Assessing the Nursing Performance to Meet Client Satisfaction regarding Antenatal Care

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Abstract

Aim: This study aim was to assess nursing performance to meet clients' satisfaction regarding antenatal care. **Design**: descriptive research was utilized in this study. **Setting**: The study was conducted at three MCH centers at Shoubra ELKhima district. **Sample** all nurses in the previous MCH centers are 35 nurses and 150 pregnant women attending for maternal health care. **Tool**: two tools were used for data collection the first one was a structured interviewing questionnaire sheet included socio demographic data about nurses, nurses' knowledge regarding antenatal care, socio demographic data about pregnant women, obstetric history, antenatal follow up and likert scale which monitor women satisfaction. The second tool was an observational checklist to observe actual nursing performance in ante-natal care clinic. **Results:** the majority of the nurses had poor knowledge regarding antenatal care in MCH centers and had poor performance of antenatal care. The majority of the study subjects were unsatisfied with the performance of the nurses in MCH centers. **Conclusion**: quality of antenatal care provided at studied MCH centers was poor,   due to shortage of staff, lack of necessary equipment and supplies. Pregnant women were unsatisfied with antenatal care provided in these centers. **Recommendation:** Continuous training Programs for health care providers at MCH centers to improve their performance and consequently raise the quality level.

Keywords: Ante-natal care, Nursing performance, Client satisfaction.

Introduction

Antenatal care (ANC) is the care of the woman during pregnancy. The primary aim of ANC is to promote and protect the health of women and their unborn babies during pregnancy so as to achieve at the end of a   pregnancy a healthy mothers and a healthy baby, reduce the mortality and morbidity of women and children, to improve the physical, mental, and social well being of women, children, and their families **(Kuhnt& Vollmer, 2017).**

The effectiveness of antenatal care is not only the aim but also improving maternal satisfaction with health care services. The knowledge about users' views is still very limited, especially in developing countries **(Akowuah et al, 2018).**

The goal of ANC is to have healthy pregnancy, clean and safe delivery and to give birth to a full term healthy baby. The component of ANC includes the following: registration and record keeping, periodic examination, including laboratory tests, risk detection and management, immunization, referral as needed, emotional and psychological support, health education, nutrition care, dental care, home visiting and social care **(WHO, 2016).**

According to the World Health Organization (WHO), the worldwide estimated maternal mortality that in 2015, roughly 303 000 women died during and following pregnancy and child birth .In Egypt, maternal mortality ratio has declined dramatically from 174/100000 live births in 1992-1993 to 67.6 / 100000 live births in 2005 to 44.6 / 100000 live births in 2009 to

33/100.000 live births in 2015. Such decrease in MMR reflects the country's effort in achievement of the millennium developmental goals. The target of those goals was to reduce MMR by three quarters by 2030. One of the cornerstones for achievement of these goals is the provision of quality antenatal care (**WHO, 2018).**

The most common challenges affecting antenatal care utilization as one of important aspects of maternal health could be related to the services as following; availability, accessibility, affordability, and characteristics of healthcare services, quality of maternal health services or related to the clients such as following; women's position in the household and society as well as knowledge, attitudes, culture and beliefs (**Devkota et al, 2018).**

Clients' satisfaction is considered an important indicator of the efficient utilization of health services, as it assesses an individual's attitude to health services received and the extent to which these services meet the person's requirements and needs. The effectiveness of antenatal care is not only the aim but also improving maternal satisfaction with health care services (**Alkhazrajy et al, 2015).**

Satisfying pregnant women is achieved through satisfying their needs and expectations, which in turn causes a pleasant feeling in them and promotes their mental health and brings about a feeling of calmness and security. The better the needs and expectations are satisfied, the satisfaction achieved will be more profound and complete and vice versa i.e. failure to satisfy their needs causes anxiety and imbalance (**Karlström et al, 2015).**

Healthcare service quality is associated with patient satisfaction and healthcare organizations' productivity. Therefore, it is very important to define measure and improve quality of health care services. Quality healthcare is a subjective, complex and multi-dimensional concept. **Mosadeghrad (2014)** defined quality

healthcare as "consistently delighting the patient by providing efficacious, effective and efficient healthcare services according to the latest clinical guidelines and standards, which meet the patient's needs and satisfies providers (**Mosadeghrad, 2014).**

Aim of the study:

The aim of this study was to assess nursing performance to meet client's satisfaction regarding antenatal care in MCH centers through**:**

1- Assessing the knowledge of nurses regarding antenatal care in MCH centers.
2- Assessing performance antenatal care nurses in MCH centers.
3- Assessing client's satisfaction about nursing performance in antenatal clinic.

