

## Assessment quality of life among women with rheumatoid arthritis at Suez Canal University Hospital

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### **Abstract**

**Background:** Rheumatoid arthritis (RA) is a symmetrical disease that initially affects small joints progressing to larger joints. It causes significant musculoskeletal functional impairment and disability. Patients with Rheumatoid Arthritis (RA) often report impaired quality of life. **Aim:** to assess quality of life among women with rheumatoid arthritis at Suiz Canal University hospital. **Subjects& Methods: Research Design:** A descriptive design was utilized. Setting: The study was conducted at the outpatient clinic of the Rheumatology and Rehabilitation at Suez Canal University Hospitals. **Subjects:** Purposeful sample was composed of 80 women had a definite diagnosis of RA and willing to participated in the study. **Tools:** three tools were used for data collection: **Tool I:** Women assessment interview questionnaire composed of two parts; sociodemographic, medical history. **Tool II:** Arthritis Impact Measurement Scale2 (AIMS2-SF). **Tool III:** Health Assessment Questionnaire (HAQ). **Results:** the study finding revealed that 85.5% of the study sample had low quality of life. 60 % of the study sample had sever effect of pain on work. 56% of the study sample had weak health. More than two third of the study sample their health become worse after rheumatoid. **Conclusion:** rheumatoid arthritis had a great impact on all domains of quality of life of women with RA. **Recommendations:** women with rheumatoid arthritis need more attention to improve quality of life.

**Key words:** Rheumatoid arthritis, pain, quality of life.

### **1- Introduction**

Rheumatoid arthritis (RA) is a chronic inflammatory and autoimmune disease characterized by the attack of the immune system on the body's healthy joint lining causing, sustained inflammation and degeneration of articular structures (Fouaini et al., 2022). Worldwide, the annual incidence of RA is approximately 3 cases per 10,000 population, and the

prevalence rate is approximately 1%, increasing with age and peaking between the ages of 35 and 50 years (Bryant, 2022).

In the early stage of the disease, joints of hands and feet are mostly affected. Patient deals with morning stiffness, pain, joint and periarticular edema, intraarticular effusion, limited range of motion in joints and as a consequence

muscle weakness occurs, which results in the inability to undertake some activities. Progression of the disorder and level of disease activity leads to

Quality of life (QOL) is defined as the general well-being of individuals and societies, based on the individual's culture and life values with respect to that individual's objectives, expectation, and standards (Goma et al., 2019). Patients with Rheumatoid Arthritis (RA) often report impaired quality of life. Progression level of disease activity leads to limitations in many activities, also daily life activities, resulting in the increasing disability (Szewczyk et al., 2021).

Patients with RA, often experience changes in their physical appearance and function. The symptoms of the disease mainly affect the locomotor system, as they intensify, RA patients lost the ability to function on a daily basis with regard to self-maintenance and performance of work activities (Chronic diseases and health promotion, 2021).

The limitations caused by the disease often lead to a loss of

limitations in many activities, also daily life activities, resulting in the increasing disability and loss of self-reliance (Goma et al., 2019)

independence and result in dependency on others. The recurrent pain associated with inflammation and limited joint mobility as well as the loss of autonomy have a negative influence on other aspects of functioning (mental, physical, social and environmental), which affects the perceived quality of life in these patients (Grimmer, 2020).

### **Significance of the study**

About 1% of Egyptians are suffering from rheumatoid arthritis, with a higher incidence in females than males (Mohamed et al., 2016). The incidence of the RA in Arab countries increased up to 1.5 % of the population in the age group between 30 to 50 years. (World Health Organization, 2020).

### **The aim of the study**

**The aim of the study was to** assess quality of life among women with rheumatoid arthritis at Suez Canal University hospital.

## **2. Subject and Methods**

**Study Design:** A descriptive design was utilized in conducting the study.

**The sample of the study:**

Purposeful sample was composed of 80 women had a definite diagnosis of RA and willing to participate in the study under the following criteria:-

- 1- Women was diagnosed with rheumatoid arthritis from more than one year by specialist and listed in clinic records.
- 2- Age ranged between 20-50 years.
- 3- Ambulatory and able to communicate
- 5- Agree to participate in the study.

