

DEVELOPING NURSING CARE GUIDELINES FOR REHABILITATION OF PATIENTS WITH RHEUMATOID ARTHRITIS.

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Abstract

Rheumatoid arthritis is a crippling disease which affects all life domains of the patients, so there is a necessary need for adequate rehabilitation process. The aim of the study was Assessment of nurses' knowledge and performance toward rehabilitation of patients with rheumatoid arthritis, and Assessment of nurses' attitude toward rehabilitation of patients with rheumatoid arthritis. Materials and method: Correlation research design was utilized to conduct this study. Sample: Convenience sample of all available nurses at the time of the study providing care for patients with rheumatoid arthritis (N=40) at the physical medicine and rehabilitation department in the outpatient clinic at Mansoura University Hospital. Data were collected using three tools; first tool included two parts socio demographic characteristics of the studied nurses and assessment of nurses' knowledge about different aspect of rehabilitation of patients with rheumatoid arthritis. Second tool was nurse's practice toward rehabilitation of patients with rheumatoid arthritis. Third tool was nurse's attitude toward rehabilitation of patients with rheumatoid arthritis. (20.0%) of the studied nurses had satisfied knowledge and all of the studied nurses (100.00%) had an unsatisfied performance in physical, psychological rehabilitation, and health education while (90.0%) of the studied nurses had satisfied attitude. It is recommended to hold continuous educational and orientation program for the newly nursing staff and encourage a high level of self care, follow up, teaching for rheumatoid arthritis and improving health status.

Keywords: *Nursing guidelines, rehabilitation, rheumatoid arthritis.*

Introduction:

Rheumatoid arthritis (RA) is a devastating disease that occurs worldwide and affect all racial and ethnic groups, It affects about 0.6% of the United States adult population ⁽¹⁾. Approximately 70% of patients who have the disease are women it usually developed between the ages of 30 and 50, but it can occur at any age ⁽²⁾. In Egypt the incidence of rheumatoid arthritis was found to be 1% of all population the prevalence rate is approximately 0.2% ⁽³⁾

Rehabilitation is a meritorious process of functional improvement that involves client, family, community, and health care provider. Optimal function is achieved when the uniqueness and wholeness of the individual is recognized⁽⁴⁾.

The rehabilitation is an evitable part for patient with rheumatoid arthritis as the early beginning of the rehabilitation process will in turn lead to early adaption and achieving the highest level of physical, psychological, and social well being as possible and learn how to use available resources and focus on existing abilities it also help the patient to achieve an acceptable quality of life with dignity, self respect and independence ⁽⁶⁾.

The nurse have a pivotal role in rehabilitation as maintaining optimal level of physical function providing the patient with psycho social support and encouraging the patient to be independent all of these can be achieved by planning

rehabilitation program based on patients needs and also through using of therapeutic program which include exercise either active or passive according to ability of the patient, heat therapy in the form of superficial heat compresses , wax bath, warm shower and transcutaneous electrical nerve stimulation ⁽⁶⁾.

Also, she encourages the patient to become independent and protect the affected joints through balance work and rest, reduce effort on joints, avoid positions of stress on it, use large and strong joint, and avoid remaining in one position ⁽⁷⁾.

Significance of the study

Rheumatoid Arthritis(RA) is a serious, progressive and irreversible disease affecting approximately 0.5-1% of populations worldwide in which there is a gradual loss in functional capacity and at the end of 15years, nearly30%–50% of the patients need help for vocational/self-care activities and the patients have a 7-folds higher risk of disability ⁽⁸⁾. This will in turn leading to increase the morbidity and mortality.

Nurses work as part of multidisciplinary team they provide a valued component of care for patients with rheumatologic conditions as they have a positive impact on patients' knowledge, attitude and satisfaction; therefore they must have a good Knowledge and skills about understanding of rheumatologic conditions and its management in order to be well prepared for this role ⁽⁹⁾.

SUBJECTS AND METHOD

The aim of this study:

The aim of the study was:

1. Assessment of nurses' knowledge and performance toward rehabilitation of patients with rheumatoid arthritis.
2. Assessment of nurses' attitude toward rehabilitation of patients with rheumatoid arthritis.

Research questions:

1. What is the nurses' knowledge and performance regarding the rheumatoid arthritis patient?
2. What is the nurses' attitude toward rehabilitation of patients with rheumatoid arthritis?
3. Is there is a relationship between nurses knowledge and performance toward rheumatoid arthritis patients?
4. What is the relationship between socio demographic characteristics of the studied nurses and their knowledge and performance?