Research question:

1-Is there a relation between the knowledge of nurses about antenatal care nurses and their socio demographic data?
2- Is there a relation between the nurses' knowledge and their performance?
3-Is there a relation between client satisfaction and nursing performance in antenatal care in MCH centers?

Subjects and methods

1-**Research design**: Descriptive design was used to achieve the aim of the present study

Setting:

The study was conducted at MCH centers at Shoubra ELKhima district. The total number of MCH in Shoubra ELKhima is 14 MCH centers. The MCH centers were chosen randomly (Nobar MCH – Begam MCH – Osman MCH).

Subjects:

Two subjects was included in the study

• Nurses: All nurses in the previous MCH centers are 35 nurses.

• Pregnant women: The total numbers of clients who are followed up at MCH during (2014/2015) were 1500 clients, so 10% of clients (150) were selected according to Inclusion criteria: Pregnant

women registered for antenatal care and have at least two visits to MCH centers.

Tools of data collection: Data was collected using two tools:

Tool (1): interviewing questionnaire:

A-For Nurses

Part one: sociodemographic data for nurses which includes (age, marital status, educational level, qualification, experience and received training programs about antenatal care).

Part two: assess nurse's knowledge about antenatal care which includes: anatomy and physiology of reproductive system, importance of antenatal care, component of antenatal care, visit schedule and signs of pregnancy, physiology and psychology changes during antenatal period, and health education during antenatal period.

Scoring system: Each complete answer was scored (2), while incomplete answer was scored (1)**.**Satisfactory knowledge ≥ 60%**.** Unsatisfactory knowledge < 60%**.**

B-For pregnant women:

Part one: sociodemographic data for pregnant women which include: age, educational level, qualification, number of children and income.

Part two: obstetric history which included: past history and present history, antenatal follow up.

Part three: Likert scale which monitor women satisfaction regarding antenatal care.

Scoring system for satisfaction scale

- Very satisfied 5
- Satisfied 4
- Neither satisfied 3
- Not satisfied 2
- Very un satisfied 1

Total score Satisfied ≥ 60%**,** Unsatisfactory knowledge < 60%.

Tool (11): Nurses' performance observational checklist was used to assess the quality of nurses' performance in antenatal clinic, this checklist included: communication skills, history taking, vital signs and measure of weight and length.

Scoring system for observation checklist Nurses' performance was calculated for each item as follows-Done= 2, Not done=1

Total score Satisfied ≥ 60%, Unsatisfactory knowledge < 60%.

11- Operational Design:

The operation design included preparatory phase, pilot study and field work.

The Preparatory phase: It included reviewing of related literature covering the various aspects of the problem using the articles, periodicals, magazines and text books**.**

Pilot study:

A pilot study was carried out on 10% from nurses and 10% from mothers to evaluate the data collection tools. The necessary modification of the tools constructed was according to the result of the pilot study**.**

Field work:

The field work was carried out from middle of January, 2017 to the end of June 2017 covering six months. The data was collected by the researcher using the previous tools. This done in antenatal clinic for five days per week from 8.00 am to 12.00 pm. 2 nurses and 3 mothers were observed daily and 3 sheets were filled each day) until the predetermined number was obtained.

Ethical consideration:

An official permission was obtained from the Ethical Committee Faculty of Nursing / Ain Shams University. Informed consent was taken from nurses and mothers to apply this study on them.

111- Administrative design:

An issued letter was obtained from the Dean of Faculty of Nursing / Ain Shams University   directed to administrators of MCH centers to conduct this study.

1V- Statistical design:

Data collected were organized, scored tabulated, analyzed using number and percentage distribution. Statistics analyzed by computer and proper statistical tests were used to determine whether there significant difference or not. The following statistical analysis Number, Percentage, P value, Chi-square, correlation and proportion of probability p-value.

