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Effect of Pyelonephritis During Pregnancy on Mother's Quality of Life

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Abstract

Background: Renal parenchymal infection or Pyelonephritis, constituted 1% to 4% among pregnancies. It is a condition in which the renal tubules become inflamed and their ability to reabsorb sodium is greatly affected.

Aim of study; the aim of study was to study the effect of Pyelonephritis during pregnancy on mother's quality of Life.

Methods: Study design: descriptive study. Setting: The study was conducted at outpatient of obstetric department Menoufia University and second setting was Ministry of health Teaching hospital. Subjects: The subjects of this study were 120 pregnant mothers medically diagnosed with pyelonephritis chosen according to the inclusion criteria. Pregnant mothers without any complications rather than pyelonephritis. Type of sample: A convenient sample was utilized from both study setting.

Results: The study had revealed that mothers had lack of somatic fitness there for they were unable to give care for their families. It is also observed that the majority of the mothers had improper social fitness; they received social support from their family's members. Additionally, there were unhappy with their life changes. More than half among the sample studies was psychological upset because they have almost felt sad and afraid of the deterioration and complications of the pyelonephritis.

Conclusions: there was a significant relation was observed between quality of life (QOL) and general characteristics; p values are 0.001, 0.032, 0.022, o.o4 and o.028 respectively. On the other hand, the score percent of sexual fitness shows insignificant difference p value=0.54. Housewives score means significantly higher than the women working as regard somatic fitness percent, social fitness, psychological fitness, job fitness and sexual fitness, p values are 0.01, 0.01, 0.001, 0.04 and 0.03 respectively.

Study recommended; that outreach program must be designed and implemented to improve QOL among pregnant mother with pyelonephritis, psychological follow up programs among pregnant mother with pyelonephritis to improvement of their QOL, and further studies in the area of this study are needed with increase sample size to generalized results.

Keywords: Pyelonephritis, Pregnancy, Quality of life.

Introduction

Renal parenchymal infection or Pyelonephritis, constituted 1% to 4% among pregnancies. It is a condition in which the renal tubules become inflamed and their ability to reabsorb sodium is greatly affected. The incidence of higher during pregnancy was found when the patient's history contained some indication of an earlier renal disease. Pregnancy associated with chronic nephritis has to be interrupted in the first trimester as the particular conditions of pregnancy predispose to pyelonephritis [(1).]

The basic factor predisposing to urinary tract infection during the prenatal period is the relative stasis of urine caused by pregnancy-induced changes. Hydroureter is common during the last half of pregnancy. Progesterone causes the ureters to dilate, while the enlarging uterus leads
to mechanical compression. In addition, changes in a pregnant woman's immune system may make her more susceptible to infection. The patients at highest risk are those in whom acute pyelonephritis develops, with associated premature labor and advanced cervical dilation[(4)].

Pyelonephritis is rising globally, particularly in developing countries where the major underlying causes, diabetes and hypertension, are also on the rise. Thus, detecting kidney disease early and managing the underlying causes are key to saving lives [(5)]. Mothers who have a pyelonephritis are at high risk for pregnancy complications, including miscarriage, stillbirth, preterm birth, and preeclampsia [(6)]. The risks of complications of pyelonephritis in pregnancy, especially preterm labor and delivery, as well as the need to prevent recurrences and permanent renal damage, have dictated this aggressive approach [(7)].

The prevalence of symptomatic bacteriuria during pregnancy is 2% to 14%. Factors associated with a higher risk include advanced age, higher parity, and a lower socioeconomic status. In approximately 20% to 40% of untreated women with asymptomatic bacteriuria, a symptomatic urinary tract infection, such as cystitis or pyelonephritis, will subsequently develop during the course of pregnancy or immediately postpartum. Conversely, acute pyelonephritis will develop in less than 5 % of patients with asymptomatic bacteriuria who have been appropriately treated with antibiotics [(3).]

Provided pregnancy pyelonephritis is diagnosed and treated early enough the incidence of intrauterine fetal death, premature, birth and perinatal fetal loss will not be higher than the average, but developmental retardation has a slightly higher incidence. The degree of renal disturbance not only increases the probability of pyelonephritis but also the damage suffered by the mother and fetus. The prevention of inflammatory renal and appropriate treatment of inflammatory renal diseases and the constant control of the patient is the task of prenatal and nephrological care, so as to avoid early and late complications [(1,2).]

