Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

EFFECT OF NURSING INTERVENTION FOR OLDER ADULT ABOUT THEIR ACTIVITY OF DAILY LIVING POST HIP JOINT REPLACEMENT

Dr. HALA MOHAMED MOHAMED

Professor of Community Health Nursing, Faculty of Nursing / Ain Shams University & Technical institute on nursing Dar El Shefaa Hospital.

Dr. MAGDA ABD EL- SATTAR AHMED

Professor of Community Health Nursing, Faculty of Nursing / Ain Shams University & Technical institute on nursing Dar El Shefaa Hospital.

RAWIA ABDELMOEAM HASHEM

Clinical instructor of Community Health Nursing, Faculty of Nursing / Ain Shams University & Technical institute on nursing Dar El Shefaa Hospital.

Abstract

Background: Hip joint replacement is the replacement of a critically injured hip with an artificial joint. It is an orthopedic procedure which aims to improve the management of diseases of the hip joint that have not responded well to conventional medical treatment or lifestyle changes. **Aim of study**: evaluate the effect of the nursing intervention for older adult Post hip joint replacement on their activity of daily living. **Research Design**: A quasi -experimental design was utilized in this study. **Setting:** The study was conducted at outpatient orthopedic clinics in El Helal hospital. **Study sample**: A purposive sample was collected; it consisted of 126 older adults with HJR attending orthopedic out-patient clinic, both genders, from one to three months after surgery **Tool**: one tool was used in this study. **Tool I:** Structured Interviewing Questionnaire included six parts I) Demographic characteristic of the patient, II) Subjects medical history(Past medical history, current medical history). **III:** Patient's knowledge about factors leading to hip joint replacement **I**V) Patients reported practice. **V**) Katz Index of Independence in Activities of Daily Living. V**I**) Home environment as reported by the elderly related to facilitation. **Results:** The age of older adults with hip joint replacement ranged between 60 - < 65 and 58.7% of them were males. 57.1% of them were unable to mobile,88.9% diagnosed their disease through medical examination.78.6% of the studied older adults had unsatisfactory level of total knowledge at pre-intervention program compared with, 60.3 % of them had satisfactory level of total knowledge at post-intervention program about hip joint replacement. Moreover, there was a highly statistically significant difference in all items of the studied older adults' reported practices about daily living activity pre and post intervention program. **Conclusion:** In conclusion hip replacement surgery is most common among the older adults between rang 60-<65 years. It is more prevalent among males more than female**,** Implementation of the nursing intervention had affect positively on knowledge, practice and activity of daily living of older adult with hip joint replacement surgery. **Recommendation:** A simplified and comprehensive booklet should be available for all elderly with hip joint replacement which include a clear, brief and simple explanation about causes and complications about hip joint replacement and how to deal with these complications. Utilize Internet to present different educational programs to raise older adult's awareness regarding different health issues such as accident prevention for falling and fractures, as well as, the precaution after hip joint replacement... Further research studies about normally changing of age process, preventive measures and coping measures. Regular follow up of patient with hip replacement to evaluate health related daily activities to detect any health problems early.

Keywords: Elderly, hip replacement, Activity of Daily Living

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

INTRODUCTION

Worldwide people in the world will be aged 60 years or over at this time the share of the population aged 60 years and over will increase from 1 billion in 2020 to 1.4 billion. By 2050, the world's population of people aged 60 years and older will double (2.1 billion).The number of persons aged 80 years or older is expected to triple between 2020 and 2050 to reach 426 million **(World Health Organization (WHO), 2022).**

Globally, aged 60 years or more will double, while those aged 80 years or more will number 400 million persons by 2050 **(WHO, 2019).**

Hip joint replacement surgery is usually necessary when the hip joint is worn or damaged to the extent that your activities of daily life will be difficult to perform due to experience pain even while resting. The most common reason for hip replacement surgery is osteoarthritis. Other conditions that can cause hip joint damage include; rheumatoid arthritis, a hip fracture, and disorders that cause unusual bone growth **(American Academy of Orthopedic Surgeons, 2020).**

Hip joint replacement is a procedure in which a doctor surgically removes a painful hip joint with arthritis and replaces it with an artificial joint often made from metal and plastic components. It usually is done when all other treatment options have failed to provide adequate pain relief. The procedure should relieve a painful hip joint, making walking easier **(Johansson & Katajisto, 2019).**

Hip joint replacement may suitable for elderly people with osteoarthritis. Osteoarthritis is one of the ten most disabling diseases in developed countries. Worldwide, estimates show that 10% of men and 18% of women aged over 60 years have symptomatic osteoarthritis, including moderate and severe forms. Age is the strongest predictor of the development and progression of osteoarthritis. It is more common in women, increasing after the age of 50. Other risk factors include obesity, physical inactivity, smoking, excessive alcohol consumption and injuries. While joint replacement surgery is mainly carried out among people aged 60 and over **(WHO, 2021).**

An activity of daily living (ADLs or Basic ADL) is a term used in healthcare to refer to people's daily self-care activities.