**Exclusion criteria:**

Inability to participate in the study

**Setting:**

The study was conducted at the outpatient clinic of the Rheumatology and Rehabilitation at Suez Canal University Hospitals. This setting was chosen because these clinics provides follow up and rehabilitation services for outpatient's clients with low-cost tickets and on health insurance. Moreover, it covers a wide range of population with different socio-demographic.

**Tool of data collection:**

**Tool I:** women assessment interview schedule; this tool developed by researchers after reviewing of relevant literature to assess women health status. It consisted of three parts as follows: Part I: Women demographic characteristics: This part of the tool included age, educational level, marital status, area of residence, occupation, and income

**Part II:** Women medical history; were collected from women medical record, it was included location of joints (upper limbs/ lower limbs) affected, duration of illness.

**Tool II: RAND 36 Item Health Survey 1.0 Questionnaire (SF 36):** by (Stewart & Ware, 1992).

To assess quality of life and role limitation due to rheumatoid arthritis. It contains six subscales. First subscale was General physical health; The second subscale was Role limitation due to physical problems composed of ten questions, The third subscale was functional limitation composed of seven questions; The fourth social functioning composed of two questions; The fifth subscale was bodily pain composed of two questions; The last subscale was role

limitation attributable to emotional problem.

### **Scoring system**

The score of each item ranged from 5 to 1. Five point for excellent health and one point for poor health. For pain 5 indicate less pain and 1 indicate more pain. Regarding physical health ranged from 3 to 1. 3 point for not affection and 1 point for great affection. All items are summed. Total score was 100. High score (more than 80) indicates high quality of life. (50-80) indicate moderate quality of life. (less than 50) indicate poor quality of life.

### **Field work**

The data collection was done first using interview questionnaire sheet. The researcher visited the study setting, and met with the patients individually. Data collection took a period of 4 months, from the first of January 2021 to the end of April 2021. The researcher collected data three days per week (Sunday, Tuesday, Thursday; these days special for women attendance to the clinic) according to the inclusion criteria. Concerning the first descriptive part of this research, the researcher used the tool and collects the pertinent information.

### **A pilot study:**

A pilot study was be carried out on 10% of the study sample (8 women). They attended to the Outpatients Clinic of Rheumatology and Rehabilitation at Suez Canal University Hospital. The purpose of pilot study was to assess tools contents, clarity, consistency and applicability. It also, help to estimate the time needed to complete data collection forms. All of them received clear explanation on the study purpose. Those who shared in the pilot study were included in the study sample as there was no modification in the tool.

### **Ethical considerations:**

All ethical issues were taken into consideration during all phases of the study; The Scientific Research Ethics Committee at the Faculty of Nursing, Suez Canal University approved the research at February 2019. The researcher maintained an anonymity and confidentiality of the subjects. The researcher introduced herself to the study sample and briefly explained the nature and aim of the study to every woman before participation, and women were enrolled voluntarily after the oral informed consent process. Women were also assured that all information obtained during the study was confidential, and used for the research purpose only, and

they have the chance to withdraw from the study when they want.

### **Statistical analysis**

Data entry and statistical analysis were done using SPSS 20.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages. Categorical variables were compared using chi-square test. Statistical significance was considered at p-value <0.05.

### **3. Results**

**Table (1):** - Shows that; 72.5% of the study sample age was (40-50) years with mean score of (45.27±4.12), 61.3% resided in rural area and married (75%), 50% had mild certification, 45% treated with health insurance.

**Table (2):** Shows that 56.3% of the study sample have rheumatoid arthritis from more than 5 years, 68.8% reported that haven't family history of rheumatoid arthritis.

**Table (3):** Illustrates that the most affected joint with pain and stiffness is finger joint 97.5% -100%, followed by shoulders 83%, 86.4%, and the least affected joint is foot 31.3%, 58.8%. Concerning affected joints with redness and edema are low; the most affected joint with edema is wrist 50% and the

for qualitative variables, and means and standard deviations and medians and interquartile ranges for qualitative variables. Quantitative continuous data were compared using independent sample t-test for independent variables and one way ANOVA test to compare means of quantitative data. Qualitative

least affected joint with edema was

shoulder 2.5%

**Table (4):** Points that 56% of the study sample had weak general health and no one of the study sample had good health.