Subjects and method of the current study were discussed under the following four main designs:

1. Technical Design
2. Administrative Design
3. Operational Design
4. Statistical Design

1. Technical Design

The technical design of the current study included: research design, study setting, subjects, and tools for data collection

Research design:

The correlation research design was utilized to conduct this study. The correlation research is a type of non experimental research in which the researcher measures two or a wide range of variables to assesses the strength between variables and the statistical relationships between them, additionally the researcher can collect much information from many subjects at one time and study a wide range of variables and their interrelations ⁽¹⁰⁾.

Setting:

The study was carried out in the physical medicine and rehabilitation department in the outpatient clinic at Mansoura University Hospital.

Subjects:

A convenience sample of all available nurses at the time of the study providing

care for patients with rheumatoid arthritis (N=40) at the physical medicine and rehabilitation department in the outpatient clinic at Mansoura University Hospital.

Tools of Data Collection:

Data was collected by using the following tool:

Three tools were used for data collection:-

Tool I: - Nurses Knowledge about rehabilitation of patients with rheumatoid arthritis.

It was developed by the researchers after extensive reviewing of the related and recent literature and translated into the simple Arabic language it consists of two parts.

Part (1): Socio-demographic data sheet

It included age, sex, educational level, marital status, living condition, years of experience, and previous training courses about rehabilitation.

Part (2): Knowledge assessment questionnaire: It included assessment of nurses knowledge about different aspect of rehabilitation of patient with rheumatoid arthritis such as their basic knowledge about rheumatoid arthritis, complications of rheumatoid arthritis, pain management of rheumatoid arthritis, nursing management of rheumatoid arthritis, role of nurse in rehabilitation clinics of rheumatoid arthritis, role of the nurse in helping the patient to accept his condition, and role of the patient's family in rehabilitation process.

Tool II: - Observational check lists.

Aimed at assessing the performance of the studied nurses regarding rehabilitation of patients with rheumatoid arthritis. It was adopted from; ⁽¹⁰⁾ and other modification was done by the investigators and it was written in English. It includes ideal nursing care necessary for rehabilitation of patients with rheumatoid arthritis and is ranking as: done correctly, done incorrectly, not done.

Tool III: - Attitude scale which is used to assess the attitude of nurses about the rehabilitation of patients with rheumatoid arthritis.

It was adopted from; ⁽¹²⁾ It was developed by Talbot 1995 and modified by polit and hungler 1997;the scale include 18 clear and simple statements and it use three points likert scal. ⁽¹³⁾.

2. Administrative design:-

An official permission was obtained from the Faculty of Nursing, Mansoura University to the directors of Mansoura University Hospitals at which the study was conducted. Before collecting data from the nurses participated in the study, the investigator explained the purpose of the study and took oral consents from them.

3. Operational Design

This part included: validity& reliability, pilot study, field work, and limitation of this study.

Content validity& Reliability:

Extensive review of the current national and international literatures related to the research was done using textbooks, articles, magazines, internet, and other related researches. Tools of data collection were adopted and modified by the investigator then tested for content validity by a panel of five experts in the field of medical surgical nursing all were assistant professor of medical surgical nursing at the faculty of Nursing, Mansoura University reviewed the tools for clarity, relevance, comprehensiveness, understanding, applicability and simplicity for implementation and some modification were applied accordingly.

Reliability: The reliability of the developed tools was estimated using the Cronbach's Alpha test to measure the internal consistency of the tools ($r=0.81$) .. A pilot study was conducted with 5 nurses before starting the data collection to assess tool for its clarity, feasibility its applicability and the approximate time

needed for answering the questionnaire. Necessary modification will be done according to the result of the pilot study.

Nurses were answering the written questionnaire on the presence of researcher without referral to text books, within 30 minutes. Each nurse was observed separately while they provide care to patients with rheumatoid arthritis to assess their practice by using an observational check list.

Field Work:

Once the researchers review the related literature to develop the study tools for data collection that covered aim of the study the official written permission to conduct the study was obtained from responsible authorities at Mansoura University Hospitals after explaining the aim and the nature of the study. The pilot study was carried out on 5 nurses to test the applicability and relevance to tool and then the necessary modification was done. The selection of participants and collection of data was over a period of 5 months that started from July 2014 to December 2014. Data was collected at physical medicine and rehabilitation department in the outpatient clinic at Mansoura University Hospital. The researcher started by introducing herself to nurses and explain that the aim of the study was assessment of nurses' knowledge and performance toward rehabilitation of patients with rheumatoid arthritis, and assessment of nurses' attitude toward rehabilitation of patients with rheumatoid arthritis.

