

# Effect of Health Education Intervention on Mothers' Performance of Their Children Suffering From Systemic Lupus Erythematosus

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**Abstract:** Systemic lupus erythematosus is an inflammatory disorder of autoimmune origin, characterized by multi-system involvement, which the immune system becomes confused because loses its ability to tell the difference between a foreign invader the body's own cells and tissues, sending out auto antibodies special blood proteins that mark invaders for attack that actually target specific healthy cells and tissues in the body. The aim of the present study was to evaluate the effect of health education intervention on mothers' performance of their children suffering from Systemic lupus erythematosus. **Subjects and method:** A quasi-experimental research design was used. **Setting:** The study was conducted at outpatient pediatric department of Tanta and Menoufia University Hospital **The subjects:** A convenience sampling of 40 mothers of their children suffering from systemic lupus erythematosus in the previous mention setting 20 children from each hospital. Two tools were used in this study: **Tool I:** Socio demographic characteristics of the children and their mothers and their knowledge about the disease, **Tool II:** mothers' practice report related to Systemic lupus erythematosus .The result showed that significant improvement in mothers knowledge and practice regarding health education intervention of their children with lupus, **Recommendation:** Increasing educational workshops and follow up about the disease will be helpful to identify and diagnose early cases of SLE children, and increasing survival rate of these children.

**Keywords:** Educational intervention, Mothers' performance, Systemic Lupus Erythematosus.

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## I. INTRODUCTION

The word lupus is a Latin term which means wolf. "Lupus" has been used since the Middle Ages by the Romans to describe ulcerative lesions in the skin similar to the results of a wolf bite. Systemic lupus erythematosus is an autoimmune disease in which the body's immune system mistakenly attacks healthy tissue in many parts of the body. SLE predominantly affects young women of reproductive age. However, 20% of all cases of SLE begin in childhood. The prevalence of SLE ranges from around 20 cases per 100,000 people in Europeans to more than 200 cases per 100,000 individuals with African ancestry. In Sweden, the prevalence of SLE is around 40 cases per 100,000 individuals. These broad differences in disease prevalence among populations may be attributed to different genetic backgrounds or differences in local environmental factors. The Lupus Foundation of America reports that there are approximately 1.5 million cases of lupus. <sup>(1-3)</sup>

The etiology of lupus is still unknown but has been related to multiple factors including genetic, hormonal, immunogenic and environmental factors. Children are more likely to have major organ involvement and probably have often a graver prognosis than adults, which indicate the influence of age at onset on the clinical course and outcome of SLE Female sex hormones, sunlight, smoking, vitamin D deficiency, and certain infections, are also believed to increase the risk. <sup>(4,5)</sup>

The mechanism involves an immune response by autoantibodies against a person's own tissues. These are most commonly anti-nuclear antibodies and result in inflammation. Diagnosis can be difficult and is based on a combination of symptoms and laboratory tests. There are a number of other kinds of lupus erythematosus including discoid lupus erythematosus, neonatal lupus, and subacute cutaneous lupus erythematosus.<sup>(6,7)</sup>

Systemic lupus erythematosus in children usually over 8 year of age, female to male ratio affected 8:1 in all age groups .All ethnicity may be affected with apparently higher prevalence in several dark skinned racial groups including blacks<sup>(8)</sup>. The clinical manifestations of SLE have been extensively described from different geographical parts of the world; the prevalence and severity of the disease differ among ethnic groups.<sup>(9, 10)</sup>

The classification of SLE disease status is determined by meeting at least four out of eleven criteria that range from rashes, antinuclear antibodies, through arthritis, Immunologic disorders, Hematological manifestations , Malar rash , Photosensitivity, Serositis, and Nephropathy, Mucosal ulcers and Discoid rash to Neurologic disorders Thus, the clinical presentation of the disease in terms of signs, symptoms, and severity might vary considerably between individuals and even in the same patient over time.<sup>(11, 12)</sup>

Systemic lupus erythematosus is a pleomorphic disease where many organ systems may be involved either alone or in combination. SLE patients can thus presents combinations of various rashes, arthritis, pleurisy, proteinuria, Reynaud's phenomenon, seizures, or fever of unknown origin. Symptoms vary between people and may be mild to severe characterized by multi-system involvement. The most common early symptoms of SLE include arthritis, and swollen joints, fever, chest pain, hair loss, mouth ulcers, swollen lymph nodes, feeling tired, and malar a red rash which is most commonly on the face, often there are periods of illness, called flares, and periods of remission when there are few symptoms.<sup>(11, 12)</sup>