Quality of life refers to that which makes life worth living and connotes the caring aspect of nursing, because nursing is concerned not only with survival and decreased morbidity, but also with the whole patient. In providing care to mother's with pyelonephritis, nurse help mothers to manage the side effects of therapy and focusing nursing intervention on decreasing symptoms or improving the mother's ability to deal with them, improving functional abilities, decreasing limitation and identifying issues that affect general health perception could increase a mother's overall[(11)].

The concept of health-related quality of life (HRQOL) takes into account patient well-being as expressed by both the physical and psychological domains of health. HRQOL may be affected by several factors, including the clinical manifestations of diseases, the side effects of treatment, and the quality of the relationships of the patient with family members and health care providers [(12)]. .

Quality of life is terms of how it is negatively affected, on an individual level, by disease. QOL refers to the degree to which a person enjoys the important possibilities of his or her life. Their quality of life Model is based on the categories "being", "belonging", and "becoming", respectively who one is, how one is connected to one's environment, and whether one achieves one's personal goals, hopes, and aspirations[8].
Quality of life (QOL) is used in healthcare to refer to an individual's emotional, social and physical wellbeing, including their ability to function in the ordinary tasks of living [5].

The role of maternity nurses during physical examination must be focused on the vital signs, the abdomen, and the costovertebral angle (CVA). Careful measurement of temperature is important, since fever with UTI strongly suggests pyelonephritis. An increased respiratory rate can indicate respiratory compensation for metabolic acidosis. The abdomen should be examined especially for adnexal tenderness, which may suggest that the correct diagnosis is actually pelvic inflammatory disease. CVA tenderness is the classic physical finding in pyelonephritis [9,10]

Laboratory testing and 24 hours urine collection should be started. Awareness of symptoms of anemia and fetal monitoring through non-stress test and fetal movement counts also is mandatory. Ultrasound imaging of the kidney may be required and monitoring of electrolyte level is important. The mothers should be asked about fetal movement, contraction, burning or difficulty during urination, more frequent urination, particularly at night, passage of bloody appearing urine, puffiness around the eyes, swelling of hands or feet [6]

Nurses can take a central role in working with pregnant mother to promote better (QOL) among mothers with pyelonephritis consequently it were reflect on better pregnancy outcomes. Urine culture should be obtained at the first prenatal visit. Dipstick methods are insufficiently sensitive for screening for bacteriuria in pregnancy [8].

Significant of the study:

It was reported that pregnancy markedly predisposes to pyelonephritis, which can harm both the mother and the fetus. Bacteriuria during pregnancy is associated with prematurity and low birth weight, although a cause-and-effect relationship is unclear. There were no previous studies in Menufyia University faculty of nursing Maternal and Neonatal Nursing Department regarding to the previous mention study title. Incidence of acute pyelonephritis during pregnancy is less than 5 % and the rate of live birth to mothers of all races and ages with a history of renal disease was 7/1000 [8].This study help to identify mothers/fetus needs and to plan care to motivate these mothers to develop positive coping pattern.

The Aim of the study was study effect of pyelonephritis during pregnancy on mother's quality of life.

Research questions

1. Are pregnant mothers having correct knowledge regarding pyelonephritis and it is related changes of quality of life?

2. What are factors influencing quality of life among pregnant mothers with pyelonephritis?

Subjects and Methods

Design:

A descriptive study design was used.

Setting:

The study was conducted at outpatient of obstetric department Menufiya University and second setting was Ministry of health Teaching Hospital.

Subjects:

The total subjects of this study were 120 pregnant mothers medically diagnosed with pyelonephritis. The study inclusion criterion is pregnant mothers without any complications rather than pyelonephritis.

Type of sample:

A convenient sample was used.

Sample Technique:

The data was collected through a period of 10 months started from July 2010 to April 2011 for 3 days per week starting at 9 am to 2 pm. The researcher introduced herself to the pregnant mothers and obtained their consent to be recruited in the study after explaining the aim of the study. Each mother was interviewed individually by the researcher. The average time for filling each sheet was about 25 minutes depending on the response of the mother. Consent was obtained from each mother and the interviewing questionnaire was explained to each mother. Then the QOL measures were applied for each mother to assess her somatic, socio-psychological, spiritual & sexual QOL.

Tools:

Two tools were used for data collection:

I. The first tool:

An interviewing questionnaire was developed based on the review of relevant literature, among the effect of pyelonephritis during pregnancy on mother's quality of Life it comprised three parts: Part 1: Addressed information related to general characteristics data such as age, occupation, level of education. Part 2: Assessed mother's obstetrical histories. Part 3: Assessed mother's knowledge regarding pyelonephritis disease.