The researcher asks nurses to answer the written questionnaire without referral to text books within 30 minutes, Observe each nurse separately while they provide care to patients to assess their performance by using observational check list, In addition to use the attitude scale to determine the nurses attitude toward rehabilitation of patients with rheumatoid arthritis. After data were collected it was revised, coded for statistical analysis by using statistical package for social science "SPSS version 18".

Limitations of the study

Presence of one rehabilitation setting only for rheumatoid arthritis patients, Small number of nursing staff, less number of a highly qualified nurses and Time constrain.

Ethical Consideration:

An approval from ethical committee of faculty of nursing at Mansoura University for conducting the study was obtained to carry out the study, Official written permission was obtained from responsible authorities at Mansoura University Hospital (MUH) after explanation the aim of the study, Oral consents were obtained from participants after illustrating the aim and the nature of the study, Privacy and confidentiality of the collected data was ascertained, and Finally anonymity and safety of participant was assured throughout the whole study and the participant can withdraw from the study at any time.

4. Statistical analysis

The collected data were revised, organized, tabulated and analyzed using the statistical package for social science "SPSS version 18". The quantitative data were presented as number and percentage.

Results

Table(1):Distribution of socio demographic characteristics of the studied nurses (No. =40).

Socio-demographic characteristics	No. / %	
	No.	%
Age (years)		
Less than 25	7	17.5
25-	10	25.0
35-	16	40.0
45 or more	7	17.5
Sex Female	40.0	100.0
Educational level		
Diploma Nurse	40	100.0
Marital status		
Married	38	95.0
Single	2	5.00
Years of experience		
1-	7	17.5
5-	10	25.0
15-	17	42.5
25 or more	6	15.0
Previous training courses about rehabilitation		
Yes	2	5.0
No	38	95.0

This table shows the distribution of nurses, according to their socio-demographic characteristics. Regarding age, (40.0%) of the studied nurses were in the age group (35-<45), while (17.5%) less than 25 years old and (17.5%) 45 years old or more. Concerning sex and educational level, all of them (100%) were females and had a diploma of nursing science. Almost of nurses (95%) were married and only (5.0%) were single in addition to all of them (100%) living with their families. In reference to years of experience, (42.5%) had (15-<25) years of experience, while (15%) had (25 or more) years of experience. Concerning previous training courses about rehabilitation, the majority of nurses (95%) were not having previous training courses about rehabilitation and only (5.0%) have training courses in physical medicine and rehabilitation field.

Table (2): Total mean score of nurses' knowledge, performance and attitude toward rehabilitation of patient with rheumatoid arthritis.

Scores	Min-Max	Mean±SD	Unsatisfactory (<60%)		Satisfactory (60%≤)	
			No.	%	No.	%
Knowledge						
Knowledge score	24.0-70.0	48.8±11.8	32	80.0	8	20.0
Performance						
Physical rehabilitation	31.7-51.2	43.2±4.5	40	100.0	0	0.0
Psychological	0.0-30.0	10.5±6.4	40	100.0	0	0.0
Social	0.0-100.0	24.2±26.1	34	85.0	6	15.0
Health education	2.4-35.7	19.8±7.7	40	100.0	0	0.0
Total performance score	22.0-39.9	31.5±3.7	40	100.0	0	0.0
Attitude						
Attitude score	55.6-83.3	67.4±7.9	4	10.0	36	90.0

Table (2) It shows that the attitude score is the highest score, which ranged from (55.6-83.3) with Mean±SD (67.4±7.9) and the psychological rehabilitation is the lowest score which ranged from (0.0-30.0) with Mean±SD (10.5±6.4).

Additionally, only about (20.0%) of the studied subjects had satisfied knowledge and in contrast about (90.0%) of them had satisfied attitude in addition to (100.00%) had unsatisfied performance in physical, psychological rehabilitation and health education.

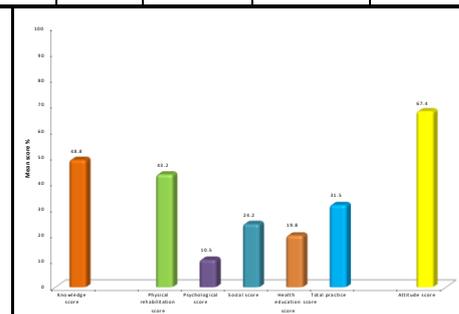


Figure (1): Total mean Score of nurses' knowledge, performance and attitude toward rehabilitation of patient with rheumatoid arthritis.