The approach to management can be thought of as a 6-step process: using the multidisciplinary team (MDT), initial induction treatment, maintenance therapy, adjuvant therapy, managing disease flares, and disease monitoring<sup>(10)</sup>

Mother with systemic lupus erythematosus children pervasive impact on their life and their children they need of educational, psychosocial and care interventions to promote mental resilience positive coping strategies, self-advocacy and capacities for social participation for their children which can lead to better treatment.<sup>(9)</sup>

Nurses have a key role in supporting patients diagnosed with lupus. The role of the nurse covers a broad spectrum, including nursing instruction, advice and support. Nursing instruction refers to the provision of planned learning methods for patients that enables individuals to expand their health knowledge and influence their self-care behavior. Nursing support could range from advice on the use of sun protection when undertaking outdoor activity to scheduling outdoor activity for early morning, late afternoon or early evening to avoid peak sun exposure .Other interventions such as offering advice on a balanced diet, adequate exercise and rest, and the use of heat or cold therapy (depending on joint symptoms), all help to manage disease activity In addition to lifestyle modification advice, other roles the nurse may engage in may include performing urinalysis and close monitoring during pregnancy and screening for diabetes.<sup>(4,5)</sup>

#### **Aim of the study was to:**

Determine the effect of health education intervention on mothers' performance of their children suffering from Systemic lupus erythematosus.

#### **Research hypothesis:**

Mothers who received health education intervention expected to improve mean scores knowledge and practice report immediately after implementation of the health education program

#### **Subjects and Method**

##### **Research Design:**

A quasi-experimental research design was used

##### **Setting:**

The study was conducted at outpatient pediatric department of Tanta and Monyefia University Hospital

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**Subjects:** Convenience sampling of 40 mothers of their children suffering from Systemic lupus erythematosus 20 of each hospital in the above previously mention setting

**Criteria for children:** - (age ranged between 11-18 years- both sex- free from cancer)

**Tools of data collection:** Two tools were used in this study:

**Tool I: Structure interview schedule: Structure interview schedule was developed by the researcher and included four parts:**

**Part (1): a-Sociodemographic characteristics of the children such as :** age, sex, birth order

**Part (2): b-Sociodemographic characteristics of the studied mothers** such as age,, education level, occupation .

**Part (3): Medical history of the mothers such as:**

- Auto immune disease as Nephrotic syndrome, Systemic lupus erythematosus
- Bleeding and Genetic disorder

**Part (4): Common health problems accompanying child with Systemic Lupus Erythematosus** such as: Discoid rash, Malar Rash, oral ulcers, hematological disorder, weight loss, Photo sensitivity, activity intolerance, painful joint , anxiety and immunological disorder.

**Tool II part (1): Mothers' knowledge about their children with Systemic lupus erythematosus:** it includes 12 multiple choice questions related to Mothers knowledge related to definition of Systemic lupus erythematosus , causes, path physiology, clinical manifestation, complications, diagnosis, prognosis relation between disease and hereditary, predisposing factors increase disease severity, photosensitivity , sport ,nutrition, school activity, immunity ,infection, drugs, ,treatment and nursing management of children, , stress and vaccines.

**Mothers' knowledge was scored as following:**

- Correct and complete answer was scored (1)
- Wrong answer or don't know and was scored (0)

**The total score of Mothers' knowledge** was calculated and classified into three levels as following:

- Less than 50% was considered poor knowledge.
- 50- Less than 75% was considered fair knowledge.
- 75-100 % was considered good knowledge.

**Tool II part (2): Health education intervention for Mothers:** it includes 47 steps related mothers report

- Nutritional assessment (5point)
- Sun rays (4 point)
- Vaccination (5 point),
- Sport (5 point)
- Medication (5 point)
- Emotional support (4 point)
- Follow up (5 point)

**Scoring system for Mothers' care was follows:**

- Done correctly and complete was score (1)
- Done incorrect or not done well was score(0)

**The total score of mother report was calculated and classified as follow:**

- 60 to less than 75 were considered unsatisfactory.
- 75-100 % were considered satisfaction

**Method:**

1-An official Permission to carry out the study was obtained from the responsible authorities.