Health professionals often use person's ability or inability to performed as measurement of their functional status, particularly in regard to people post injury, with disabilities and the elderly. Common ADLs include feeding ourselves, bathing, dressing, grooming, work, homemaking, cleaning oneself after defecating and leisure **(Singh & Lewallen, 2020).**

A community health nurse must improve the patient's walking ability and maintain their activity of daily living. However, there may be a greater emphasis on independent and confident ambulation, with the correct use of ambulatory aids and specific interventions programs, such as muscle strengthening exercises, aimed at minimizing or correcting impairments **(Huang & Yeh, 2021).**

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

Significance of the study:

Egypt is one of the most populous countries in Africa and the Middle East. With a 2020 estimated population of 102.33 million, Egypt ranks 14th in the world. As estimates, this population age structure is now at 37.6% 25-54 years of age, 4.22% for 65 plus years of age, while elderly people represent 3.9% **(CAPMAS, 2019).**

In Egypt, incidence of hip joint replacement had increased with people over age of 65 reached 60%in the Arabian region, while this ratio is less than 20%in the U.S. and Europe **(Mahmoud, 2019).**

AIM OF THE STUDY

This study aimed to evaluate the effect of the nursing intervention for older adult Post hip joint replacement on their activity of daily living, through

1. Assessing the knowledge and practice of older adult related to hip joint replacement care.
2. Assessing activities of daily living related to hip joint replacement to detect patients' health needs (pre the intervention).
3. Planning& implementing nursing intervention program based on patients health needs detecting in relation to activity of daily living of older adult.
4. Evaluating the effect of nursing intervention on knowledge, practices and activities of daily living of post the implementation of the intervention program that is related to hip joint replacement.

Research hypothesis:

Implementation of the nursing intervention will affect positively on knowledge, practice and activity of daily living of older adult with hip joint replacement surgery.

SUBJECTS AND METHOD

Research design:

Quasi experimental design was used in this study.

Setting:

The study was carried out in outpatient orthopedic clinics in El Helal Orthopedic hospital, which affiliated to the Ministry of Health and population. The hospital was selected because it is the one of only Government Specialized Hospital in the orthopedic surgeries. Moreover, the majority of the cases are mostly referred to it for follow up after surgery.

Sampling:

Purposive sample, sample size will be 126 patients to achieve power of 95%and a level of significance of 5% (tow sided), assuming improvement 30% **(Rosner, 2016)**.

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

$$n = \left(\frac{Z_{1-\alpha/2} + Z_{1-\beta}}{ES} \right)^2$$

Z_α = Standard normal deviate for α = 1.9600.

Z_β = Standard normal deviate for β = 0.8416.

$B = (Z_\alpha + Z_\beta)^2 = 7.8489$.

$C = (E/S_\Delta)^2 = 0.0625$.

N = B/C = 125.5820.

The N thus calculated is rounded up to the next highest integer to give the group size.

$$n = (\frac{1.96+0.84}{0.0625})^2 = 125.5820 = 126 \text{ patients}$$

Inclusion criteria:

1. Older adult 60 years old and more
2. Perform hip replacement surgery from1 to3months period
3. Free from mental disorder and able to communicate

Tools for Data Collection: one tool was used for data collection.

Tool I:

A- Structured Interviewing Questionnaire was developed by the investigator after reviewing the related literature in Arabic language. It was contain six main parts:

Part I: Socio demographic variables of the study subjects such as age, gender, residence, marital status, education level, occupation, daily work hours, income/month, family members, rooms number, crowding index, caregiver, change occupation and responsible for treatment expense.

Part II: Subjects medical history (which items past & current history).

Part III: older adults knowledge about hip joint replacement such as meaning, purpose, causes, complication after operation, signs of wound infection, signs indicated to deep venous thrombosis, instruction for rest and safety, incorrect position & correct position effect on hip joint, Pain relive methods, medications after operation benefits of medications, important of follow up and benefits of exercise (15 Questions).

Total scoring system:

The studied older adults' answered were compared with model key answers; where scored as complete correct answer had scored (2), incomplete correct answer had scored (1) and incorrect or don't know answer had scored (0). Total knowledge scores ranged from (0- 30) points. In this respect the level of older adults' knowledge was classified into two categories as the following:

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

- **Satisfactory level of knowledge** (≥50%) was ranged from (15-30) degrees.
- **Unsatisfactory level of knowledge** (<50%) was ranged from (0-15) degrees.

Part IV: older adults reported practice; it consisted of 36 items which divided in to 7 items such as:

- **Daily living activity** (sitting, walking, using stairs and sleeping (12 items).
- **Healthy nutrition** (4 items).
- **Pain relieve methods** (4 items).
- **Drug administration precautions** (3 items).
- **Nature of exercise** (3 items).
- **Type of exercise** (4 items).
- **Hip joint protection** (6 items).

