

## Effect of Educational Program on Quality of Life for Patients Post Hip Joint Replacement

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## Abstract

**Background :** Total hip replacement (THR) has evolved into a reliable and suitable surgical procedure to relieve pain and restore function among patients with damaged or degenerated hip joints and chronic pain and improved patients' quality of life. **Aim:** This study aimed to evaluate the effect of educational program on quality of life for patients post Total hip replacement through the following 1- assess patients ' level of knowledge and quality of life, 2- plan and implement educational program for patients with Total hip replacement 3- Evaluate effect of education program on quality of life for patients' with Total hip replacement. **Design:** A quasi experimental design was used to utilize this study. **Setting:** The conducted at orthopedic department and outpatient orthopedic clinic at the Ain Shams University Hospital. **Sample:** Purposive sample composed of 60 clients from the previous mentioned setting divided into two groups. **Tools:** Two tools are used for data collection; *first tool*, an interviewing questionnaire designed by the researcher to assess a) socio-demographic data, b) medical history past, present & family history, C) knowledge, D) practice. *Second tool*, Quality of Life questionnaire. **Results:** There was satisfactory level of total knowledge and quality of life related to hip joint replacement in the study group post implementation of the educational program, **Conclusion:** There is highly statistically significant relation between knowledge, practice and their quality of life after hip joint replacement. **Recommendations:** Establishing a special educational program to provide patients with adequate knowledge and training to overcome patients' problems.

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**Key Words:** Quality of life –Hip Joint Replacement

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INTRODUCTION

Total hip joint replacement (THR) is one of the best solutions for hip joint diseases and the most successful surgical interventions in the orthopaedics field. It is a surgical technology that replaces the hip joint with artificial parts, aiming to reduce joint pain, restore hip function and improve the quality of life for patients with severe hip disease and injury (Kokkori, 2017).

Hip joint replacement is currently the most successful surgical treatment for hip joint disease and the outcomes are excellent with a long-term survival rate of minimum 70% at 35 years for hip arthroplasty in the follow-up studies (Pijls *et al.*, 2016). The purpose of Hip joint replacement is improving quality of life of patients suffering from debilitating hip disorders, such as osteoarthritis, rheumatoid arthritis and avascular necrosis (McDonald *et al.*, 2014).

This procedure can bring almost immediate relief to the unremitting pain due to which the functional capacity of the lower limb has been greatly decreased. Especially to those patients with an end stage degenerative joint disease, total hip replacement is often the final attempt that the surgeons can resort to in terms of pain relief, increasing mobility and improved ability to perform routine daily activities (Heiberg *et al.*, 2013).

QOL assessment has become a main focus to the health care professionals and nursing care providers since last two decades. Quality of life concept has been used to evaluate the effectiveness of the treatments, reliability of data information in order to allocate health care services and resources, also for making health care decisions based on the individual health needs of the patients (Foreman and Kleinpell, 2013).

Quality of life affected immediately after a HJR is diagnosed; patient with THR is often in a state of crisis marked by physical, social, and psychological

disequilibrium. Persons unable to acknowledge and put into perspective the disturbing feelings brought on by disease are prone to abnormal illness responses, which significantly detract from physical and/or mental health. Depression and anxiety often go together and afflict everyone to some degree from time to time; they are the most common abnormal responses to chronic illness (Anderson & Burckhardt, 2012).

Hip replacement surgery can be a life altering event for the patient with advanced painful hip disease. The role of the nurse in the care of the hip replacement patient is to educate, provide safe and competent care, and help coordinate the care provided by the multidisciplinary team. The nurse is a critical link in providing the continuity of care required for these patients throughout the perioperative phase (Barden & Chandler, 2016).

**Significance of the study**

Hip replacement (HR) is the most effective and safest method for treating severe degenerative, traumatic and other diseases of the hip joint. From 2000 to 2010 the incidence of primary HR in the USA increased from 142.2/100,000 to 257/100,000 in patients aged 45 and over (Comprehensive Outpatient Rehabilitation Facilities (CMS), 2014).