II. The second tool:

The tool was developed by the researcher for data collection after extensive review of the relevant literature. A translated modified Arabic version of quality of life index scale was utilized adapted from Medical Outcomes Studies (MOS) Short Form, known as the SF-36, developed by Johon Ware and colleagues 1992, and adapted by the researcher to study the effect of pyelonephritis during pregnancy on mother's quality of Life.

The MOS was 36-items short form health survey (SF-36) conceptual framework and item selection [(17)]. The tools were tested for content validity by jury of three experts in nursing to ascertain their relevance and completeness.

Ethical Considerations:

The study was carried out with co-operation of different levels of authority. An official letter was sent from the Dean of the Faculty of Nursing in Menoufiya University to the directors of Meonufiya University and Ministry of health Teaching Hospitals explaining the aim of the study and the time of data collection seeking his permission for data collection. An official permission through written letters clarifying the purpose and sitting of the study was obtained from the directors of Meonufiya University and Ministry of health Teaching Hospital, as an approval for data collection.

A written informed consent was obtained from the participants after explaining the purposes of the study, which include: no harm was occurring to participant, do not contradict with the cultural, traditional and religious issues, human rights were reserved, and data was confidential and used mainly for the purpose of the research. (It should be potted at the end of this topic).

Pilots study:

The pilot study was carried out 10 women of sample size to test the reliability and applicability of the tools, and then the tools were modified according to the results of the pilot study.

Limitation of the study:

Difficulties in collect data and 5 mothers refused to complete the questionnaire because they were busy by their home responsibilities & excluded from the study.

Results:

Table (1): Shows the general characteristics of pregnant mothers; more than half of pregnant mothers had age ranged from 25-35 years, more than half of the sample was housewives and more than one third of the sample was highly educated. It also show the obstetrical history of pregnant mothers; about tow third of them were multigravida, more than one third were nullipara, more than one third had children and about half of the sample visit the antenatal care clinic twice monthly.

Table (2): Shows that, the majority of the pregnant mother's (71%) had no correct knowledge regarding antenatal care.

Table (3): Shows that, back pain was the most prevalent symptom followed by dysuria.

Table (4): Shows that, more than half of pregnant mothers were drinking hot herbal as (Fenugreek حلبه) and they were seeking un-prescribed medication from the pharmacy.

Table (5): Shows that, slightly above half of the sample knew that the proper diet for pyilonephritis was low salt diet, while more than half could not follow the proper diet, while 23% of them used herbal medications to treat their pyilonephritis.

Table (6): Shows that, slightly above half of the sample were had lack of power, more than half of them could not care for their family because illness and more than half of the sample were unsatisfied with their health.

Table (7): Shows that, more than half of mothers were feeling sad, while more than half were afraid of deterioration of conditions, more than half of the sample not received social support from family members, and more than half had spiritual satisfaction.

Table (8): Shows that, more than two third of the sample not had ability to work, more than half were unsatisfied with their quality of life, and more than half were affected regarding sexual relation, and above half were not satisfied with their sexual life.

Table (9): Shows that, there is a significant difference between age groups regarding the score percent of the somatic fitness, social, psychological fitness. Job fitness and spiritual fitness; p values are 0.001, 0.032, 0.022, 0.04 and 0.028 respectively. On the other hand, the score percent of sexual fitness shows insignificant difference p value=0.54. housewives score means significantly higher than the women working as regard somatic fitness percent, social fitness, psychological fitness, job fitness and

sexual fitness, p values are 0.01, 0.01, 0.001,0.04 and 0.03 respectively. The other interest and spiritual fitness shows significant difference.

Table (10): Shows that there is a significant difference between gravidity and QOL score percent except regarding social fitness; and significant difference between parity and QOL score percent regarding psychological fitness, sexual, and spiritual fitness.

Table (1): Distribution of pregnant mothers according to their general characteristics and obstetrical history (n = 120).

Variables	No.	%
General characteristics:		
Age / year		
< 25	40	33.3
25 - 35	65	54.2
> 35	15	12.5
Occupation		
Housewife	80	67.0
Working	40	33.0
Educational level		
Illiterate	40	33.3
Primary	15	12.5
Secondary	30	25.0
University	35	29.2
Obstetrical history:		
Gravidity		
1-2	45	37.5
≥ 3	75	62.5
Parity		
Non	20	16.7
1-2	35	29.2
≥ 3	65	54.1
Abortion		
Non	100	83.3
1-2	15	12.5
≥ 3	5	4.2
Living children		
Non	20	16.7
1-2	40	33.3
≥ 3	60	50.0

Table (2): Distribution of pregnant mothers according to their correct knowledge about the antenatal care (n = 120).