2- Ethical and legal considerations:

- Confidentiality and privacy will be taken into consideration regarding the data collection.

- Mothers' consent was taken to participate in the study and including the right to withdraw at any time.

3. The tools of the study were developed after review of literature containing the knowledge and skills related to lupus erythematosus

4. Questionnaire sheet was tested for content validity for clarity and applicability by presenting to 6 experts in pediatric nursing field and necessary modification was done.

5. A pilot study was conducted on five mothers to test the reliability of the tools; test-retest was calculated at interval of two weeks period.

6. Tool I and II were used three times, pre, immediate post and three months after implementation of training program.

7. The study was conducted on three phases:

a- Assessment phase: Mothers knowledge and practice report were assessed using tool I and tool II at the beginning and prior to implementation of the training program; the questionnaire sheet was given to all mothers included in the study to assess their lupus knowledge and care given to the child.

b- Implementation phase: Training program was implemented

8. Health education session: was given to all mothers in the study in 10 groups, one group every week, all mother come each week to clinic , the educational session was given for a duration of 30-45 minutes hours using lecture, data show, discussion, video tapes, and handout which given to all mothers included in the study. The handout related to Systemic lupus erythematosus was written in Arabic language to be easily understood by all mothers .

- **The first session:-**

It was focus on: definition, predisposing factors and path physiology of Systemic Lupus Erythematosus.

- **The second session:** Focus on: Clinical manifestation, diagnosis and complications of Systemic Lupus Erythematosus.

- **The third session:-**It will focus on: Problems accompanying child with Systemic Lupus Erythematosus: including; Arthritis, Immunologic disorders, Hematological manifestations.

- **The fourth session:** Problems accompanying child with Systemic Lupus Erythematosus: including; Malar rash, Photosensitivity and Serositis.

- **The fifth session:** Problems accompanying child with Systemic Lupus Erythematosus: including; Nephropathy, Mucosal ulcers and Discoid rash to Neurologic disorders.

- **Sixth session:** Problems accompanying child with Systemic Lupus Erythematosus: including. Nephropathy, Mucosal ulcers.

- **Seventh session:** Problems accompanying child with Systemic Lupus Erythematosus: including; Discoid rash and Neurologic disorders.

- **The eight sessions:** Focus on: Management for child with Systemic Lupus Erythematosus.
- **The nine sessions:** Focus on: Educational intervention for mothers related to how to deal with problems of child with Systemic Lupus Erythematosus.

#### Evaluation Phase:

Evaluation of the guidelines effects on mothers' knowledge and care was carried out using the same assessment tools. Each mother will be evaluated immediately after implementation of the guidelines (post-test) and these are compared to pre-test levels and after three months.

## II. INDENTATIONS AND EQUATIONS

**Table (1):** Percentage distribution of mothers and their children according to their personal characteristics. This table show that about three quarter of children's' age between 16-18 years with mean age (16.4±1.7). Regarding Childs' sex it was observed that the majority (92.5%) of children with SLE were Girls. Nearly two third (67.5%) were secondary education, with mean age of their mothers (42.1±4.7) , mean years experience of their mother (4.6±1.6) and majority of them (82.5%) not have autoimmune disease .

**Table (2)** Percentage distribution of studied mothers related to knowledge about Systemic Lupus Erythematosus before health education intervention. It was observed that all of the mothers don't know meaning of systemic lupus erythromatosis, most of them (82.5%, 80%) don't know important of sport, needs of child with SLE, and nature of the disease. Also nearly two third of them (75%, 72.5%, 70%, 67.5%, 67.5% and 62.5%) don't know incidence, causes, definition of SLE, school attendance, nutritional requirements and vaccination respectively, and about half of them (52.5%) don't know meaning of discoid as problems of systemic lupus erythromatosis. Regarding factors increase disease sensitivity and photosensitivity; it was observed that 75% and 65% of the mothers had correct answer.

**Table (3)** Percentage distribution of studied mothers practice before health education intervention for their children suffering from systemic lupus erythromatosis, it was observed that all of mothers reported that they don't give the child effective nutrition and cortisone at time before application of the program. As well as most of them (97.5%, 95%, 95%, 95%, 95% and 92%) respectively unsatisfactory on their practice before program application.

**Table (4):** Percentage distribution of child with Systemic Lupus Erythematosus related to the total score of common health problems. It was found statistically significant difference between child's health problems before and after three months from program application with p value ranged between high satisfactory to satisfactory.