QOL has become a basic health professionals concern to ensure that after successful THR surgery, patients will have significant improved quality of life in terms of physical, psychosocial and spiritual health (Greene, 2017). So it's important to evaluate the effect of educational program on quality of life after total hip replacement

AIM OF THE STUDY:

- This study aimed to evaluate the effect of educational program on quality of life for patients post Total hip replacement through the following
  1. Assess patients ' level of knowledge, practice

- and quality of life for patient post TJR,
2. Plan and implement educational program for patients with hip joint replacement
  3. Evaluate effect of education program on quality of life for patients' with hip joint replacement.

**Research Hypothesis:**

1. The educational program will affect positively on patient knowledge and practice for patient post hip joint replacement.
2. The educational program will improve quality of life for patient post hip joint replacement.

**SUBJECTS AND METHODS:**

**Research design:** A quasi-experimental design was utilized to meet the aim of the study.

**Setting:** This study was conducted in orthopedic department at el Demerdash hospital affiliated from Ain Shams University Hospital and outpatient orthopedic clinic at Ain Shams University Hospital.

**Subjects:** Purposive sample composed of 60 patients from the previous mentioned setting and divided into two group (30) study and (30) control group. The total number of client post hip replacement of the previous setting form 2017

The sample size was determined considering the total number of patients (150) who had admitted during the year 2017 in the previous mentioned setting, the power analysis that indicate 60 patients to conduct this study. Considering alpha type I error ( $\alpha$ ) = 5% with confidence level 95% and significance level ( $\alpha$ ) at 0.05 and power of study (power of test) 90% with type II beta error ( $\beta$ )= 10%

**Tools of data collection**

Data collected through used the following tools:

**The first Tool:** An interviewing Questionnaire; it was designed by the researcher after reviewing the related literature (Kokkori, 2017); (Barden and Chandler, 2016) and Heiberg et al, 2013; Osborn, Wraa & Watson,2010) it was consisted of four parts:

**Part 1:**

It was concerned with the demographic characteristics such as age, gender, residence, marital status, level of education, occupation.

**Part 2:**

It was concerned with medical history past, present & family history.

**Part 3:**

It was concerned with assess patients level of knowledge regarding hip joint replacement operation as:

- Meaning of THR. (1 question)
- Indications of THR(5 question)

- Complication of THR(6 question)
- Precautions after THR(10 question)
- Medication(7 question)
- Diet (5 question)
- Regular Follow-up(4 question)

**Scoring system:** The total score of knowledge was 38 grades. Each correct answer was scored one, and the Wrong answer was scored zero. **It was consider as follow**

- Score < 70 referred to unsatisfactory level of knowledge when total grades was < 27
- Score  $\geq$  70 referred to satisfactory level of knowledge when total grades was  $\geq$  27

**Part 4:**

It was concerned with practice regarding sitting (10 steps), walk (12 steps), using stairs (10 steps), and hip protections (10 steps).

**Scoring system:** the total score of practice was (42 grades). The step done correct was scored one, and the step that not done or done incorrect was scored zero. **It was consider as follow**

- Score < 70 referred to unsatisfactory level of practice when total grades was < 27
- Score  $\geq$  70 referred to satisfactory level of practice when total grades was  $\geq$  27

**The second tool: Quality of Life:** this tool was adapted from (Health Survey – SF-36, World Health Organization, Quality of Life – (WHO QOL, 2009) which included :

- Physical domain (15 items) regarding (pain, discomfort, activities of daily living).
- Social domain (8 items) as (personal relationships, culture, social support).
- Psychological domain (7 items) including (suffering, such as feeling

Depressed or anxious)

- Spiritual domain (5 items) included relation with god and pray.

**Scoring system:** the total QOL score was 72 grades.if patient answer was always scored zero, if sometimes scored one and if never was scored two. **It was consider as follow.**

- Poor QOL  $\leq$  50 or less than grade 36
- Average QOL=50 %< 75% or less than grade 54.
- Good QOL  $\geq$ 75 when total grades was  $\geq$  54

**Educational program about hip joint replacement:**

It was be developed by the researcher after

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reviewing the related literature () it will be written in simple Arabic language and composed of two parts

**Part 1:** it consisted of knowledge related to hip joint replacement as definition, casus, signs and symptoms, complication from surgery and preparation for patient and material used in operation and drug therapy and its side effect.