Total scoring system:

The studied older adults' reported practices scored as the following always scored (3), sometimes scored (2) and never scored (1).The total scores were ranged from (0 to 108) degrees. These scores were summed and were converted into a percent score and classified into 2 categories:

- **Adequate level** (≥60%) was ranged from (65-108) degrees.
- **Inadequate level** (<60%) was ranged from (0-65) degrees.

Part V: **Katz Index of Independence in Activities of Daily Living (ADL) (1983),** it consists of two parts:

- **Activities of Daily Living (ADLs):** It consisted of 28 items which divided into 8 parts as the following (bathing, dressing, toileting, transferring, continence, feeding, walking and climbing stairs).
- **Instrumental Activities of Daily Living** (IADLs): It consisted of 30 items which divided into 8 parts as the following ability to use telephone, shopping, food Preparation, housekeeping, laundry, mode of transportation, responsibility for own medications and ability to handle finances.
- **Total scoring system:** The studied older adults' activity of daily living scored as the following independent scored (1) and dependent scored (0). The total scores were ranged from (0 to 58) degrees. These scores were summed and were converted into a percent score and classified into 2 categories:
- **Independency** (≥ 70%) was ranged from (41-58) degrees.
- **Dependency** (<70%) was ranged from (0-40) degrees.

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

Part VI: Home environment as reported by the elderly related to facilitation that helped patients with hip joint replacement such home general characteristics, lighting, ventilation, bathroom, furniture and floor and rugs.

Scoring system:

Statements are represented in two rating and classified into: 1 point is for safe and 0 is fore unsafe. The scores of the items will be summed up and the total score is 23 grades and equal 100%. The home environmental is consider safe if the present score was 75% or more and unsafe if the score was less than 75%.

The Validity: Jory of 5 experts in community health nursing was reviewed the tools for its content validity.

The reliability was done by Cronbach's Alpha coefficient test to assure homogeneity of tool as:

Tool	No of questions	Cronbach's Alpha
Knowledge	15	0.98
Reported practices	36	0.99
Activities of Daily Living	58	0.99

Operation design Pilot study:

The pilot study was carried out on 5 patients, who were chosen randomly from the previous mentioned setting. The purpose of this pilot was to test the eligibility of the field.

Also to determine the approximate time needed for the data collection. So, the pilot study sample was excluded from the study sample and replaced by another subjects.

Ethical consideration:

An official permission was obtained from the Dean of faculty of Nursing Ain Shams University directed to manager of ELHELAL hospital using proper channels of communications. Before the initial interview, informed oral consent was obtained from every subject to be recruited in the study sample. The investigator was started by explaining the purpose of the study briefly to the participants. They were reassured about the confidentiality of any obtained information. They were also informed about their right to refuse to participate or withdrawal at any time. The study maneuvers didn't entail any harm to participants.

Field work:

The collection of data tasks a period of 6 months started at January-2022 and ended at June-2022. The data collection tools were conducted in the orthopedic outpatient clinics in Al-Helal hospital. Older adult's agreements was obtained verbally and assured that the obtained information was kept confidentiality and used only for the purpose of the study. The interview with the clients was carried out within 2 days per week (Monday and

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

Thursday) during morning shift (9 AM-2 PM) and afternoon shift (1 PM-4 PM) was done for every participant of the sample on an individualized base. The researcher spent 30-1.30 minutes with each participant to fill the study tool.

The intervention construction was included three phases:

Preparatory phases:

First, preparatory phase: A review of recent, current, national and international related literature in various aspects of the problems to design the study tools, then assessment was done to determine the patients' health needs by using pretest based the data about the collected patients' knowledge and their practices.

Second phase: Developing and implementing the nursing intervention in order to improve patient's level of knowledge, practices and ADLs.

The Study general objective was evaluated the nursing intervention for older adult Post hip joint replacement on their activity of daily living.

Third phase: Finally, the evaluation phase: This phase was to evaluate the effect of the nursing intervention program on the client's knowledge, activity of daily living and practices related to hip replacement through comparing the results of the posttest by the results of the pretest as pre and post tests are the same.

Program description:

The program was designed for elderly to evaluate the of nursing intervention program for older adults Post hip joint replacement on their activity of daily living, through; assessing the knowledge and practice of older adult related to hip joint replacement care, assessing activities of daily living related to hip joint replacement to detect patients' health needs, planning& implementing intervention program based on their health needs, and evaluating the intervention on knowledge, practices and activities of daily living of older adults post hip joint replacement.

