* (2013) founds that there is a non-significant effect of the patients' marital status on their self-care activities ^(30, 31). Rajasekharan, *et al.*, (2015) and Mohebi, *et al.* (2014) founds that there is a non-significant effect of the patients' duration of disease on their self-care activities ^(26, 32). They also found that there is a non-significant effect of the smoking on their self-care activities.

CONCLUSIONS:

1. The participated epileptic patients in the study within age group were less than or equal 24 years, also equal percentage between male and female, large part of them were single, able to read and write and primary school graduate, and live in urban area, according to occupation most of them were not working.
2. There is a direct effect of the patients' self-efficacy on their self-care, when self-efficacy for patients' increases, their self-care increases as well and vice versa.
3. Patients' of education, Reported seizure and Receive health education affect their self-care levels.
4. There are strong effects of levels of education for epileptic patients on their self-care.

RECOMMENDATIONS:

1. Epileptic Patients need education guidance, such as published materials with regard to self-care activities.
2. An educational program should be designed and applied to increase patients' information about self-care activities for epilepsy to reduce or prevent complications.
3. The center should use a manual to facilitate the self-care activities of patients with epilepsy.
4. Ongoing assessment should be planned to evaluate the application of instructions and education to maintain the patients' health.
5. Further studies can be carried out on large sample size to give more data about self-care activities.

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