**Part 2:** consisted of knowledge and practice related to how patient improve his quality of life as, diet therapy, follow up exercise and how patient can sit, walk, go upstairs, sleep and prevention of complication post HJR.

### Validity and reliability:

Testing *validity* was ascertained by a group of 7 experts in medical surgical nursing department faculty of nursing Ain Shams University (3 professors and 4 assistants professor) to determine face and content validity of the tool. The expertise reviewed tools for clarity, relevance, applicability, comprehensiveness, simplicity and minor modifications were done. While, *reliability* of the study tools was done by Alpha Cronbach test. The reliability scores for patients' knowledge, and patients' practice were 0.809- 0.795. Consequently, these values indicate high internal consistency of the used tools.

### Ethical consideration:

Ethical approval was obtained from the scientific ethical committee in the faculty of nursing at Ain Shams University before starting the study. The researcher clarified the objective and aim of the study to the patients included in the study. The researcher assured maintaining anonymity and confidentiality of the subject data. Patients were informed that they allowed choosing to participate or not in the study and that they have the right to withdraw from the study at any time without giving any reasons. Values, culture and beliefs were respected.

### Pilot Study:

The pilot study was conducted on 10 patients (5 patients from study group and 5 patients from control group) (10% of the total study sample) to test clarity, feasibility, validity, reliability and applicability of the tools used in this study. The patients who were included in the pilot study were included to the sample because no modification was done after conducting pilot study.

### Field work:

Filed work included three phases: assessment phase, implementation phase and evaluation phase.

1- Assessment phase include get approval from medical and nursing director for applying the research then met the patient when admitted to orthopedic department to assess if he meets criteria and take his acceptance to share in the research the research developed the tool and make validity and

reliability and apply pilot study, the research also prepare program session, class room, need supplies and equipment.

### 2- Implementation phase: this included:

The educational program started to the patients who admitted for HJR surgery in the orthopedic department before making operation the data was collection. The first 30 patients were selected to be a control group, while the second 30 patients were selected to be a study group.

For the control group, data collection started from the beginning of December 2017 to the end of July 2018. The researcher starting interviewing process by filling demographic and part 2: patient history which took about 10 minutes part 3: assess patient knowledge which took about 20 minutes then filling part 4: which consisted of level of practice and took about 25 minutes, lastly quality of life for patient with THR questionnaire which took about 15 minutes. The researcher reviewed each point in front of patient to be sure that no points are missed. After one month from pre test the patient fill the post test and after three months from pre test the patients fill follow up test.

While for the Study group data collection the researcher starting the interviewing process by filling the data collection tools as the control group which took also approximately the same time to be filled. The patient was given the educational program about quality of life for patient post THR after explaining its purpose, content, how to go through the educational program and informed them that they have 3 sessions to implement educational program first session about THR and second session for discussed practice and third session for quality of life for this patients then evaluation was done. After one month from pretest and giving educational program for the patient was fill the post test and after three months from pre-test the patients was fill follow up test.

### Evaluation phase:

This phase included evaluation of the effect of educational program on patients' knowledge and practice, and quality of life by comparing the result pre - post and follow up educational program implementation by using the same data collection tools which was done twice and between control and study group. Immediate post implementation of educational program after one month from pre-test and follow up after 3 months from pre-test.

### Statistical design

The collected data was statistically analyzed and presented in tables and graphs, using appropriate reliable and valid statistical methods and tests.