Items	Know		Don't know	
	No.	%	No	%
Correct knowing the importance of antenatal care	50	41.7	70	58.3
Correct Knowing regarding antenatal care visits	35	29.2	85	70.8
Schedule of ante natal care				
Once /month	35	29.2	85	70.8
Twice /month	50	41.7	70	58.3
More than twice /month	45	37.5	75	62.5

Table (3): Distribution of pregnant mothers according to their knowledge about pyilonephritis (n=120)

Items	Knowledge level			
	Correct		Incorrect	
	No.	%	No.	%
Signs & symptoms:				
• Back pain and/or flank pain kidney pain location.	35	29.2	85	70.8
• Urinary frequency Dysuria	105	87.5	15	12.5
• Pyuria –cloudy urine	45	37.5	75	62.5
• Hematuria	65	54.2	55	45.8
• Fever	35	29.2	85	70.8
• Nausea & vomiting	65	54.2	55	45.8
Complications:				
- Abortion	30	25.0	90	75.0
- Premature labor	25	20.8	95	79.2
- Eclampsia	12	10.0	108	90.0
- Fetus complications	10	8.3	110	91.7

Table (4): Distribution of pregnant mothers according to their self care utilized to relief pyelonephritis symptoms (n=120)

Item	No.	%
Mother's self care utilized to relief pyelonephritis symptoms		
- Take worm shower	35	29.2
- Avoid certain food as hothouse	70	58.3
- Drink hot herbal as (Fenugreek) حلبه	75	62.5
- Seek un-prescribed medication from the pharmacy	90	75.0
- Utilize health services for examination.	45	37.5

Table (5): Distribution of pregnant mothers according to their knowledge about the dietary aspect of the pyilonephritis (n=120)

Knowledge aspect	No.	%
Proper diet:		
Usual diet	40	33.3
Low salt	65	54.2
Low protein	5	4.2
Low salt & protein	10	8.3
Why cannot follow the diet:		
Unknown cause	20	16.7
Salt is essential	30	25.0
Family member meal	50	41.6
Can not eat	20	16.7
Number of meals /day		
Two	44	36.7
Three	48	40.0
More than three	28	23.3
Fluid volume/day		
(2-4) cups	15	12.5
(5-7) cups	45	37.5
≥ 8 cups	60	50.0
Usual drinks/day		
None	20	16.7
Tea	60	50.0
Coffee	7	5.8
Chocolate	5	4.2
Herbal drink	28	23.3

Table (6): Distribution of pregnant mothers according to their changes on quality of life (somatic fitness) (n=120)

Item	No at all		Sometimes		Very often	
	No	%	No	%	No	%
Somatic fitness:						
Lack of power	10	8.3	30	25.0	80	66.7
Abdominal and back pains	10	8.3	35	29.2	75	62.5
Loss of urine control	25	20.8	30	25.0	65	54.2
Dysurea	7	5.8	45	37.5	68	56.7
Tired exhausted	8	6.7	42	35.0	70	58.3
Change in eating habits	20	16.7	40	33.3	60	50.0
Satisfied with health	65	54.1	35	29.2	20	16.7

Table (7): **Distribution of pregnant mothers according to their changes on QOL (psycho-social and spiritual fitness) (n=120)**

Items	No at all		Sometimes		Very often	
	No	%	No	%	No	%
Social fitness:						
Having enough income	80	66.7	30	25.0	10	8.3
Unhappy with life changes	78	65.0	22	18.3	20	16.7
Satisfaction with family communication	20	17	55	45.8	45	38
Feelings towards family	5	4.2	22	18.3	93	77.5
Receiving social support from family members	95	79.2	15	12.5	10	8.3
Coping of family members with the pyelonephritis	66	55.0	28	23.3	26	21.7
Psychological fitness:						
Satisfaction with coping of pyelonephriti	75	62.5	35	29.2	10	8.3
Afraid of deterioration	66	55.0	28	27.5	21	17.5
Loss of hope	65	54.1	20	16.7	35	29.2
Feeling of sad	42	35.0	28	23.3	50	41.7
Spiritual fitness:						
Spiritual satisfaction	55	45.8	5	4.2	60	50.0
Disease has some positive aspects	65	54.2	45	37.5	10	8.3
Religious activities are supportive	10	8.3	20	16.7	90	75.0
Practicing religious duties	76	63	24	20	20	17