**Table (5):** Displays that 48.8% of the study sample had extremely sever pain and 42.5% of the study sample had sever effect of pain on work. Also, presence of highly statistically significant relation between severity of pain and its effect on work.

**Table (6):** Indicates that 83.8% of the study sample were disabled in hard activities, 50% were disabled in walking, and 62.5% were disabled in showering and dressing.

**Table (7):** Refers that 91% of the study sample were lethargic most of time, 86%

were nervous most of time. 88.7% were nervous most of time.

**Table (8):** Indicates that 41.3% their Physical health were obstacle in dealing with people, 50% of the study sample their Physical problems affected social activities.

#### **. 4. Discussion**

In the present study, sample characteristics reflect the nature of patients, the majority of the study sample belonged to the age group (40-50) year. Nearly half of them have no health insurance services. This finding in agreement with **Elsayed et al (2022)** in Egypt who founded that the majority of the studied sample age more than 40 year and half of the study sample not treated with health insurance.

In the present study, more than half of the study sample had the disease from more than five years. These results reflect that RA develop at thirty years old and before. On the same line **Baratzadeh et al., (2021)** in Iran who founded that more than half of the studied sample had the disease from five years.

**Figure (1):** Shows that 68.8% of the study sample had poor health and only 31.2 had good health.

**Figure (2):** Illustrates that quality of life of the study sample, only 2% had high quality of life, (12.5%) had moderate quality of life, (85.5%) had low quality of life

Regarding residence more than two thirds of them resided in rural areas. This finding might be due to they attend the clinic in the city because there is good care. This may result in decreasing in knowledge and practice of women regarding their disease. Similar result in Egypt by **(Senara et al., 2019)** who found that two third of the study sample from rural area. Another study in Egypt by **(Mohammed & Ghareeb, 2020)** who found that 70% of the study sample come from rural area. Unlike study in Algeria by **(Ouali et al., 2020)** who found that most of the study sample from urban.

Concerning occupation, approximately one third of the study sample occupied. The same result was found in Egypt by **(Gamal et al., 2021)**

who found the same percentage from the study sample were occupied.

In the present study, two third of the study sample were married. This result may be due to the Egyptian culture that marriage considered one of the life necessities. As the same result by **(Nadrian et al., 2019)** in Iran who found that (79%) were married. Similar finding in Palestine by **(Al-Jabi1, 2021)** who found 77% were married.

Concerning level of education, the majority of the study sample had mild certification and lower degree. This finding goes in line with high percentage of participants from rural areas, where the education is still low. This finding goes in line with by **(Baratzadeh et al., 2021)** in Iran who found that (90%) from the study sample had a mild certificate and lower degrees.

In the present study, nearly half of the study sample had chronic disease This result was in agreement with **(Mohamed and Ghareeb, 2020)** in Egypt who founded the same result nearly. This indicated that chronic disease percentage were elevated among young age women in Egypt.

Regarding family history of rheumatoid arthritis; this study founded that, nearly one third of the study sample had family history, this finding supported by study conducting in Egypt by **Elsayed et al (2022)** who found the same percentage had family history of rheumatoid arthritis. The results indicate that family history of rheumatoid arthritis is a weak risk for the disease.

In relation to the affected joints with arthralgia, the most affected joint with pain and stiffness is wrist followed by shoulders. Similar finding in Egypt by **(Elsayed et al., 2022)** who found that 82.5% of the study sample complain from wrist joint.

In the point view of the researcher, this result in joint stiffness, arthralgia and arthritis leads to continuous fatigue that reflects on performing daily activities, resulting disability contributes to the burden of disease. Due to the multiple effect of RA, other aspects of the individual life may be negatively affected including the psychological and social functions.

Regarding health status and educational level, health status improved with higher educational level, similar

finding by **(Gamal et al., 2021)** in Egypt who founded that high education level associated by improved clinical status. In the point view of the researcher; high educational level improves women understanding, an educated woman is more aware of healthy habits and more concerned her health, also more able to use social media and search on information, and more contact with people and gaining experiences.