Results:

Table (1): showed that 51.4% of nurses were married and 100% from nurses are staff nurse.And 88.6% of nurses had two or more Work shop training.

Table (2): showed that 54.7% of client's aged more than 20 years.73.3% of clients was Intermediate education.. 67.4% of clients had no kids or had one kid. 80.7% of clients had not enough income. It was found that the mean of Crowd index was 1.54.

Table (3): As seen in the there were that (2.9%) had correct answer about uterus function, Psychological change during the first trimester, the second trimester and the third trimester. Also (5.7%-8.6%) of nurses correct answers regarding Uterus place, hormones, signs of pregnancy, physiological changes during the first trimester, physiological changes during the third trimester, nurse role during pregnancy, determine the due date and health education.

While the highest correct answers were about recognized the shape (100%) and antenatal visit (82.9%).

Table (4): It was noticed from that 65.7% of nurses measure blood pressure and measure the weight and length. (28.6%) of the nurses have communication and take the history of the clients, (5.7%) of nurses' measure temperature, While all of nurses don't measure pulse.

Table (5): It was noticed from that, 76.7% of clients were strong unsatisfied with the received psychological care, 66.6% of them were strong unsatisfied with the availability of required tools, 74% of them were unsatisfied with heard pulse of the fetus, 66%-63.3% of them were unsatisfied with communication way from the nurse, measured vital signs, health education, time of the visit and chance to debate and dialogue. Also 48.7% of them were unsatisfied with maintain privacy during disclosure. While 53.3% of the clients were satisfied with determine the date of the next visit.

Table (6): showed that, there were statistical significant relations between Knowledge of antenatal care nurses and (age, marital status, qualification, experience and MCH training) with p-value < 0.05.

Table (7): showed that, the correlation between Nurses' knowledge of antenatal care and the nurses' performance was 0.95; it means that the correlation between them was strong correlation.

Table (8): showed that, the correlation between Nurses' performance of antenatal care and the client's satisfaction was 0.93 it means that the correlation between them was strong correlation.

Table (1): Distribution of studied nurses regarding their socio-demographic characteristics (n=35).

Socio demographic characteristic	No.	%
Marital Status		
Single	8	22.9
Divorce	2	5.7
Widow	7	20.0
Job		
Staff nurse	35	100
Work shop Training		
No training	4	11.4
Two Times	20	57.2
2+	11	31.4

Table (2): Distribution of The Studied Client according to their Sociodemographic Characteristics (n=150).

Client data	No.	%
Age		
-20	19	12.7
20-	82	54.7
30-	44	29.3
40-	5	3.3
Children		
Not have child	96	64
One	5	3.3
Two	29	19.4
Three	15	10
Three+	5	3.3
Income		
Not enough	121	80.7
Enough	29	19.3
Crowd index	Mean	1.54

Table (3): Distribution of studied Nurses according to their correct knowledge regarding antenatal care in MCH centers, (n=35).

Correct Knowledge of Nurses	Correct	%
Recognized the shape	35	100
Uterus Items	12	34.3
Uterus function	1	2.9
Uterus site	2	5.7
Uterus shape	16	45.7
Femininity Hormones	2	5.7
Nursing care during pregnancy	4	11.4
Importance of care during pregnancy	14	40
Components of care during pregnancy	13	37.1
Antenatal follow up visits	29	82.9
Signs of pregnancy	3	8.6
Physiological changes during the first trimester	3	8.6
Physiological changes during the second trimester	13	37.1
Physiological changes during the third trimester	3	8.6
Psychological change during the first trimester	1	2.9
Psychological change during the second trimester	1	2.9
Psychological change during the third trimester	1	2.9
Warning Signs during Pregnancy	24	68.6
Weight gain during Pregnancy	6	17.1
Nurse role during pregnancy	2	5.7
Nurse role during follow up visits	7	20
Health education during Pregnancy	2	5.7
Determine expected date of delivery	2	5.7
Total knowledge	10	28.5

Table (4): Distribution of Studied Nurse according to their Performance regarding Antenatal Care in MCH centers (n=35).