**Table (5):** Relation between the total score of mothers' knowledge pre, immediate and after three month of program application. It was clarified that more than three quarter of mothers had poor knowledge before programs application, significantly improved immediately post program to 92.5% were good then relatively decreased to becomes 47.5% fair and 47.5% good after three months from program implementation

**Table (6)** Percentage distribution of mothers' intervention pre, post and three month post to ward child lupus care. It was observed that , there is highly significant improvement difference between pre, immediate and three months post program implementation( $P_1=0.00^{**}$  ,  $P_2=0.00^{**}$ )in relation to mothers care , regarding nutritional assessment, sunrays, vaccination , sport, medication, emotional support, skin rash and follow up,

**Table (7):** Percentage distribution of total practice level of mother's pre, immediately and after three month from program application. It was observed that , there is highly improvement in phase's difference between pre, immediate and three months post program implementation in relation to mothers practice , where most of them (97.5%) of them before program unsatisfactory ,while immediately post program their practice improvement to be good for about two third of them (62.5%) and after three month post were (87.5%) satisfactory.

**Table (8):** Correlation between mother years of experience and mothers' educational level and practice level. It showed that were highly statistically significant correlation ( $r=0.69$ ) and ( $0.63$ ) where p value equal to ( $p=0.00$ ) between years of experience of mothers and educational level and their total practice level before program application. While after three months only correlation between mothers educational level and practice where p value equal to ( $p=0.05$ ). Finally there was no statistical significant correlation immediately post of program implementation.

III. FIGURES AND TABLES

Table (1): Percentage distribution of mothers for their children according to their socio demographic characteristics (n=40).

Characteristic	No.	%
<b>Age of child</b>		
10-<12	1	2.5
12<14	2	5
14-<16	8	20
16-<18	29	72.5
Mean ±SD	16.4±1.7	
Min- Max	11-18	
<b>Gender</b>		
Male	1	2.5
Female	39	97.5
<b>Birth order</b>		
First		
Second		
Third		
<b>Mother education</b>		
University education		
Secondary		
Illiterate or read and write		
<b>Years of mother experience with the disease.</b>		
1:3		
4:6		
6:8		
Mean ±SD	4.6±1.6	
Min- Max)	1-8	
<b>Age of the mother</b>		
30:39	12	30
40:49	24	60
50:60	4	10
More than 60	0	0
(Mean ±SD)	42.1±4.7	
(Min- Max )	33-54	
<b>Mother autoimmune diseases</b>		
Have autoimmune diseases	7	17.5
Not have autoimmune	33	82.5

Table (2): Percentage distribution of studied mothers related to knowledge for their children suffering from Systemic Lupus Erythematosus before health education intervention (n =40)

Knowledge of systemic lupus erythematosus.	No	%
<b>Definition of Systemic Lupus Erythematosus</b>		
Correct	12	30
Incorrect	28	70
<b>Named of Systemic Lupus Erythematosus</b>		
Correct	0	0
Incorrect	40	100
<b>Incidence</b>		
Correct	9	22.5
Incorrect	31	75.5
<b>Causes</b>		
Correct	11	27.5
Incorrect	29	72.5

Disease and hereditary		
Correct	8	20
Incorrect	32	80
Factors increase disease activity		
Correct	26	65
Incorrect	14	35
Photosensitivity		
Correct	30	75
Incorrect	10	25
Discoid		
Correct	19	47.5
Incorrect	21	52.5
Sports		
Correct	7	17.5
Incorrect	33	82.5
Nutrition		
Correct	13	32.5
Incorrect	27	67.5
Vaccine		
Correct	15	37.5
Incorrect	25	62.5
School		
Correct	13	32.5
Incorrect	27	67.5

Table (3): Percentage distribution of studied mothers practice before health education intervention for their children suffering from systemic lupus (n=40).