The study results indicate high disability among the study sample. The same results founded by **Ahmed & Rashid (2021)** who studied the effectiveness of health educational program on daily living activities for patients with rheumatoid arthritis and found that presence of higher disability among the study sample.

The present study indicated that increase pain intensity and pain effect on work and daily living activities. Similar finding in study by **(Szewczyk et al., 2021)** in Poland who found that pain intensity increases among rheumatoid arthritis patients and need for rehabilitation. Another study in Egypt by **(Goma et al., 2019)** who studied the impact of rheumatoid arthritis on the quality of life and its relation to disease

activity and found that increase pain intensity among rheumatoid arthritic patients.

In the present study, there are limitation in physical function. This result was agreed with **(Goma et al., 2019)** in Egypt who found that rheumatoid arthritis causes impairment of physical function, physical ability. Similar finding by **Mandal et al., (2020)** in India who studied quality of life among patients with rheumatoid arthritis in Kolkata and reported that two thirds of the study sample had unsatisfactory quality of life.

In the present study, the majority of the study sample had poor quality of life. This result was agreed with **(Goma et al., 2019)** in Egypt who found that rheumatoid arthritis causes impairment of all domains of QOL (limitation of physical function, physical disability, and pain), mental health disorders. Similar finding by **Mandal et al., (2020)** in India who reported that two third of the study sample had unsatisfactory quality of life. In addition, **Soliman et al., (2022)** in Egypt revealed that nearly half of women with arthritis had poor total quality of life. Unlike these

finding, study in Ecuador made by (Cruz et al., 2019) who assessed quality of life Ecuadorian patients with rheumatoid arthritis and found that quality of life for the patients who participated was from moderate to good.

### 5. Conclusion

Rheumatoid arthritis had great impact on all domains of quality of life among women with RA. It affect physical health, also women with rheumatoid arthritis suffered from pain, social

problems in dealing with people due to their physical problem which lead to emotional problems.

### 6. Recommendations

Women with RA need more attention to improve their quality of life.

Further researches and studied are needed to identify needs of women with rheumatoid arthritis

**Table (1): Frequency and distribution of studied women according to their demographic characteristics (n=80).**

Items	frequency	%
<b>Age</b>		
20-40y	22	27.5
40-50 y	58	72.5
Mean ±SD	<b>45.27±4.12</b>	
<b>Residence</b>		
Urban	31	38.8
Rural	49	61.3
<b>Education</b>		
Illiterate(can't read &write)	10	12.5
Read and write	17	21.3
Mild certification(diplome)	40	50
High certification(bachelor)	13	16.3
<b>Social</b>		
Unmarried	7	8.8
Married	60	75.0
Divorced	6	7.5
Widow	7	8.8
<b>occupation</b>		
House wife	44	55.0
Worked	36	45.0

Treatment with health insurance		
Yes	36	45.0
No	44	55.0

**Table (2): Frequency and Distribution of studied women according to their medical history (n=80).**

Items	No	%
<b>Years of RA disease</b>		
One year	10	12.5
1-3 year	13	16.3
3-5 year	12	15
More than 5 years	45	56.3
<b>Family history of RA</b>		
Yes	25	31.3
No	55	68.8

**Table (3): Frequency and Distribution of the studied women according to their Joint affected with RA (n=80).**

Items	Pain		Stiffness		Redness		Edematous	
	No	%	No	%	No	%	No	%
Upper limbs:								
Fingers	72	90.0	80	100	45	56.3	25	31.3
Wrist	78	97.5	70	87.5	13	16.3	40	50.0
Elbows	58	72.5	53	66.3	5	6.3	19	23.8
Shoulders	67	83.0	69	86.4	14	17.5	2	2.5
Neck and upper back	50	62.5	61	76.3	11	13.8	3	3.8
Lower limbs:								
Pelvis	60	75.0	47	58.8	15	18.8	16	20.0
Knees	72	90.0	62	77.5	17	21.3	30	37.5
Ankles	30	37.5	45	56.3	30	37.5	13	16.3
Foot	25	31.3	47	58.8	10	12.5	10	12.5