Performance of antenatal care nurses in MCH centers	Do	%	Don't	%
Communication Skill	10	28.6	25	71.4
History taking	10	28.6	25	71.4
Measure the temperature	2	5.7	33	94.3
Measure the pulse	0	0	35	100
Measure the Blood pressure	23	65.7	12	34.3
Measure Weight and height	23	65.7	12	34.3
Total Performance	3	8.6	32	91.4

Table (5): Distribution of Studied Clients according to their Satisfaction about Nursing Performance in Antenatal clinic (n=150).

Items	Strong un satisfaction		un satisfied		Neither satisfied nor un satisfied		Satisfied		Strong satisfied	
	No.	%	No.	%	No.	%	No.	%	No.	%
The nurse received with smile	31	20.7	95	63.3	10	6.7	4	2.7	10	6.7
Nurses collaborating	38	25.3	99	66	10	6.7	3	2	0	0
Nurses treat with respect	63	42	61	40.7	7	4.6	15	10	4	2.7
The nurse gave information about pregnancy	32	21.3	84	56	11	7.4	20	13.3	3	2
Maintain privacy during disclosure	51	34	73	48.7	4	2.6	22	14.7	0	0
Help during the medical examination	47	31.3	87	58	5	3.3	11	7.4	0	0
Required tools during detection were available	100	66.6	50	33.4	0	0	0	0	0	0
Measured vital signs	38	25.3	98	65.3	14	9.4	0	0	0	0
Heard the pulse of the fetus	30	20	111	74	5	3.3	4	2.7	0	0
Measured weight and height	30	20	82	54.6	0	0	38	25.3	0	0
Provided health education on the current stage of pregnancy	51	34	95	63.3	0	0	4	2.7	0	0
Health education information was understandable and easy	51	34	95	63.3	0	0	4	2.7	0	0
The time of the visit is enough	38	25.3	96	64	0	0	16	10.7	0	0
The date of the next visit has been determined	30	20	40	26.7	0	0	80	53.3	0	0
Gave a chance in the debate and dialogue	43	28.7	98	65.3	0	0	9	6	0	0
Take into account psychological and social status	115	76.7	30	20	0	0	5	3.3	0	0
Total Satisfaction	-	-	130	86.7	-	-	20	13.3	-	-

Table (6): Relation between Knowledge of Antenatal Care Nurses and their Socio demographic Characteristic (n=35).

Socio demographic characteristic	Knowledge of antenatal care nurses				χ^2	P-value
	correct		incorrect			
	No	%	No	%		
Nurse Age						
20-	2	20	1	4	7.001	0.030
30-	4	40	7	28		
40-	4	40	17	68		
Nurse Marital Status						
Married	5	20	13	52		
Single	2	20	6	24	13.618	0.002
Divorced	0	0	2	8		
Widow	3	30	4	16		
Qualification						
Institute above average	2	20	2	8	8.412	0.036
Diploma Nursing 3 years	8	80	23	92		
Experience						
Less than 10	4	40	6	24	7.760	0.021
10-	3	30	8	32		
20-	3	30	11	44		
MCH Training						
No	1	10	3	12	11.403	0.010
Two Times	5	50	15	60		
2+	4	40	7	28		

Table (7): Relation between the Nurses' Performance and the Nurses' knowledge of Antenatal Care (n=35).

Total of Nurses' knowledge antenatal care	The nurses' performance				R2	P-value
	Do		Don't			
	No	%	No	%		
correct	2	67	8	25	0.95	0.04
incorrect	1	33	24	75		

Table (8): Relations between Client Satisfaction and the Nurses' Performance.

The Client satisfaction				The nurses' performance				R2	P-value
Unsatisfied		Satisfied		Do		Don't			
No	%	No	%	No	%	No	%		
130	86.7	20	13.3	3	8.6	32	91.4	0.93	0.05

Discussion

Satisfaction with care was measured as it is recognized as an important and valid indicator of the quality of care. Satisfaction is a major determinant of health service utilization in general. Lack of satisfaction with quality of care could be a major demotivating factor in the use of maternity care facilities (**Jafari, et al 2010).**

Antenatal care (ANC) is the key entry point of a pregnant woman to receive broad range of health promotion and preventive services which provide the health

of the mother and the baby. Quality of ANC is an important determinant of pregnancy outcome and has been designated one of the four pillars of safe motherhood, along with clean and safe delivery, essential obstetric care and family planning which could contribute to reduction of maternal mortality **(Ghosh-Jerath et al 2015)**.