### Significance of results was considered as follows:

Non significant (NS)  $P > 0.05$

Significant (S)  $P < 0.05^*$

Highly Significant(HS)  $P < 0.01^{**}$

### Result:

**Table (1):** Comparison between study and control groups regarding their demographic characteristics:

Items	Groups				X <sup>2</sup>	P value
	Study(n=30)		Control (n=30)			
	No	%	No	%		
<b>Age</b>						
• 18-<30	8	26.7%	6	20%	0.32	<b>0.85</b>
• 30-<40	10	33.3%	8	26.7%		
• ≥40	12	40.0%	16	53.3%		
<b>Mean± SD</b>	<b>41.6±8.8</b>		<b>47.1±9.4</b>		<b>t=0.2</b>	<b>0.84</b>
<b>Gender</b>						
• Male	18	60%	20	66.7%	0.07	<b>0.79</b>
• Female	12	36.7%	10	33.3%		
<b>Education</b>						
• Illiterate	0	0.0%	2	6.7%	5.23	<b>0.16</b>
• Read and write	6	20.0%	11	36.6%		
• Moderate education level	19	63.3%	15	50.0%		
• High educational level	5	16.7%	2	6.7%		
<b>Marital status</b>						
• Single	15	50.0%	12	36.7%	4.77	<b>0.09</b>
• Married	15	50.0%	18	60.0%		
<b>Residence</b>						
• Rural	20	66.7%	22	73.3%	0.32	<b>0.57</b>
• Urban	10	33.3%	8	26.7%		
<b>Nature of occupation</b>						
• Muscular effort	5	16.7%	11	36.7%	3.24	<b>0.20</b>
• Mental effort	16	53.3%	11	36.7%		
• Not work (house wife)	9	30.0%	8	26.6%		

P>0.05 not significant \*P<0.05 Significant \*\* P<0.001 highly significant

Table (1) showed that, the mean age of the patients in the study group was 41.6±8.8, while that of the patients in the control group was 47.1±9.4, while in relation to gender, the result showed that 60% & 66.7% were males in the study and control groups respectively.

As regards educational level, the results showed that, 63.3% of the patients in the study group and 50% of those in the control group have moderate education. While, considering job, the results revealed that, 53.3% of the patients in the study group and 36.7% of the patients in the control group there work need mental effort.

In relation to marital status, 50% of patients in the study group and 60% in control groups were married. While, concerning residence, results revealed that, 66.7% in the study and 73.3% in control groups respectively were from rural areas.

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**Table (2):** Frequency and percentage distribution of history of disease regarding patients in the study and control groups.

Items	Groups				X <sup>2</sup>	P value
	Study (n=35)		Control (n=35)			
	No.	%	No.	%		
<b>Current medical history:</b>						
Rheumatoid inflammation	5	16.7%	11	36.7%	4.55	0.103
Vessel hypertrophy	8	26.7%	12	40%		
Malignant disease around hip	19	63.3%	11	36.7%		
Fracture due to accident	12	40%	16	53.3%		
<b>Current complain after operation</b>						
Not able to move	10	33.3%	22	73.3%	4.06	0.044
DVT	8	26.7%	19	63.3%		
Wound infection	10	33.3%	8	26.7%		
<b>Past history</b>						
<b>Previous orthopedic operation.</b>						
Total hip replacement	11	36.7%	7	23.3%	2.14	0.143
Plates and wires	24	80%	18	60%		
External fixation	9	30	10	33.3%		

P>0.05 not significant \*P<0.05 Significant \*\* P<0.001 highly significant

Table (2) illustrated that, regarding to causes of HJR surgery was 63.3% of patients in the study group and 36.7% of patients in control group were complain of malignant disease around hip and 40% of patients in the study group and 53.3% of patients in control group were complain of fracture due to accident. Regarding to complain after surgery there were 33.3% of patients in study group and 73.3 % of patients in control group not able to move and 26.7% of patients in study group and 63.3% of patients in control group had DVT. While regarding to previous orthopedic operation 33.3% of the patients in study and 60% of patient in control group had plates and wires surgery.

**Table (3):** Comparison between the control and the study group regarding to Patients' satisfactory level of knowledge and practice Pre- - post and follow up educational program implementation.