Program objective:

At the end of the program the older adults will be able to

- Improve basic knowledge regarding older adults about factors leading to hip joint replacement through applying the intervention program as the following: Meaning of hip joint replacement, causes & types of hip joint replacement, susceptibility to complication, patient habits such as eating habit, rest & sleeping pattern, hygiene & type of physical activity.
- Improve ideal practices related to Activities of Daily Living (ADLs) & Instrumental Activities of Daily Living (IADLs).
- Improve ideal practices and beliefs related to home environment as reported by elderly related to hip joint replacement such as a raised toilet seat or a reaches to grab objects without excessive bending of hips

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

General objectives:

- Evaluate the effect of nursing intervention program for older adults Post hip joint replacement on their activity of daily living,

Specific objectives:

At the end of this program each elderly will be able to:

- Acquire knowledge related to hip joint replacement care to improve health and outcomes.
- Acquire healthy practices to improve health and outcomes.
- Improve activities of daily living of older adult post hip joint replacement.

Statistical design:

The collected data organized, tabulated and statistically analyzed using Statistical Package for Social Science (SPSS) version 25 for windows. Descriptive statistics were applied (numbers, percentages, mean and standard deviation).Test of significance, Chi-square test ($\chi 2$) this test used to compared for qualitative variables and correlation coefficient (r) were done for assessment of inter relationship among quantitative variables that were normally distributed or when one of the variables is qualitative, these tests were applied to test the study hypothesis. Reliability of the study tools was done using Cronbach's Alpha. A highly significant level value was considered p- value < 0.001, significant level value was considered when p- value < 0.05 and no statistical significance difference was considered when p- value > 0.5.

RESULT

Table (1): Shows that, 47.6 % of the studied older adults were aged between 60 >65 years with Mean ±SD= (64.98±5.05), 58.7 % of them were male, 49.2 % of them were married, 31.7 % of them couldn't read or write and 52.4 % of them worked less than 8 hours daily.

Figure (1): Shows that, 78.6% of the studied older adults had unsatisfactory level of total knowledge at pre-intervention program compared with, 60.3 % of them had satisfactory level of total knowledge at post-intervention program about hip joint replacement.

Figure (2): Clarifies that, 73.8 % of the studied older adults had inadequate level regarding to total score level of reported practices post hip joint replacement at preintervention program, which improved to be 66.7 % of them had adequate level postintervention program.

Figure (3): Shows that, 65.1 % of the studied older adults had dependency level of dependency regarding their total activity of daily living at pre-intervention program, which improved to be 57.1 % of them, had independency level post-intervention program respectively.

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

Table (2): Shows that, 74.6 % & 73.8% of the studied older adults had dependency regarding their total instrumental of daily living activity about laundry and responsibility for own medications at preintervention program, which improved to be 60.3 % & 57.9 % of them, had independency post-intervention program respectively. Moreover, there was a highly statistically significant difference in all parts of the studied older adults' instrumental of daily living activity pre and post intervention program (P, ≤ 0.001).

Table (3): Clarifies that, there were highly statistical positive correlation between total level of the studied older adults' knowledge, reported practice and total activity of daily living post hip replacement at pre and post intervention program at (P= ≤ 0.001).

Table (1): Distribution of the studied older adults according to their socio-demographic characteristic (n=126).

Socio-demographic characteristic	No.	%
Age		
60 □65 year	60	**47.6**
65□ 70 year	46	36.5
≥ 70 year	20	15.9
Mean ±SD	**64.98±5.05**	
Gender		
Male	74	**58.7**
Female	52	41.3
Marital status		
Single	4	3.2
Married	62	**49.2**
Divorced	50	39.7
Widow	10	7.9
Educational level		
Cannot read &write	40	**31.7**
Read& write	24	19.0
Intermediate education	30	23.8
University graduate	32	25.4
Working hours / day		
Less than 8 hours	66	**52.4**
≥ 8 hours	60	47.6