Table (8): Distribution of pregnant mothers according to their changes on QOL (job & Sexual fitness) (n=120)

Items	No at all		Sometimes		Very often	
	No	**%**	**No**	**%**	**No**	**%**
Job fitness:						
Ability to work	82	68.4	28	23.3	10	8.3
Sleeping well	78	65.0	25	20.8	17	14.2
Ability to enjoy life	66	55.0	35	29.2	19	15.8
Practicing usual chores	70	58.4	40	33.3	10	8.3
Satisfied with quality of life	68	56.7	35	29.1	17	14.2
Sexual Fitness:						
Satisfied with any sexual life	87	72.5	23	19.2	10	8.3
Condition affected sexual relation	20	16.7	45	37.5	55	45.8
Loss of libido	18	15.0	40	33.3	62	51.7
Dyspareunia	15	12.5	35	29.1	70	58.4
Avoiding sex fearing pain	20	16.7	35	29.1	65	54.2

Table (9): Relation between QOL score percent and mother's general characteristics (n=120)

QOL score percent of fitness Aspects	General characteristics											
	Age / year						P	Occupation				P
	< 25 N=40		26 – 35 N=65		≥ 35 N=15			Housewife N=80		Working N=40		
	Mean	SD	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Somatic	68.36	12.83	61.87	10.35	66.58	9.83	0.001**	72.51	11.80	672.29	9.50	0.010*
Social	79.94	11.72	72.90	11.84	72.69	7.41	0.032*	74.79	12.33	674.75	12.35	0.010*
Psychological	72.41	10.39	73.86	11.47	62.22	8.16	0.028*	75.97	11.33	64.85	9.76	0.001**
Spiritual	97.57	10.29	77.30	8.79	74.81	8.01	0.058	80.20	10.14	84.61	8.70	0.49
Job	65.54	15.12	58.92	11.56	57.40	15.72	0.040*	68.32	14.04	56.57	10.98	0.040*
Sexual	67.28	9.28	65.64	9.90	63.66	8.28	0.64	67.44	9.15	63.13	9.76	0.030*

****statistical significant difference (P ≤ 0.05)*** ****highly statistical significant difference (P ≤ 0.001)***

Table (10):
Relation between QOL score percent and educational level

score percent of QOL's Aspects	General characteristics								P value
	Educational level								
	Illiterate N=40		Primary N=15		Secondary N=30		University N=35		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Somatic fitness	64.44	11.46	62.35	11.71	65.32	12.31	76.39	9.75	0.032*
Social fitness	70.0	10.03	72.16	13.45	73.32	12.58	76.50	10.62	0.026*
Psychological fitness	55.78	9.25	62.22	11.06	67.57	12.88	74.89	9.40	0.036*
Spiritual fitness	84.00	10.69	87.59	11.11	87.48	8.80	80.89	8.98	0.290
Job fitness	69.33	12.60	67.59	12.80	61.26	13.06	57.05	12.32	0.041*

****statistical significant difference (P ≤ 0.05)***

Table (11): Relation between QOL score percent and Obstetrical history

score percent of QOL's Aspects	Obstetrical history											P value
	Parity						P value	Gravidity				
	Non		1 – 2		≥ 3			1 – 2		≥ 3		
	Mean	SD	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Somatic fitness	12.95	2.65	22.80	2.74	12.45	1.70	.062	35.96	4.65	10.76	1.70	0.001**
Soocial fitness	13.81	2.42	25.58	2.41	13.40	2.34	.0146*	27.31	3.45	13.45	2.03	.438
Psychological fitness	13.63	1.45	20.28	2.34	9.20	1.32	.011*	24.79	2.76	9.89	i.34	.001**
Spiritual fitness	12.67	1.53	13.11	2.23	12.90	1.79	.025*	27.84	3.64	10.65	1.45	.037*
Job fitness	7.28	1.83	20.23	2.78	8.45	1.34	.056	15.72	2.42	8.09	1.43	.017*
Sexual fitness	46.35	4.78	38.15	4.78	32.45	4.45	.002*	56.42	8.23	35.37	4.48	.001**

statistical significant difference (P ≤ 0.05) ****highly statistical significant difference (P ≤ 0.001)***

Discussion

Pyelonephritis is the medical term for inflammation of the renal pelvis, tubules and interstitium most commonly associated with an infection. It is a serious complication of a urinary tract infection (UTI), typically extending from the infected bladder (cystitis) as a result of an ascending infection. A kidney infection may vary in severity but can be life threatening and contribute to a host of other complications involving various systems other than the renal system. Although it can affect any age group and gender, pyelonephritis is more common in women who are generally prone to UTIs in comparison to men, given the shorter urethra [(13)].