Variables	Control Group N=30				Study Group N=30				Independent T test	P value	
	Satisfactory		Un satisfactory		Satisfactory		Un satisfactory				
	No	%	No	%	No	%	No	%			
<b>Knowledge</b>	<b>Pre</b>	9	30%	21	70%	7	23.3%	23	76.7%	0.54	0.59
	<b>Post</b>	12	40%	18	60%	24	80%	6	20%	-.689	0.0000
	<b>Follow up</b>	8	26.7%	22	73.3%	28	93.3%	2	6.7%	.744	0.0000
<b>Practice</b>	<b>Pre</b>	8	26.7%	22	73.3%	10	33.3%	20	66.7%	0.36	0.73
	<b>Post</b>	9	30%	21	70%	22	73.3%	8	26.7%	-.267	0.0000
	<b>Follow up</b>	11	36.7%	19	63.3%	27	90%	3	10%	.302	0.0000

P>0.05 not significant \*P<0.05 Significant \*\* P<0.001 highly significant

This table showed that there were highly statically significant relation between study and control group regarding satisfactory level of total knowledge pre, post and follow up education program implementation. This table showed that there were highly statically significant relation between study and control group regarding satisfactory level of total practice pre, post and follow up education program implementation.

**Table (4):** Correlation of patients' knowledge and practice in pre- post and follow up educational program implementation in the control and study group.

Patients' practice	Patients' knowledge					
	PRE		POST		Follow up	
	Control	Study	Control	Study	Control	Study
<b>Pearson Correlation Coefficient</b>	-0.235	-0.193	-0.324	0.688	-0.297	0.644
<b>P value</b>	0.157	0.142	0.258	0.001**	0.265	0.001**

P>0.05 not significant \*P<0.05 Significant \*\* P<0.001 highly significant

This table showed that there were highly statically significant relation between study and control group regarding satisfactory level of total knowledge and practice post and follow up education program implementation.

**Table (5):** Comparison between the control and the study group regarding to Patients' Quality of life Pre- - post and follow up educational program implementation.

Items	Pre				Post				Follow up				X <sup>2</sup>	P value
	control		Study		Control		Study		Control		study			
	No	%	No	%	No	%	No	%	No	%	No	%		
<b>Physical QOL</b>	17	56.7	15	50	22	73.3	4	13.3	20	66.7	2	6.6	8.77	0.012*
Poor	8	26.7	7	23.3	6	20	9	30	7	23.3	8	26.7		
Average	5	16.6	8	26.7	2	6.7	17	56.7	3	10	20	66.7		
<b>Social QOL</b>	11	36.7	15	50	24	80	4	13.3	28	93.3	4	13.3	9.97	0.0037**
Poor	8	26.6	8	26.7	6	20	8	26.7	2	6.7	5	20		
Average	11	36.7	7	23.3	0	0	18	60	0	0	21	66.7		
<b>psychological QOL</b>	22	73.4	24	80	28	93.4	1	3.3	23	76.7	0	0	7.23	0.042*
Poor	4	13.3	4	13.3	1	3.3	5	16.7	5	16.7	4	13.3		
Average	4	13.3	2	6.7	1	3.3	24	80	2	6.6	26	86.7		
<b>Spiritual QOL</b>	8	26.7	7	23.3	10	33.4	0	0	12	40	1	3.3	7.49	0.023*
Poor	12	40	11	36.7	7	23.3	5	16.7	10	33.3	2	6.7		
Average	10	33.3	12	40	13	43.3	25	83.3	8	26.7	27	90		
<b>Total QOL</b>	17	56.7	16	53.3	23	76.7	3	10	24	80	2	6.7	11.54	0.007**
Poor	9	30	8	26.7	5	16.6	5	16.6	4	13.3	3	10		
Average	4	13.3	6	20	2	6.7	22	73.4	2	6.7	25	83.3		

P>0.05 not significant \*P<0.05 Significant \*\* P<0.001 highly significant

This table showed that there were statically significant relation between study and control group regarding their total quality of life for physical domain, psychological domain and spiritual domain pre, post and follow up education program implementation. While, there were highly statically significant relation between study and control group regarding total quality of life for social domain and total Quality of life pre, post and follow up education program implementation.