Item	No	%
Nutrition		
- Unsatisfactory	40	100
- Satisfactory	0	0
Sunrays		
- Unsatisfactory	37	92.
- Satisfactory	3	57.5
Vaccine		
- Unsatisfactory	39	97.5
- Satisfactory	1	2.5
Sports		
- Unsatisfactory	38	95
- Satisfactory	2	5
Cortisone		
- Unsatisfactory	40	100
- Satisfactory	0	0
Follow up		
- Unsatisfactory	38	95
- Satisfactory	2	5
Emotional		
- Unsatisfactory	38	95
- Satisfactory	2	5
Skin rash		
- Unsatisfactory	38	95
- Satisfactory	2	5



**Table (4): Percentage distribution of child with Systemic Lupus Erythematosus related to the total score of common health problems accompanying with the disease**

Item	Before the program		After three months		P value
	No	%	No	%	
<b>Discoid rash</b>					
Positive	9	22.5	6	15	P=0.25
Negative	31	77.5	34	85	
<b>Malar rash</b>					
Positive	12	30	7	17.5	P=0.06
Negative	28	70	33	82.5	
<b>Oral ulcer</b>					
Positive	6	15	4	10	P=0.5
Negative	34	85	36	90	
<b>Hematological disorder</b>					
Positive	30	75	16	40	-----
Negative	10	25	24	60	
<b>Weight loss</b>					
Positive	20	50	14	35	P=0.03**
Negative	20	50	26	65	
<b>Photo sensitivity</b>					
Positive	16	40	8	20	P=0.008**
Negative	24	60	32	80	
<b>Activity intolerance</b>					
Positive	7	17.5	3	7.5	P=0.13
Negative	33	82.5	37	92.5	
<b>Painful joint</b>					
Positive	24	60	20	50	P=0.13
Negative	16	40	20	50	
<b>Anxiety</b>					
Positive	31	77.5	19	47.5	P=0.00**
Negative	9	22.5	21	52.5	
<b>Immunological disorder</b>					
Positive	32	80	28	70	P=0.22
Negative	8	20	12	30	

**Table (5): Relation between the total score of mothers' knowledge pre, immediate and after three month of health education intervention**

Total knowledge score	Pre		Immediate Post		3month post		P value
	No	%	No	%	No	%	
<b>Definition of systemic lupus</b>							
Correct	12	30	34	85	33	82.5	P1=0.00** P2=0.00**
Incorrect	28	70	6	15	7	17.5	
<b>Walf and Lupus</b>							
Correct	0	0	33	82.5	27	67.5	P1=---- P2=-----
Incorrect	40	100	7	17.5	13	32.5	
<b>Incidence</b>							
Correct	9	22.5	35	87.5	26	65	P1=0.001* P2=0.00**
Incorrect	31	77.5	5	12.5	14	35	
<b>Causes</b>							
Correct	11	27.5	36	90	26	65	P1=0.004* P2=0.00**
Incorrect	29	72.9	4	10	14	35	
<b>Disease and hereditary</b>							
Correct	8	20	34	85	30	75	P1=0.00* P2=0.00**
Incorrect	32	80	6	15	10	25	
<b>Causes increase disease activity</b>							
Correct	26	65	37	92.5	29	72.5	P1=0.58



Incorrect	14	35	3	7.5	11	27.5	P2=0.001**
<b>Photosensitivity</b>							
Correct	30	75	40	100	25	62.5	P1=0.36
Incorrect	10	25	0	0	15	32.5	P2=-----
<b>Discoïd</b>							
Correct	19	47.5	37	92.5	27	67.5	P1=0.06
Incorrect	21	52.5	3	7.5	13	32.5	P2=0.00**
<b>Sports</b>							
Correct	7	17.5	38	95	29	72.5	P1=0.00**
Incorrect	33	82.5	2	5	11	27.5	P2=0.00**