Regarding to nurses' socio demographic characteristics, the present study found that 60% of nurses aged more than 40years.This disagreed with **(Sobhy, 2006)** who studied about "Pre/postnatal Nursing Care in Maternal and Child Health Centers at Benha City" who found that two third of studied nurses aged between 24 to less than 34 years old. This might be due to work in antenatal clinic with less effort so the head nurse put nurses with high age in this place **(table 1).**

Regarding marital status, the study found that half of nurses were married (**table 1**). The results of study disagreed with **(Zahra**, **2012)** who studied "Quality Improvement of Maternal Health Care in Maternal and Child Health Care Centers in Kalyubia Governorate" who found that 74.5%of nurses were married. Also this finding disagreed with **(Ezz El-din, et al**, **2015)**, who studied about" Effect of Applying Performance Improvement Model on Ante-Natal Care Nurses Performance in Family Health Centers In Quena City" and found the majority of studied nurses were married. This might be due to married nurses preferred to work in antenatal clinic due to their less working hours and having morning shifts only.

Regarding the level of education, the study found that majority of the studied nurses were educated at secondary school of

nursing (**table 1**).The results of study agreed with **Sobhy (2006),** that majority of studied nurses had nursing diploma. This result might be due to many reasons such as, the financial conditions for the Egyptian families, because they seek fewer years of study and get job opportunity in a way that save time and money. Moreover is social belief about nurse career.

Regarding years of experience, one third of the studied nurses had 10-20 years (**table 1**).This study agreed with **Sobhy (2006)** who found that 34% of studied nurses had 10-20years experience. Also this study agreed with **Zahra (2012)** who asserted that40.3% of nurses had 10-20 years of experience .This result might be due to more nurses studied with high age so they had many years of experience according to age. The present study revealed that majority of nurses attended two times or more training courses**(table 1)**, this study agreed with **Sobhy(2006)** who demonstrated that one half of studied nurses attended two times or more training courses. While **Ezz-El din et al (2015),** found more than half of nurses' studies didn't attend any training program. This result might be due to the interest of Ministry of Health to improve professional practices of nurse.

Considering age of clients, the study revealed that more than half of clients aged 20 and less than 30 years**(table 2)**,this agreed with **Ismail (2017)** who studied "Pregnant Women's Satisfaction with The Quality of Antenatal Care At Maternal and Child Health Centers in El-Beheira Governorate". She found that half of clients aged 20 and less than 30 years. Also this study disagreed with **Soliman (2015),** who studied "Satisfaction of Rural Pregnant Women as Quality Indicator of Provided Antenatal Care". She asserted that the majority of clients aged more than 20 and less than 35 years (83.6%).This finding might be due to the criteria selected and sample available.

Regarding the level of education,

the current study elaborated that three quarter of studied clients had intermediate education **(table 2).**This study agreed with **Soliman (2015**) who found that more than half of clients sample at secondary level. In Also disagreed with **Montasser et al (2012)** who studied "Egyptian Women's Satisfaction and Perception of Antenatal Care ", and found that 37.6 % of studied sample had secondary level of education. This high percentage of educated women reflects the increase in the awareness of population about woman's rights as female education.

Regarding occupation, the current study found that the majority of clients were housewife **(table 2)**. The results of study agreed with **Montasser et al (2012)**, and found that 95.1% of studied sample were don't work. Also agreed with **Soliman (2015),** who found that 90.7% of clients studied were don't work. This finding might be due to working women may not find the chance to visit the primary health centre especially during working hours**.**

The current study found that two third hadn't child, and one third had one child or more **(table 2)**. The results of study disagreed with **Montasser et al (2012),** who found 11.1% of studied sample hadn't child. Also disagreed with **Soliman (2015),** who found that majority of clients studied had one or more, This finding might be due to have large number of children and caring for them may be one of the barriers for those women for not attending the primary care centre**.**

The current study elaborated that 80% had insufficient income **(table 2)**. It might be due to high standard level of living now and person income are not enough requirements of life.