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**Table (6):** Correlation between total quality of life, total knowledge and total practice of patients in the study and control groups pre, post and follow up of education program implementation.

Patients' knowledge	Patients' total Quality of life											
	Pre				Post				Follow up			
	Study		control		Study		Control		Study		control	
	r	P value	R	P value	R	P value	r	P value	r	P value	R	P value
	.284	0.89	.265	0.76	.712	0.000**	.310	0.91	.744	0.000**	.250	0.75
<b>Patients' practice</b>	.167	0.67	.156	0.44	.265	0.000**	.145	0.41	.277	0.000**	.143	0.40

P>0.05 not significant \*P<0.05 Significant \*\* P<0.001 highly significant

This table revealed to correlation between quality of life and total knowledge, practice and there were highly statically significant relation between study and control group regarding satisfactory level of total knowledge and practice with quality of life post and follow up education program implementation for the study group. While there were no statically significant relation for control group pre, post and follow up.

### DISCUSSION

Total hip replacement is a surgical procedure that has been widely used over recent decades. It is an intervention that causes a dramatic improvement in the individual's functional state and also in his quality of life. Health-related quality of life is a multidimensional model that includes physical, material, social and emotional wellbeing, as well as individual development and daily activities. The physical and functional characteristics of each individual treated with total hip replacement necessitate effective measured made using validated instruments that are capable of furnishing observers with reliable data (*Klemetti et al., 2015*).

The current study results revealed that two fifth of the study group and more than half of the control group there age over 40 years. This findings was no corresponding with *Loures and Leite (2012)* who reported that, in a study about analysis on quality of life of patients with osteoarthritis undergoing total hip arthroplasty, conducted at Brazil, more than two thirds of their studied subjects were had up to 60 years,

Regarding to gender, there were two third of the study group and More than two third of the control group were males. These findings were not in the same line with *Imam et al. (2016)* who clarified that, in a study about cement less Total Hip Replacement for the management of severe Developmental Dysplasia of the Hip in the Middle Eastern population; a prospective Analysis, at Egypt, all of the studied patients was females.

Regarding to education level, there were more than two third of the study group and half of the control group were have moderate educational level. This finding was in agreement with *Holwerda (2015)* who pointed out that, in a study about the impact of total hip replacement, more than half of their studied subjects were had moderate education.

Regarding to marital status, there were half of the study group and two third of the control group were married. This finding contradicted with *Petersen (2010)* who stated that, in a study about rehabilitation outcome after total hip replacement; prospective randomized studies evaluating two different postoperative regimes

and two different types of implants, at Denmark, half of the studied subjects were married.

Regarding to residence, there were more than two third of the study group and less than three quarter of the control group were lived in rural area. This may be due to inappropriate road traffic and street and far from health care service. These findings were in the same line with *Imam et al. (2016)* who clarified that, in a study about cement less Total Hip Replacement for the management of severe Developmental Dysplasia of the Hip in the Middle Eastern population; A prospective Analysis, at Egypt, more than half of the studied patients were life in rural area.

Regarding to nature of occupation, there were more than half of the study group and more than one third of the control group there work need mental effort. This finding was not in the same line with *Fox (2014)* who stated that, in a study about Implementing an Integrative Pre and Postoperative Educational Intervention for Older Adults Undergoing Total Hip and Knee Replacement at Holland, the majority of their studied subjects were had retired. In the investigator point of view, this finding may be due to consequence of the operation and its rehabilitation program after the surgery.

In relation to current medical history, the present study results revealed that two third of the study group and more than half of control group complain of fracture due to accident, also more than two third of the study group and less than two fifth of the control group complain of malignant disease around hip. this finding was in agreement with *Holwerda (2015)* stated that, the majority of the subjects were diagnosed with osteoarthritis, less than one fifth with rheumatoid arthritis, hip dysplasia and avascular necrosis of the femoral head. Nearly half of the subjects had been diagnosed with arthritis for less than ten years, while more than half had been diagnosed for 10 to 40 years.