P1 = relation of post 3 months to pre

P2 = relation of post test to pre test

**Table (6): Percentage distribution of mothers' intervention pre, post and three month post to ward child lupus care**

<b>I- Nutritional assessment</b>							
	Before		Immediate		After 3 months		P.value
	NO	%	NO	%	NO	%	
Eat fresh vegetables and fruit	1	2.5	0	0	0	0	P1=0.85 P2=0.46
Food rich with, folic acid, vit. B12	19	47.5	0	0	0	0	
Eat fresh fish	10	25	0	0	0	0	
Avoid fat, salty and spicy food	6	15	9	22.5	13	32.5	
Avoid animal protein	0	2.5	3	7.5	1	2.5	
Mean ± D	2.9±1.3		6.9±1.4		5.9±1.4		P1=0.00** P2=0.00**
<b>II- Sunrays</b>							
Sun exposure before 10A.M. for 15 min.	10	25	0	0	0	0	P1=0.49 P2=-0.77
Use of daily sunscreen	22	55	0	0	0	0	
Skin medication as doctors order	1	2.5	23	57.5	21	52.5	
Avoid exposure to violet rays	1	2.5	14	35	6	15	
Mean ± D	1.8±0.97		3.9±0.43		3.5±0.55		P1=0.00** P2=0.00**
<b>III-Vaccination</b>							
Take vaccine at time	13	32.5	0	0	0	0	P1=0.28 P2=-0.45
Avoid vaccine at active and acute stage	19	47.5	0	0	0	0	
Avoid vaccine with autoimmunodrugs	7	17.5	10	25	21	52.5	
Avoid oral polio vaccine for sibling	1	2.5	18	45	12	30	
Advice to give pneumococcal vaccine.	0	0	12	30	7	17.5	
Mean ±SD	1.9±0.87		4.1±0.75		3.7±0.77		P1=0.00** P2=0.00**
<b>IV-Sport</b>							
Avoid restrain for general activity	13	32.5	0	0	0	0	P1=0.2 P2=0.005*
Regular daily activity	14	35	0	0	0	0	
Advice to perform certain exercise as walk	11	27.5	8	20	20	50	
Avoid heavy exercise.	1	2.5	22	55	18	45	
Stop exercise during active stage of lupus	1	2.5	10	25	2	5	
Mean ±SD	2.1±0.97		4.1±0.68		3.6±0.59		P1=0.00** P2=0.00**
<b>V- Medication (Cortisone)</b>							
Take Cortisone in the morning at the same time.	7	17	0	0	0	0	P1=0.53 P2=-0.95
Take calcium and vitamin D as doctor orders.	25	65	0	0	0	0	
Take it with food	3	7.5	4		16		
Take small frequent meals	3	7.5	10	25	14	35	
Regular measurement for bl.presure and sugar	1	2.5	26		10	25	

Mean ±SD	4.1±1.04	5.0±0.75	2.1±0.88	P1=0.00** P2=0.00**			
<b>VI- Emotional support</b>							
Regularly exercises help relaxation	10	25	0	0	0	0	P1=0.43 P2=-0.46
Avoid stressful situation for child	22	55	0	0	0	0	
Enough rest for child	8	20	7	17.5	15	37.5	
Joint a lupus support group	1	2.5	33	82.5	25	62.5	
Mean ±SD	2.8±0.68	4.3±0.59	2.03±0.86				
<b>VII- Skin rash</b>							
Adequate sleep keep skin healthy	13	32.5	0	0	0	0	P1=0.28 P2=0.005**
Adequate diet keep skin healthy	14	35	8	20	0	0	
Keep child hydrated and drinks plenty of water.	11	27.5	22	55	20	50	
Reapply sunscreen every 80 minutes, or more	2	5	10	25	20	50	
Mean ±SD	3.6±0.59	4.1±0.68	2.1±0.97	P1=0.00** P2=0.00**			
<b>VIII- Follow up</b>							
Regular follow up	10	25	0	0	0	0	P1=0.43 P2=-0.46
Regular check up for bl.p, sugar, urine analysis-	22	55	0	0	0	0	
Close observation from lupus specialist.	6	15	3	7.5	13	32.5	
Check up from Dermatologist, Hematologist ,Nephrologists.....etc	1	2.5	23	57.5	21	52.5	
Check up from specialist (social, nutritional, psychologist,.....etc)	1	2.5	14	35	6	15	
Mean ±SD	2.8±0.68	4.3±0.59	2.03±0.86	P1=0.00** P2=0.00**			

Table (7): Percentage distribution of total practice level of mother's pre, immediately and after three month from program application

Item	Frequency	Percentage
<b>Practice pre</b>		
- Satisfactory	1	2.5%
- Unsatisfactory	39	97.5%
<b>Practice post</b>		
- Satisfactory	25	62.5%
- Unsatisfactory	15	37.5%
<b>Practice 3 months after</b>		
- Satisfactory	5	87.5%
- Unsatisfactory	35	12.5%

Table (8): Correlation between mother years of experience and mothers' educational level and practice level

Parameter	Practice pre	
	r	P value
Years of experience	0.69	0.00**
Mother's education	0.63	0.00**
<b>Practice post</b>		
Years of experience	0.001	0.993
Mother's education	0.06	0.73
<b>Practice 3 months</b>		
Years of experience	0.24	0.14
Mother's education	0.31	0.05