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

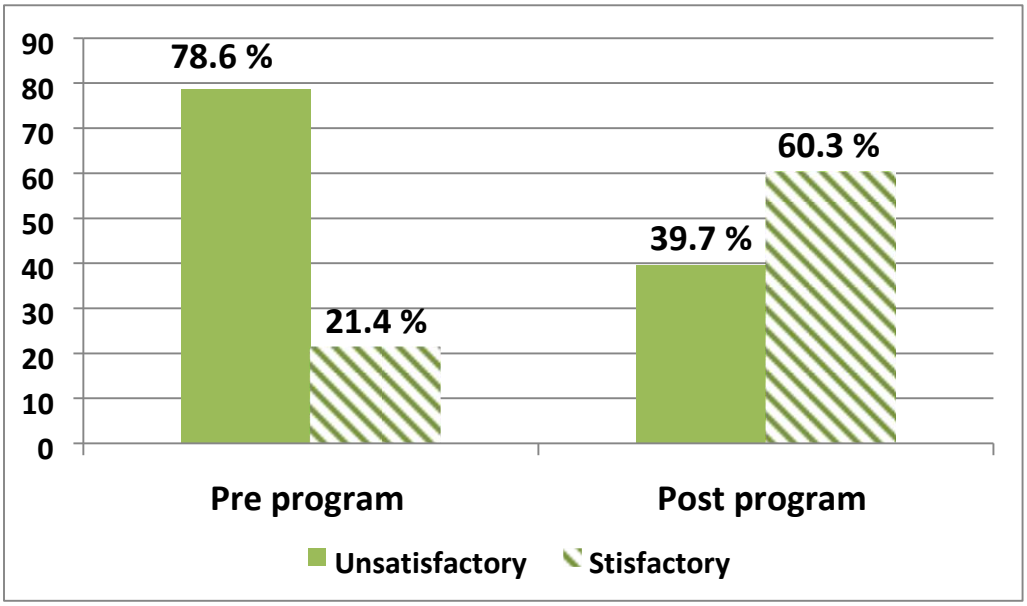

Figure (1): Distribution of the studied older adults regarding their total level of knowledge about hip joint replacement pre and post intervention program (n=126).

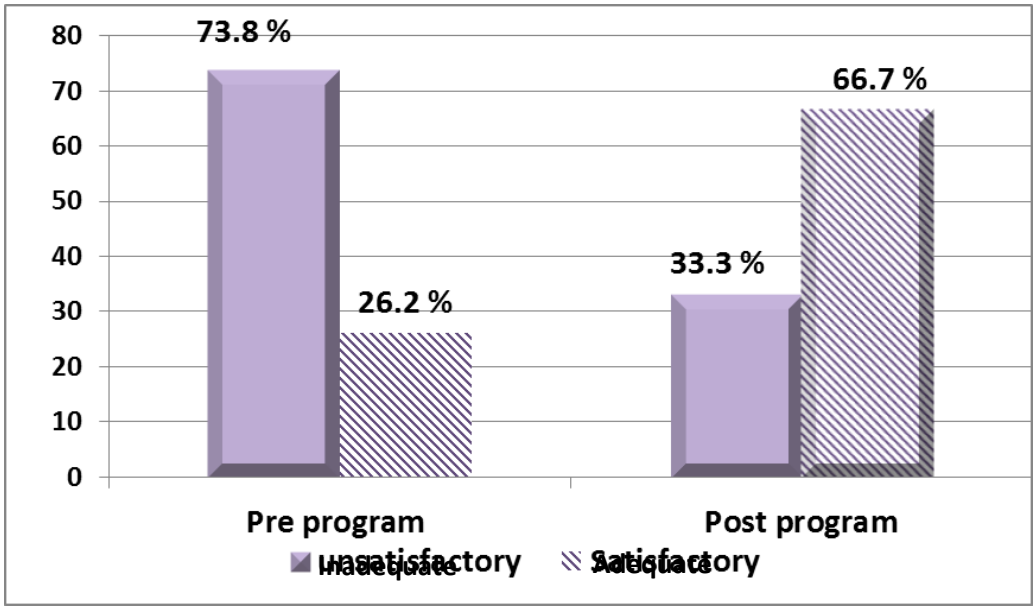

Figure (2): Percentage distribution of the studied older adults regarding to their total score level of reported practices post hip joint replacement pre and post intervention program (n=126).

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

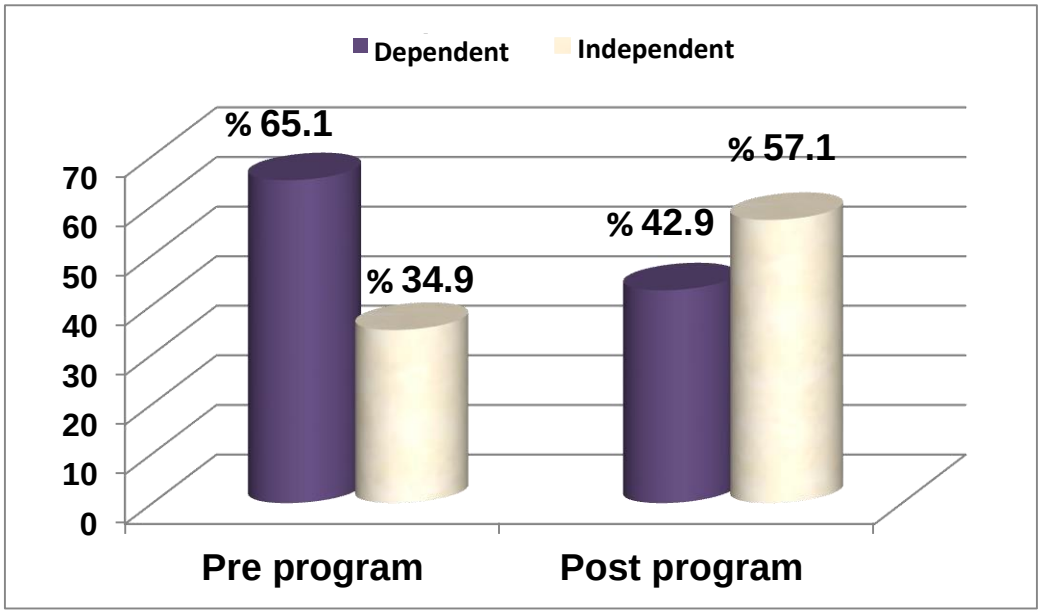

Figure (3): Distribution of the studied older adults according to their total activity of daily pre and post program (n=126).