**Table (4): Frequency and distribution of studied women according to their physical health (n=80).**

Items	Health status of the study sample	
	No	%
<b>Health assessment in general</b>		
Excellent	0	0.0
Very good	0	0.0
Good	13	16.3
Accepted	22	27.5
Weak	45	56.3
<b>Health compared to last year</b>		
Now the best	0	0.0
Now better than	0	0.0
Almost the same level	13	16.3
Somewhat worse	22	27.5
Now so much worse	45	56.3
<b>My health is good as any one</b>		
Definitely true	0	0.0
Somewhat true	0	0.0
I don't know	2	2.5
Somewhat false	32	40.0
Definitely false	46	57.5

**Table (5): Likert pain scale among studied women (n=80).**

Items	Pain	
	No	%
<b>Degree of pain</b>		
No pain	0	0.0
Mild	1	1.3
Moderate	10	12.5
Somewhat sever	30	37.5
Extremely sever	39	48.8
<b>Effect of pain on work</b>		
No effect	0	0.0
Mild	3	3.75
Moderate	29	36.3
Sever	34	42.5
Extremely sever	14	17.5

**Table (6): Frequency and distribution of studied women according to physical domain of quality of life**

Items	Physical ability	
	No	%
<b>Hard activities</b>		
Yes severely disabled	67	83.8
Disabled in simple rate	13	16.3
<b>Moderate activities</b>		
Yes severely disabled	32	40.0
Disabled in simple rate	48	60.0
Not disabled	0	0.0
<b>Lifting and carrying groceries</b>		
Yes severely disabled	39	48.8
Disabled in simple rate	41	51.3
Not disabled	0	0.0
<b>Climbing stairs</b>		
Yes severely disabled	39	48.8
Disabled in simple rate	41	51.3
Not disabled	0	0.0
<b>Blending&amp; kneeling</b>		
Yes severely disabled	32	40.0
Disabled in simple rate	48	60.0
Not disabled	0	0.0
<b>Walking</b>		
Yes severely disabled	40	50.0
Disabled in simple rate	40	50.0
Not disabled	0	0.0
<b>Showering&amp; undressing</b>		
Yes severely disabled	30	37.5
Disabled in simple rate	50	62.5
Not disabled	0	0.0

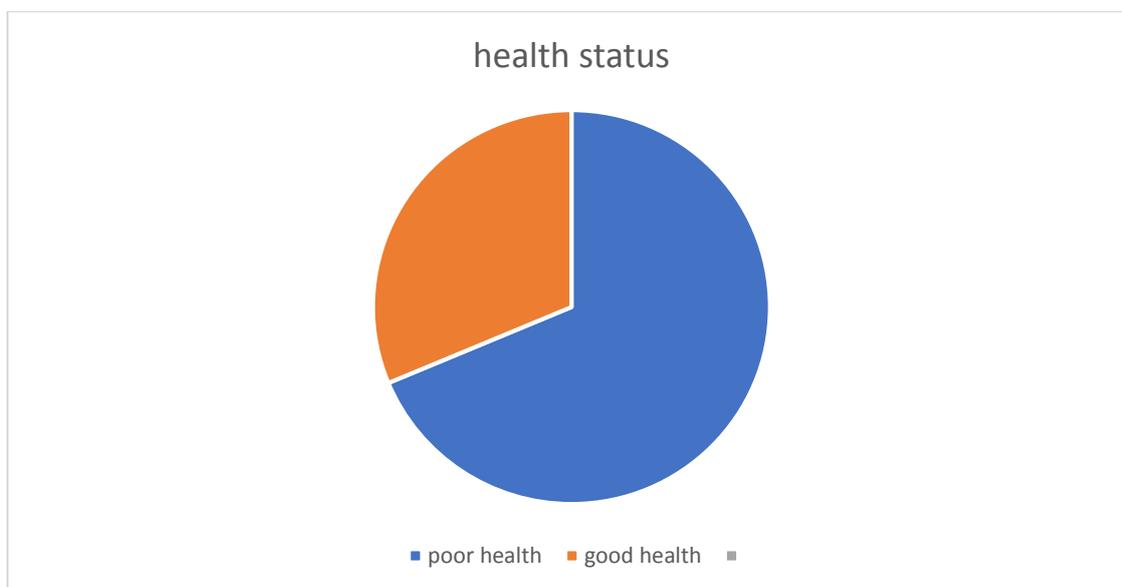
**Table (7): Frequency distribution of studied women regarding emotional domain of quality of life**