Table (3): Correlation between nurses' knowledge, performance and attitude toward rehabilitation of patient with rheumatoid arthritis.

Scores	Knowledge score		Attitude score	
	R	P	r	P
Knowledge				
Knowledge score	--	--	0.321	0.043*
Performance				
Physical rehabilitation	0.059	0.716	-0.065	0.688
Psychological	-0.039	0.81	-0.149	0.36
Social	0.051	0.757	0.046	0.777
Health education	-0.23	0.886	0.122	0.452
Total performance score	0.032	0.846	0.008	0.96
Attitude				
Attitude score	0.321	0.043*	--	--

r: Pearson correlation coefficient *significant at $P \leq 0.05$

The table portrayed that, the correlation between the scores of knowledge, performance and attitude toward rehabilitation of patients with rheumatoid arthritis among the studied nurses. It shows that there was a statistical significant correlation between attitude and knowledge of the studied nurses $r=0.321$ at $p=0.043$.

Table (4): Relation between mean scores of knowledge, performance and attitude and socio-demographic characteristics among the studied nurses.

Socio-demographic characteristics	Studied nurses (n=40)	Knowledge score		Performance score		Attitude score	
		Mean±SD	ANOVA test	Mean±SD	ANOVA test	Mean±SD	ANOVA test
Age (years)							
Less than 25	7	48.3±13.6		33.5±4.3		69.8±8.4	
25-	10	39.0±11.9	F=5.201	31.5±3.9	F=0.897	64.5±8.8	F=0.718
35-	16	55.3±7.8	P=0.004*	30.8±3.7	P=0.452	68.1±7.5	P=0.548
45 or more	7	48.3±8.9		31.3±2.9		67.9±7.5	
Duration of nursing experience (yrs)							
1-	7	48.3±13.6		33.5±4.3		69.8±8.4	
5-	10	39.0±11.9	F=5.861	31.5±3.9	F=0.862	64.5±8.8	F=0.761
15-	17	55.5±7.6	P=0.002*	30.9±3.6	P=0.470	67.7±7.4	P=0.523
25 or more	6	46.3±8.0		31.1±3.1		68.9±7.5	

F: ANOVA test *significant at $P \leq 0.05$.

Table (4): Clarifies relation between scores of knowledge, performance and attitude and socio-demographic characteristics of the studied nurses. It shows that there was a statistical significant relationship between age and knowledge of the studied nurses $F=5.201$ at $p=0.004$. While there was a statistical significant relationship between duration of nursing experience and knowledge of the studied nurses $F=5.861$ at $p=0.002$.

Discussion:

Rheumatoid Arthritis (RA) is a serious, progressive and irreversible disease in which there is an affection of the main life domains as physical well being, psychosocial well being, employment and loss of independence it ends up with about 40% of patients become totally disabled. Rheumatoid arthritis is a complex condition as it is an autoimmune disorder caused by infections, so these will double

the risk for the patient to develop and complicate to heart disease, rheumatic fever, renal failure and other sever disease⁽¹⁴⁾.

This study was carried out to develop nursing care guidelines for rehabilitation of patients with rheumatoid arthritis

I- Sociodemographic characteristics of studied nurses:

The present study revealed that the majority of the studied nurses were in middle age adults (35- to less than45) years old. This result is in agreement with ⁽¹⁵⁾ who stated that most of their studied nurses sample were (26-45) years old. But these disagree with ⁽¹⁶⁾ who found that younger adults tend to report higher levels than do middle-aged adults. This may be due to middle-aged adult nurses in this study who provide care to the rheumatoid arthritis patient while (45 to 60) years old are responsible for administrative role.

The result showed that all of the studied nurses were females. This result is supported by ⁽¹⁵⁾ who reported that all of the nurses on her study were females. This may be attributed to the old belief that nursing is a private profession for female so the majority of nurses in Egypt are females.

The findings of the current study showed that all of the studied nurses had a diploma in nursing. This finding is in agreement of ⁽¹⁷⁾ who stated that diploma in nursing account the largest number as nurses are graduated after completion of three years of nursing training. While this finding is not in line with ⁽¹⁸⁾ who stated that the majority of the study group was graduated from technical nursing institute.