Regarding nurses knowledge about antenatal care, the current study found that the majority of studied nurses had good knowledge about recognized the shape; follow up visit, and warning signs **(table 6).**This study agreed with **Sobhy (2006)** who found three quarter of nurses had correct answers regarding follow up visit while this study disagree with her who found all of nurses had correct but not complete answer about warning signs. This finding might be due to nurses had experience in this field and they had taken more training courses, this had given them good knowledge about some items of antenatal care.

The results of this study indicated that the majority of studied nurses had poor knowledge about anatomy and physiology of uterus **(table 6)**. The results of study agreed with **Hassan (2007)** who studied "assessment the quality of nursing performance in antenatal period At Benha University Hospital", she who found the majority the nurse had correct answer but incomplete regarding anatomy and physiology of uterus This finding might be due to nurses need to refresh her knowledge about reproductive system**.**

It was noticed that the majority of studied nurses had incomplete answer about the definition of antenatal period **(table 6).**The results of study agree with **Sobhy (2006)** who found the majority of studied nurses had incorrect answer. The results of study disagree with **Hassan (2007)** who found majority of nurses had the majority of studied nurses had correct answer about the definition of antenatal period. Antenatal care is the routine health control of presumed healthy pregnant women without symptoms to diagnose diseases or complicating obstetric conditions without symptoms, and to provide information about lifestyle, pregnancy and delivery**.**

The results of this study indicated that two third of studied nurses had incorrect and incomplete answer about importance of care during pregnancy, components of care and physiological changes during the second trimester **(table 6)**.The results of study agree with **Hassan (2007)** who found majority of nurses had

incorrect answers about importance of care during pregnancy, components of care and physiological changes during the second trimester. Also the results of study agree with **Sobhy** (**2006**) who found the majority of nurses had incomplete knowledge about importance of care during pregnancy, components of care, physiological changes and danger signs.

It was noticed that more than one-fifth of studied nurses had correct answer about the role during pregnancy and weight gain during pregnancy **(table 6)**. The results of study agree with **Sobhy (2006)** who found 20 % of studied nurses had correct answer about the nurse role during repeated visit and weight gain during pregnancy. Also the results of study disagree with **Ezz-Eldin et al** (**2015**) who found 75% of studied nurses had correct answer about component of visit. **Perry, (2014)** mentioned the nurses who deal with prenatal nursing care must be determined weight at the first prenatal visit, and each subsequent visit**.**

It was noticed that lack of nurses, knowledge about signs of pregnancy physiological change during the first and the third trimester, psychological change during pregnancy, nurse role during first visit, health education and determine the due date(**table6**).The results of study agree with **Hassan (2007)** and **Sobhy** (**2006**) who found majority of nurses had incorrect answers about signs of pregnancy physiological change during the first and the third trimester, psychological change during pregnancy, nurse role during first visit, health education and determine the due date. This may be due to improper knowledge and lack of motivation to update their knowledge and this explained that they were lacking basic knowledge for component care.

Regarding nurses performance in antenatal care, the current study found that all of studied nurses don't measure pulse and few of them measure

temperature(5.7%).Also nearly three quarter had poor performance in communication and taking health history but had good performance in another items of measure the blood pressure and measure weight and length**(table 7).** The results of study agree with **Ezz-Eldin et al (2015**) who found 78.4% of studies nurses had poor performance during establishing inter personnel relationship with pregnant women, history taking and measure the physical examination. This finding might be due to majority of nurses applied measure the blood pressure and measure weight and length, but nurses were not interested, had time shortage and some of them did not have adequate level of knowledge.

According to the results of the current study it can be noticed that majority of the study subjects were unsatisfied with the nurses performance. Concerning client's satisfaction the current study found that the all of clients were dissatisfied with availability of equipment **(table8)**.These findings disagreed with **Dhahi et al (2015)** who studied "A Study on Pregnant Women's Satisfaction with Primary Health Care Services in Basra", she found one half of the studied women were satisfied about equipment. This may reflect the shortage of equipment and supplies.