In relation to current complain after operation, the present study results revealed that more than one third of the study group and less than three quarter of the control group had not able to move. Also, more than one quarter of the study group and more than two third of the control group had deep venous thrombosis. This

finding disagreed with *Loures and Leite (2012)* who reported that, no cases of infection, intraoperative fracture, deep vein thrombosis or any local or general clinical complications of postoperative relevance were recorded conducted at Brazil.

Regarding to satisfactory level of patient knowledge, there were highly statistically significant relation between study and control group of patient total knowledge pre, post and follow up education program implementation. These findings were in accordance with *Reisine et al. (2012)* who show that in a study about self-administered patients Questionnaire for assessing knowledgeable about joint Arthroplasty prior to surgery, at USA, patients are knowledgeable about that: benefits of surgery, but are in need of information about surgical risks and complications.

These findings is not consisted with *Mohamed and Mecheser (2012)* who reported that, in a study about assessment of patients knowledge toward total hip replacement home-care, at Iraq, the majority of the sample were lacking knowledge related to hip joint replacement. Also, *Klemetti et al. (2015)* stated that, in a study about difference between received and expected knowledge of patients undergoing hip replacement in seven European countries, the level of received knowledge did not correspond to expectations. In the investigator point of view, these findings attributed to that, educational program affect positively of patient knowledge and improve there adherence.

Regarding to satisfactory level of patient practice, there were highly statistically significant relation between study and control group of patient total practice pre, post and follow up education program implementation. These findings in the same line with *Clohisy et al. (2010)* who illustrated that, in a study about patient compliance with clinical follow-up after total joint replacement, at USA, patient compliance with clinical follow up after total joint replacement was poor.

Meanwhile, these findings were in the same line with *Heiberg (2013)* who show that, in a study about recovery of physical functioning after total hip arthroplasty, at USA, physical functioning and practice improved after THA. This may be due to the educational program started pre operation so patient applied it directly post operative and compliance with applied this practice.

The current study results revealed that, there was highly statistically significant relation between study and control group pre, post and follow up regarding to knowledge and practice after hip joint replacement educational program implementation. This finding was in the same line with *Shen et al. (2017)* who stated that, in a study about influenced of mobile education on joint function and quality of life in patients after total hip arthroplasty, at China, knowledge has an effect on enhancing compliance and practice of patients after THR. In the investigator point of view, this finding may be due to that there was strong relation between knowledge and practice.

The present study results clarified that there were highly statistically significant relation between study

and control group pre, post and follow up for total quality of life after hip joint replacement educational program implementation. This finding in the same line with *Laupacis et al. (2013)* who demonstrated that, in a study about, the effect of elective total hip replacement on health-related quality of life, conducted at Canada, significant evolution of the health-related quality of life was improved.

Meanwhile, the result was inconsistent with *Nilsdotter (2013)* found that, in a study about predictors of patient relevant outcome after total hip replacement for osteoarthritis: a prospective study, at USA, little or no change in QoL following THR.

The present study results clarified that, there was highly statistically significant relation between study and control group regarding to quality of life and knowledge after hip joint replacement educational program implementation. This finding was consistent with *Shen et al. (2017)* who stated that, the good level in knowledge leading to better quality of life and thus speeding up recovery.

The present study results clarified that, there was highly statistically significant relation between study and control group regarding to quality of life and practice after hip joint replacement educational program implementation. These finding agreed with *Shi et al. (2010)* who found that, in a study about health-related quality of life after total hip replacement: conducted at Taiwan study, at Taiwan, quality of life was highly correlated to good performance.

#### **CONCLUSION:**

There is highly statistically significant relation between knowledge, practice and their quality of life after hip joint replacement educational program implementation. Finally the result should that the hypothesis was met and the educational program affect positively on patient knowledge practice and quality of life.

#### **RECOMMENDATIONS:**

- Establishing a educational program to provide patients with adequate knowledge and training to overcome patients' problems from day one of admission to hospital.  
A booklet or pamphlet illustrating all formations the patient may need regarding to knowledge and practice and how patient to comply post HJR should be developed.
- Further research studies are needed for ongoing assessment of patients including large sample to improve their knowledge, practice and QOL.

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