#### IV. CONCLUSION

### **MOTHERS WITH THEIR CHILDREN SUFFERING FROM SYSTEMIC LUPUS ERYTHROMATOSIS IMPROVED KNOWLEDGE AND PRACTICE AFTER NURSING INTERVENTION ABOUT LUPUS AND NEED FOR EDUCATIONAL HEALTH TEACHING RELATED TO SYSTEMIC LUPUS CARE.**

#### **Recommendation:**

- 1- Increasing campaign and workshops about the disease will be helpful to identify and diagnose early cases of SLE children, thus help increasing survival rate of these children and hence decrease morbidity the possible children of SLE and managing it. As a result, quality of life children will be improved.
- 2- Arabic booklet about lupus and periodical educational program for caring of mothers and their children suffering from systemic lupus to improve quality of life.
- 3- Encourage the nurses to participate in training courses and congresses held by specialists to update their knowledge and practice.

#### **Discussion:**

Systemic lupus erythematosus (SLE) is a multisystem autoimmune disease of unknown etiology resulting in widely variable presentations. Prognosis of SLE among a population is complex due to systemic nature of the disease showing multiple symptoms and characteristics (5,6). Huge gaps have been reported between incidence and prevalence of SLE. Importantly, the early recognition of SLE symptoms is critical to assess and manages pathologic condition of SLE (6, 7).

In the present study, about three quarter of children s' age between 16-18 years. It may be related to the nature of the disease onset at 15-45 years. This result disagreement with (A shwaq, et al 2014) who found that children affected with Systemic lupus erythematosus at age 2 and 7 years. In contrary. (Pon.Estel et al 2010) who found that the most incidence of SLE at 15 years to 45 years old.

Also, the present study clarified that the majority of the studied children were female; this can be interpret the fact that most of children with SLE were female in the reproductive period. This result is supported with (Crampton, et al. 2014) who discovered that there are two factors that triggers the onset the onset of the disease estrogen and the XX chromosome which mainly present in female.

In developing countries for an educational program based on child's' cultural background and belief systems in order to enhance patients' understanding of the aims, risks, and benefits of therapy in lupus. Many countries have formed lupus support groups and associations and trained rheumatological nurses and counselors who form important pillars in our fight against the disease.

Result of the present study reveled that the majority of mothers' having child with SLE had poor knowledge about it before program application. it may be related to lack of training program for mothers of children with SLE about natural of the disease, consequences , common health problems and management. This result in agreement with ( John Wiley and Son 2017) who mentioned that the main causes of morbidity and mortality are now either treatment-related or mothers lack of knowledge rather than the disease itself.

It is widely accepted that verbal, personal information is better received than written information. It is generally considered that in this kind of chronic disease it is beneficial for children and their parent to obtain as much scientifically valid and comprehensive information of the disease as possible.

In the present study, it was found that there is improvement in knowledge regarding systemic lupus erythromatosis immediately post program application, it may be due to highly retention for information in the human mind immediately after given, or it may be due to the importance of the topics for the parent This result in agreement with (Mohamed et al 2013) who mentioned that periodical educational training program for mothers care for their children improve their quality of life. Also (Jaime , et al 2016) who stress the importance of education and instruction for detection and control of SLE disease, instruct children with SLE to seek medical care for evaluation of new symptoms, including fever. Advise them regarding their heightened risks for infection and cardiovascular disease. Educate patients with SLE regarding

aggressive lipid and blood pressure goals to minimize the risk of coronary artery disease, avoid exposure to sunlight and ultraviolet light. Also, encourage them to receive killed vaccines during stable periods of disease, and carefully plan life.

Regarding child health problem, the finding of this study revealed that there were highly significant improvements in health status as weight loss, photosensitivity and anxiety relieve post program application. This finding is likely due to a combination of improved recognition about SLE and better approach of the therapy. This result is supported with (Sandra L. Fenwick, 2016) who found that Lupus can be mild, causing skin rashes and joint aches. The disease can also be very active, if it spreads to vital organs it can do a lot of damage. To help keep the disease from flaring up child will probably be taking some type of medication for years to come, also need to see her doctor regularly for checkups. But by helping child do these things and adopt good health habits for life (avoiding sun exposure, eating well, exercising), you'll ensure the best possible outlook for her future.

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