One of the main goals of antenatal care is the provision of adequate information that is essential for maintaining and improving pregnancy outcomes. Most of women in this study perceived that their health education needs were unsatisfactory and health education wasn't understood due to short time of visit and overcrowded **(table 8)**. This finding agreed with **Ismail (2017)** who found the majority of women were dissatisfied with the received information. Also these findings disagreed with **Montasser et al (2012),** who found the majority of clients were satisfied about health education. This may reflect the importance of continuous training programs

to health care providers to improve their knowledge and communication skills**.**

The present study revealed that the majority of the study subjects were dissatisfied with the received psychological care specifically nurses communication, treated way of nurses, didn't give them time to express their feelings without interruption as well as didn't answer their questions **(table 8)**. This result agreed with **Ismail (2017)** who found the majority of women were dissatisfied with the psychological care. Also this finding disagreed with **Montasser et al (2012),** who found they nearly one half (48%) of their subjects were satisfied with their received psychological care. The results of the current study is probably attributed to the fact that health care providers at maternal and child health centers in Egypt suffer from shortage of staff and high workload. Such conditions probably limit the care provider's chance to provide enough time and psychological care to each client**.**

The current study showed that the majority of its participants were satisfied with measuring the vital signs **(table 8).**The current finding agreed with the study of **Dhahi et al** (**2015**), she found that (94.5%) of their study participants were satisfied with measuring the vital signs. While **Soliman (2015**) found three quarter of their study participants were satisfied with measuring the vital signs.

Regarding measuring weight and height the current study showed that three quarter of participants were satisfied with measuring weight and height **(table8)**.This result agreed with **Ismail (2017)** who found the majority of women were satisfied with measuring weight while one third of women were satisfaction with measures height. While **Dhahi et al (2015**) found that one half of its participants were satisfied with measures weight and height**.**

Regarding maintenance of the privacy the current study showed that the majority of participants were satisfied with it **(table8)**. This result agreed with **Montasser et al** (**2012**), who found the majority of women (87.2%) were satisfaction with keep of privacy. While this finding disagreed with **Ismail** (**2017)** who found the one half of women were unsatisfied with maintaining the privacy**.**

The present study indicated that there were statistically significant difference between knowledge of antenatal care nurses and their age, marital status, qualification, experience, and course training **(table9)**, this result agreed with **Hassan** (**2007**) who found that there was a strong positive correlation between nurses knowledge both their age, qualification, and years of experience. The finding of the current study disagreed with **Sobhy (2006)** who found no significant difference between knowledge and age of nurses, experiences and marital status.

The present study indicated that there were strong correlation between the nurse's performance and nurse's knowledge of antenatal care r=0.95**(table 11)**, this result agreed with **Hassan (2007)** who found strong positive correlation between nurses level of knowledge and their practice r= +0.93. Also these results agree with **Sobhy (2006)** who found high statistical significant difference was detected P< 0.001.

The present study indicated that there were strong correlation between the nurse's performance and the client's satisfaction r= 0.93 **Table (13).**

Conclusion

In the light of the study findings and research questions, some important facts could be concluded, nurses didn't have correct knowledge regarding; physiological changes during antenatal period, psychological change during antenatal period, importance of care during pregnancy, components of care, the role during pregnancy and weight gain.

Regarding nursing performance during antenatal period, the majority of nurses didn't perform communication skills, and taking health history, check vital signs except measure the blood pressure.

Also, It could be concluded that quality of antenatal care provided at studied MCH centers was poor, this due to shortage of staff, lack of necessary equipments and supplies.

Pregnant women were unsatisfied with the antenatal care provided in these centers. It indicates that a decrease in the quality-of-care level is followed by a decrease in the clients' satisfaction level.

Recommendations:

The following recommendations may help in improving the level of knowledge and practice of nurses related to antenatal care to promote maternal and child health.

This could be through:

- Periodic training program for training of the nurses at maternal and child health center is recommended as it may improve their knowledge and improve training courses of the providers to upgrades their communication and consequently raise the quality level.
- Different health education methods should be available to increase awareness of the pregnant women about the importance and components of antenatal care.
- Application of nursing care standards in antenatal unit to improve maternal and child health care.

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No

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