Items	Emotional status of the study sample	
	No	%
<b>Lethargic</b>		
Little of time	0	0.0
Sometimes	5	6.3
Most of time	73	91.2
All time	2	2.5
<b>Nervous</b>		
Little of time	1	1.2
Some times	7	8.7
Most of time	69	86.2
All time	3	3.7
<b>Frustrated</b>		
Little of time	2	2.5
Some times	3	3.7
Most of time	71	88.7
All time	4	5
<b>Sadness</b>		
Little of time	0	0.0
Some times	5	6.3
Most of time	61	76.3
All time	14	17.5
<b>Fatigue</b>		
Little of time	0	0.0
Some times	5	6.3
Most of time	58	72.5
All time	17	21.3

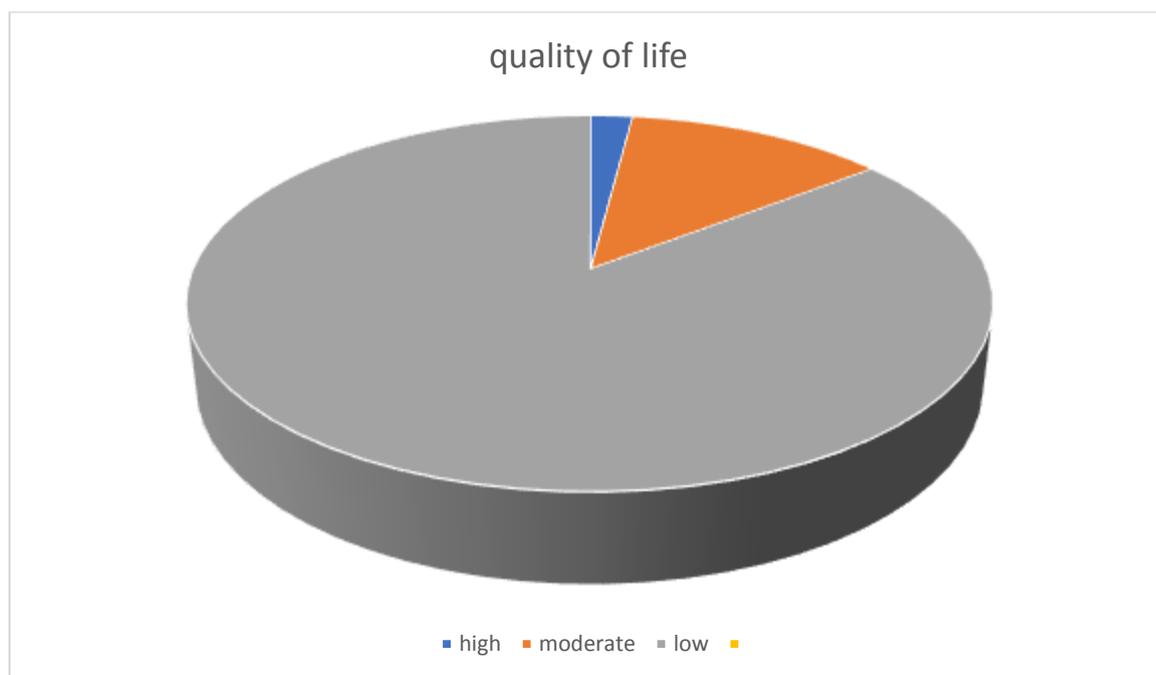
**Table (8): Frequency and distribution of studied women according to social domain of quality of life**

Items	Social status of the study sample	
	No	%
Physical health obstacle in dealing with people		
No	0	0.0
Decreased	5	6.3
Moderate	27	33.8
In large percentage	33	41.3
Too much	15	18.8
Physical problems affect social activities		
No effect	0	0.0
A little of time	1	1.2
Sometimes	14	17.5
Most of time	26	32.5
All time	40	50

**Figure (1): Percentage distribution of studied women according to their health level (n=80).**



**Figure (2): Percentage distribution of studied women according to their total quality of life before and after implementation selfcare guidelines (n=80).**



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