Table (2): Distribution of studied older adults regarding their total instrumental of daily living activity's parts pre and post program (n=126).

Items	Pre				Post				X^2	p-value
	Independent		Dependent		independent		dependent			
	No	%	No	%	No	%	No	%		
Ability to use telephone	65	51.6	61	48.4	97	77.0	29	23.0	40.140	0.0000**
Shopping	52	41.3	74	58.7	92	73.0	34	27.0	32.722	0.0000**
Food Preparation	46	36.5	80	63.5	84	66.7	42	33.3	36.225	0.0000**
Housekeeping	48	38.1	78	61.9	88	69.8	38	30.2	33.483	0.0000**
Laundry	32	25.4	94	**74.6**	76	**60.3**	50	39.7	28.219	0.0000**
Mode of transportation	48	38.1	78	61.9	84	66.7	42	33.3	38.769	0.0000**
Responsibility for own medications	33	26.2	93	**73.8**	73	**57.9**	53	42.1	32.460	0.0000**
Ability to handle finances	52	41.3	74	58.7	84	66.7	42	33.3	44.270	0.0000**

* * Highly statistically significance p≤ 0.001

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

Table (3): Correlation between total knowledge, reported practices and activity of daily living among the studied older adults post hip replacement pre and post intervention program.

Scale	Total activity daily living			Total knowledge	
		pre-program	post program	pre-program	post program
Total knowledge	r	0.724	0.903	-	-
	p- value	0.000**	0.000**	-	-
Total reported practices	r	0.759	0.933	0.746	0.586
	p- value	0.000**	0.002*	0.000**	0.000**

* * Highly statistically significance p≤ 0.001

DISCUSSION

Concerning the age of studied older adults the results of the current study revealed that, nearly half of them were aged between 60 >65 years with Mean ±SD= (64.98±5.05) and more than half of them were male, The results of the current study was supported by **Saunders et al. (2021)** who studied "Comparing an e-health program (my hip journey) with standard care for total hip arthroplasty: Randomized controlled trial" and revealed that two thirds of studied participants were 60 with Mean ±SD= 61.7±12.1 and more than half of them were males. Conversely, the study was disagreed with **Fujita et al. (2022)** who studied "Analysis of factors influencing patient satisfaction after hip arthroplasty in a Japanese cohort: the significant effect of postoperative physical activity" and revealed that the age of patients were ranged from (33–89) with mean 69.1 ± 9.9 and the majority of them were females. This could be due to that advanced age is strongly correlates with the hip osteoarthritis and the largest proportion were male due to their working condition that require much movement and might be joint inflammation.

Regarding the educational level and working hours, the results of the current study revealed that, nearly one third of studied older adults couldn't read or write and more than half of them worked less than 8 hours daily. The current study was supported by **Bassamat & Hosny (2018)** who studied "Discharge Needs of Patients after Hip Arthroplasty" and revealed that more than half of the studied patients can't read or write and nearly two thirds of them were working 6- 8 hours daily.

On the other hand, this finding was disagreed with Johansson **Stark et al. (2016)** who studied "The quality of recovery on discharge from hospital, a comparison between patients undergoing hip and knee replacement–a European study" and denoted that their hip arthroplasty patients had a high level of education. From the researcher point of view, this could be attributed to the fact that the majority of the participants were elderly, where the illiteracy is a common problem in early decades due to high cost of education and increased number of family members also, nearly two thirds were working less than 8 hrs, might be due to that the large proportion were retired and housewives in addition, this

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

could be due to the undergoing major operation that resulted in limitation of physical activities and decrease in working hours.

Regarding total patients' knowledge about total hip replacement, the current study showed that more than three quarters of the studied older adults had unsatisfactory level of total knowledge at pre-intervention program compared with nearly two thirds of them had satisfactory level of total knowledge at post- program. The study was agreed with **Bakr (2018)** who revealed that there was highly statistically significant improvement in total knowledge of the study group post-program application, only two fifth of control group had satisfactory total knowledge about total hip replacement compared with the majority of study group who had satisfactory knowledge. In addition, the study was supported by **Ali & Abo El-Fadl N (2021)** who revealed that there was highly statistically significant improvement in mean knowledge score post and follow-up program application. Conversely the study was incongruent with **Bassamat & Hosny (2018)** who illustrated that,all participants expressed their unsatisfactory level of information regarding total hip replacement, wound care; self-care, movement and postures; pain management; medications; physical therapy/exercises; complications; follow-up; dietary; vocational; social; emotional and sexual and other needs which remain unchangeable and unsatisfactory after discharge instructions.