The present study findings revealed that only 5% of the studied nurses had training courses about the rehabilitation of rheumatoid arthritis patient. This result is not in agreement of ⁽¹⁸⁾ who stated that nurses must be up to date and participate in training courses in order to acquire needed knowledge of rheumatic diseases

and their treatment , manual skills and collaboration with other health professionals. This in contrast with ⁽¹⁹⁾ who emphasized that knowledge and skills do not appear to be sufficiently covered in training courses at present. The result may be due to time constraint and work load on nurses.

II- Knowledge, performance and attitude of the studied nurses about rehabilitation of patient with rheumatoid arthritis:

The current study revealed that the majority (80.0%) of the studied nurses had over all unsatisfactory knowledge. This in line with ⁽²⁰⁾ who emphasized that there is a lack of nurses knowledge about all areas of information related to rheumatoid arthritis. This may be due to lack of training courses about rheumatoid arthritis and its rehabilitation process, lack of nurses' incentives to improve their knowledge, absence of continuous supervision and evaluation of nurses, which in turn lead to decrease the number of highly qualified nurses.

In the present study, the result revealed that the majority (90.0%) of the studied nurses had overall satisfactory attitudes toward rehabilitation of patients with rheumatoid arthritis. This is not in agreement with ⁽²¹⁾ who stated that nurses find it is difficult to work with long term rehabilitation patient and inadequately prepared to care for patients in chronic pain. These may be attributed to inadequacy in nursing education of curriculum content related to pain management.

In the present study, the result revealed that all of the studied nurses had over all unsatisfactory performance related to rehabilitation aspects of patient with rheumatoid arthritis. This is not consistent with ⁽²²⁾ who stated that nurses have an important role in the comprehensive rehabilitation of patient with rheumatoid arthritis, which should include education,

pharmacological and non-pharmacological methods to achieve pain relief, physical therapy, psychosocial therapy and improving the communication between nurse, physician and patient ⁽²³⁾.

This result may be due to lack of nurses desire to update and improve their performance, lack of training courses, absence of the multidisciplinary team and absent of continuous supervision and evaluation.

III- Correlation between knowledge, performance and attitude toward rehabilitation of patient with rheumatoid arthritis among the studied nurses

The current study revealed that there was a statistical significant relationship between knowledge and attitude of the studied nurses. This agrees with ⁽²⁴⁾ who stated that the increase in knowledge level lead to an increase in positive attitude.

In this study the majority of nurses had positive attitude despite having un satisfactory knowledge this may be due to nurses experience and working in long term rehabilitation center can affect on their attitude and their willingness to rehabilitate people with rheumatoid arthritis.

The study showed that there was no statistical significant relationship between knowledge and performance of the studied nurses this result not congruent with ⁽²⁵⁾ who stated that knowledge is essential to achieve best practices and there is a positive correlation between nurses' knowledge and performance scores. Additionally ⁽²⁶⁾ who stated that nurses' performance directly influenced by their knowledge.

IV- Relation between knowledge of the studied nurses and their socio demographic characteristic

Our study revealed that there was a statistical significant relationship between age and knowledge of the studied nurses $F=5.201$ at $p=0.004$.

While there was a statistical significant relationship between duration of nursing experience and knowledge of the studied nurses $F=5.861$ at $p=0.002$. This in contrast with ⁽²⁷⁾ revealed no significant relationship between nurses' knowledge and their age. In addition to ⁽²⁸⁾ who emphasized that nurses' age and years of experience had no influence on the level of nurses' knowledge and performance.

This result may be due to by increasing the nurses' age who working with rheumatoid arthritis patient, they become more experienced due to repetition of the procedure although they depend on their opinions rather than updating knowledge.

Conclusion:

We can conclude that the majority of nurses had unsatisfactory level of both knowledge and performance regarding rehabilitation of patients with rheumatoid arthritis, on the other hand, most of them had a positive attitude toward rehabilitation of patients with rheumatoid arthritis.

Recommendations

On the light of the findings of this study, it is recommended that to held continuous educational and orientation program for the newly nursing staff in order to fed them with the needed knowledge and performance to deal with the patients with different rheumatic conditions, provide the nurses with needed magazines and books related to the field of rheumatology and rehabilitation and encourage the establishment of libraries, establishing scientific meetings between nurses and researchers which will foster nurses to utilize research and assist researchers to define their future questions based on the real clinical queries in rehabilitation settings, finally encourage high level of self care, follow up, teaching for rheumatoid arthritis and improving health status.

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