The concept of health-related quality of life (HRQOL) takes into account patient well-being as expressed by both the physical and psychological or mental domains of health. HRQOL may be affected by several factors, including the clinical manifestations of disease, the side effects of treatment, and the quality of the relationship of the patient with family members and health care providers. In addition, to provide information about individual well-being at a given moment, the assessment of HRQOL may help identify an individual's risk for certain outcomes [(12).]

The aim of the present study is to study the effect of pyelonephritis during pregnancy on mother's quality of Life. This aim was achieved because the present study results answered its questions.

Part one general characteristics and obstetrics history

More than half of pregnant mothers had age ranged from 25-35 years. It was also reported that, the youngest pregnant mother age < 25 years old had highly significant score percent as regards the somatic fitness, social fitness, psychological fitness, spiritual and the job fitness; i.e. they had better QOL than older pregnant mother.

Similar study reported that a case-control study to evaluate QOL in patients who had nephrolithiasis with recurrent painful symptoms due to renal colic. In this case-control study, were matched according to age and gender. They found that the main outcomes measures of QOL using the SF=36 showed significantly lower averages in cases group than controls [(14)]

Part two. Are pregnant mothers have correct knowledge regarding pyelonephritis and its related changes of quality of life?

The present results revealed that, 23% of the studied pregnant mothers with pyelonephritis were used herbal medications to treat their symptoms. Despite the fact that knowledge of potential side effects of many herbal medications in pregnancy is limited, and that some herbal products may be teratogenic in human.

Past studies showed that many patients who had used herbal medications with good therapeutic outcomes later discovered that the benefits were actually due to the presence of undisclosed orthodox medications to which the herbal medications has been adulterated[(15)].

Another study [(16)] reported that there was wide spread use of herbal medications by pregnant women in Nigeria. On the other hand, however, patients could also develop renal failure and other untoward effects from use of adulterated products.

Pare three. What are factors influencing quality of life among pregnant mothers with pyelonephritis?

The present study results pointed out the young primigravida had better QOL than the multiparous mother; they had significant score percent as regards the somatic fitness, social fitness, psychological fitness, spiritual and the job fitness. In the present study, the university-graduated pregnant mother's mean score are significantly higher than those of illiterate, primary and secondary educated pregnant mother as regards the somatic fitness, social fitness and psychological fitness, and the job fitness; p value=0.041. a relation was also found between QOL and gravidity. Those results are in accordance with those reported by a descriptive analytical cross-sectional study performed in Iran and conducted on 600 pregnant women from Kashan. It was found that the lowest life quality score was obtained

in functional limitations and some dimensions of health in SF-36 were correlated with age, gravid, education, and income ($p<0.05$) [11].

As regards the quality of life aspects the present study showed that, there is a significant difference between the different age of pregnant mother's as regards the score percent of the somatic fitness, social fitness, psychological fitness, spiritual and the job fitness. On the other hand, the score percent of the sexual fitness showed insignificant difference. These results are in accordance with the results of another study [10] the researchers found that quality of life was correlated with age, gravidity, number of deliveries and income.

Conclusion:

Most of the pregnant mothers with pyelonephritis had lack of somatic fitness so they cannot give care for their families. The majority of the pregnant mothers with pyelonephritis had improper social fitness, they received social support from their family's members and they were unhappy with their life changes. The pregnant mothers with pyelonephritis had significant psychological they almost fell asd and afraid of the deterioration and complications of the pyelonephritis. Most of the pregnant mother's with pyelonephritis were not satisfied with their quality of life. While the sexual relationship of the pregnant mother with pyelonephritis more or less had slightly unpleasant relationship they were felt pain and dyspareunia during the intercourse.

Recommendations:

1. Enforcement nursing role for proper antenatal care in the area of managing the QOL among pregnant mothers especially those with pyelonephritis. Moreover, outreach program must be designed and implement to improve QOL among pregnant mother with pyelonephritis.
2. Booklet must be designed to improve miss-concept during pregnancy to help mothers to avoid consult pharmacist or use herbal during pregnancy without medical consultation.
3. Psychological follow up programs among pregnant mothers with pyelonephritis to improvement their QOL, and further studies in the area of this study are needed with different sample size to confirm the present results.

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