The significant improvement in patients' knowledge might be due to the effect of educational program and colored, illustrative and clear booklet also might be due to use of various teaching methods such as lectures and group discussion and the ability of the researcher to increase patients motivation to acquire and retain information.

Concerning studied older adult's total practices the present study revealed that, there was highly statistically significant improvement in total practices post program compared with pre-program. The study was congruent with **Nicolau et al. (2022)** who studied "Educational Intervention in Rehabilitation to Improve Functional Capacity after Hip Arthroplasty" and revealed that Education in the perioperative increase post-operative adherence to practices, promotes training to perform rehabilitation exercises, improves the hospitalization experience, increases participation in the rehabilitation process, allows early mobilization, improve sleep and nutrition and increases the functional potential, thus enabling faster reintegration into society. In addition, the study was supported by **Bassamat & Hosny (2018)** who illustrated that there was highly significant improvement in total score of participants practices post intervention. From the researcher point of view, this could be due to the effect of educational program, using various teaching methods such as demonstration and re-demonstration, group discussion and using different media such as videos, posters and booklet that were very helpful in illustrating the importance of best performed practices in promoting adequate prognosis and out-comes also, in minimizing complications and early discharge.

According to studied older adults total activity of daily living's parts pre and post program, the current study revealed that there was a highly statistically significant difference in all parts of the studied older adults' activity of daily living pre and post intervention program,

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

the study was congruent **Friedman et al. (2019)** who studied " Impact of a comanaged Geriatric Fracture Center on short-term hip fracture outcomes" a study conducted in brazil and revealed that there was significant improvement in patients self-care regarding all arts of ADLs as they found that, the half of patient completely dependent regarding their instrumental activities.

Regarding the studied older adults according to their total activity of daily pre and post program, the current study revealed that, nearly two thirds of the studied older adults had unsatisfactory level of dependency regarding their total activity of daily living at pre-intervention program, which improved to be more than half of them had satisfactory level of dependency post-intervention program. From the researcher point of view, this could be due to the effect of program on demonstrating to the researcher how to perform ADLs with maximum level of dependency. The study was congruent with **Wang (2016)** who studied "Does preoperative rehabilitation for patients planning to undergo joint replacement surgery improve outcomes" who revealed that there was significant improvement in patients' out-comes and activities of daily living. In addition, the study was agreed with **Turnbull et al. (2019)** who studied "Return to activity following revision total hip arthroplasty" and revealed that there was significant improvement in patients' ADLs post intervention, two thirds of patients had unsatisfactory level of dependency preintervention that improved to more than half of them had satisfactory level of dependency post intervention.

Concerning studied older adults regarding their total instrumental of daily living activity's parts pre and post program, the current study illustrated that there was a highly statistically significant difference in all parts of the studied older adults' instrumental of daily living activity pre and post intervention program, there was a highly statistically significant difference in all parts of the studied older adults' instrumental of daily living activity pre and post intervention program. The study was supported by **Mahrous & Gendy (2020)** who revealed that, there was significant improvement in all activities of daily living about laundry, food preparation, and housekeeping and the ability to use telephone in the study group compared with control groups.

Regarding the correlation between total knowledge, reported practices and activity of daily living among the studied older adults post hip replacement pre and post intervention program, the results of the present study illustrated that there were highly statistical positive correlation between total level of the studied older adults' knowledge, reported practice and total activity of daily living post hip replacement at pre and post intervention program, from the researcher point of view, this could be due to that higher knowledge level is associated with more information about healthy practices that enhance recovery and promote good health condition and best outcomes so that increasing patients' ability to perform ADLs independently. The study was agreed with **Bakr (2018)** who revealed that there was highly statistically significant correlation between patients' knowledge, practices and ADLs. In addition, the study was supported by **Cetinkaya et al. (2022)** who revealed that there was significant association between patients' knowledge and their ADLs.

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

CONCLUSION

In conclusion hip replacement surgery is most common among the older adults between rang 60-65 years. It is more prevalent among males more than females,

Implementation of the nursing intervention had affect positively on knowledge, practice and activity of daily living of older adult with hip joint replacement surgery.

RECOMMENDATIONS

According to results of the current study, the following suggestions are recommended:

It is recommended that Regular follow up of patient with hip replacement to evaluate health related performance of activity of daily living to detect any health problems early.

A simplified and comprehensive booklet should be available for all elderly with hip replacement which include a clear, brief and simple explanation about causes, complication about hip replacement and how to deal with these complications.

Educational program for older adults to raise their awareness about hip replacement related factors should be a priority to ensure early diagnosis of the disease.

Utilize the internet to present different educational programs to raise older adult's awareness regarding different health issues such as accident prevention for falling and fractures, as well as, the precautions after THR surgery.

Further research studies about activity daily living post hip joint replacement in older adults should be conducted at large sample for generalization of the results.

REFERENCES

- **Ali, M., & Abo El-Fadl, N. (2021).** Effect of Evidence Based Progressive Exercise Program on Functional Outcomes for Patients after Total Hip Replacement Surgery. International Journal of Novel Research in Healthcare and Nursing, 8(1), 336-385.
- **American Academy of Orthopaedic Surgeons (2020)**: Total hip replacement, Taiwan. Retrieved from http://orthoinfo. aaos.org/topic.cfm?topic=A00377on10Septe mber2015.
- **Bakr, H. (2018).** Effect of educational program on quality of life for patients post hip joint replacement. Egyptian Journal of Health Care, 9(3), 392-400.
- **Bassamat, A., & Hosny, M. (2018)**. Discharge Needs of Patients after Total Hip Arthroplasty. The Medical Journal of Cairo University, 86(March), 179-185.
- **Central Agency for Public Mobilization and Statistics** (CAPMAS) 2019.
- **Cetinkaya Eren, O., Buker, N., Tonak, A., & Urguden, M. (2022).** The effect of video-assisted discharge education after total hip replacement surgery: a randomized controlled study. Scientific Reports, 12(1), 1-9.
- **Friedman, SM, Mendelson, DA, Bingham, KW, Kates, SL.:** Impact of a comanaged Geriatric Fracture Center on short-term hip fracture outcomes. J of Arch Intern Med. (2019); 169(18):1712–1717.

ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 66 Issue 01 | 2023
DOI 10.17605/OSF.IO/RKEZW

- **Fujita, T., Hamai, S., Shiomoto, K., Okazawa, K., Nasu, Y. K., Hara, D., & Nakashima, Y. (2022)**. Analysis of factors influencing patient satisfaction after total hip arthroplasty in a Japanese cohort: the significant effect of postoperative physical activity. Journal of Physical Therapy Science, 34(2), 76-84.
- **Huang, C.L., Che, H.L. &Yeh, M.Y. (2021):** Empowering Patients through Education and Nursing Instruction: literature Review. Relation between Self_Perceptions of Health Status and Self_Care Behaviors of Older Adults 12(2), 149-159.
- **Johansson Stark Å., Charalambous A., Istomina N., Salanterä S.,**
- **Sigurdardottir, A.K., Sourtzi P. and Bachrach_Lindström M.:** The quality of recovery on discharge from hospital, a comparison between patients undergoing hip and knee replacement–a European study. Journal of clinical nursing, 25 (1718): 2489-2501, 2016
- **Johansson, K., Salanterä, S. &Katajisto, J. (2019):** Empowering orthopaedic patients through preadmission education: results from a clinical trial. Patient Education and Counseling 66(1): 84–91.
- **Katz, S. (1983):** Assessing self-maintenance: Activities of daily living, mobility and instrumental activities of daily living. JAGS, 31(12): 721-726.
- **Mahmoud, H. (2019):** FRCSEd, MD,
- Professor and Head of the Orthopedic Unit, October6 University, perception and coping strategies of elderly patient with hip osteoarthritis. Journal of Health Promotion and Health Education 36: 1-3.
- **Mahrous, M., & Gendy, F. (2020).** Effect of Pre and Post Hospital Discharge Instructions on Functional Abilities of Patients with Hip Fractures.
- **Nicolau, C., Mendes, L., Ciríaco, M., Ferreira, B., Baixinho, L., Fonseca, C., & Sousa, L. (2022)**. Educational Intervention in Rehabilitation to Improve Functional Capacity after Hip Arthroplasty: A Scoping Review. Journal of Personalized
- Medicine, 12(5), 656.
- **Saunders, R., Seaman, K., Emery, L., Bulsara, M., Ashford, C., McDowall, J., & Whitehead, L. (2021)**. Comparing an ehealth program (my hip journey) with standard care for total hip arthroplasty: Randomized controlled trial. JMIR Rehabilitation and Assistive
- Technologies, 8(1), e22944.
- **Singh, J. A., & Lewallen, D. G. (2020).** Predictors of activity limitation and dependence on walking aids after primary total hip arthroplasty. Journal of the American Geriatrics Society, 58(12), 23872393.
- **Turnbull, G. S., Scott, C. E., MacDonald, D. J., & Breusch, S. J. (2019).** Return to activity following revision total hip arthroplasty. Archives of Orthopaedic and Trauma Surgery, 139(3), 411-421.
- **Wang, L., Lee, M., Zhang, Z., Moodie, J., Cheng, D., & Martin, J. (2016).** Does preoperative rehabilitation for patients planning to undergo joint replacement surgery improve outcomes? A systematic review and meta-analysis of randomised controlled trials. BMJ open, 6(2), e009857.
- **WHO. (2021):** Definition of an older or elderly person". WHO.int.Retrieved2018-04-04.
- **World Population Prospects (2019 Revision) -** United Nations population estimates and projections.
- **World Health Organization (WHO), 2022:** available at https://www.who.int /newsroom / fact-sheets/ detail/ageing –andhealth accessed on November 15, 2022.