



EVALUATION OF ANTENATAL CARE SERVICES AND WOMEN'S PERCEPTION IN ASSIUT UNIVERSITY HOSPITAL

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ABSTRACT:

The aim of this prospective non experimental study was to evaluate antenatal care; mother's perception (opinion) about ANC and introduction of midwifery nurse as care provider in out-patient antenatal clinic at Assiut University Hospital. This study showed the difference between two groups of mothers one: of whom received ANC at regular visits and the other one did not received ANC regularly during pregnancy period. Subject and methods: The study was conducted in Assiut University Hospital. The total sample was 1755 women, divided into two groups; group one who attended regular antenatal visits (660) and group two attended irregularly (1095) attended to antenatal clinic and 12% of them (212) were visited at home through early postpartum period to evaluate mother's perception toward ANC maternal, infant and antenatal care outcome whether regular or irregular groups. The used tools used to collect data were, interviewing sheet, antenatal follow-up record and postpartum evaluation sheet.

Results: the main finding of this study was: about 38% attended 4 regular visits. The educated was regular than non educated, postpartum problems were nearly half; 49.5% irregular versus 12.4% regular group and women's opinion was 100% regular Vs irregular said that antenatal care was effective.

Conclusions: The regularity of ANC visits achieved good outcome for regular attendance mothers, study revealed high mothers satisfaction about ANC; women's opinion about care providers revealed that more than two thirds of women in both groups received good care from midwife and nurse. The present study revealed success to introduce the importance of nursing role at antenatal clinic.

Recommendations: Taking into consideration the opinion of women, it is possible at arrive to initial conclusion on how antenatal care varies according to women cultures. We adopted the new WHO antenatal care model in our maternal care services to eradicate women's barrier to attending regularly for antenatal care visits.

INTRODUCTION:

Antenatal care, the care a woman receives throughout her pregnancy is important in helping women and newborns survive pregnancy and childbirth. The traditional

approach to antenatal care, which is based on European models developed in the early 1900s, assumes that more care is better in care for pregnant women. Frequent routine visits are norm, and women are classified into risk

category to determine their chances of complications and the level of care they need. Many developing countries have adopted this approach without adjusting to meet the needs of this particular populations, taking into account their available resources or evaluating the scientific basis for specific practices^[12].

Antenatal care is a combination of monitoring for problems in mother and fetus, treatments and preventive care, health education, support and advice for pregnant women. Until recently, antenatal care has been largely un evaluated. There is limited evidence on specific component of antenatal care, but there was, at the time of planning the study, little evidence of overall effects of antenatal and delivery care on mothers and their babies, either in developed or developing countries^[16].

The consequences of failing to provide good maternal and perinatal care can be seen in the disturbing statistics of maternal and neonatal morbidity and mortality for developing countries. Traditionally antenatal care programmes have been recommended for developed countries with only minor adjustments for local conditions^[22].

A recent Cochrane review examined the effect of a reduction in the number of antenatal visits. These studies concluded that reduction of the number of visits did not confer any adverse risk to either mother or fetus. However mothers in some studies in developed countries reported decreased satisfaction with the reduced schedule. Questions were also raised regarding the significance in the reduction of visits. However the two studies from developing countries showed a truly significant reduction in the number of visits had given important implications to their lack of resources^[23].

At each antenatal visit midwives and doctors should offer information consistent

advice, clear explanations, and provide women an opportunity to ask questions^[8]. Women are more likely to be satisfied with antenatal care when they perceive midwives and doctors are kind, supportive, courteous, respectful and recognize their individual needs. Women should not be kept waiting for long periods or feel rushed through visits and investigations^[11].

Aim of the Work:

The aim of the work is to evaluate antenatal care services in Assiut University Hospital. mother's perception about antenatal care and role of midwife as a health care provider in the out patient clinic at Assiut University Hospital.

SUBJECTS AND METHODS:

Design: It was a prospective design study.

Setting: The study was conducted at antenatal care clinic in Assiut University Hospital during the period from first September 2002 to the end of September 2003.

Sample:

A total of 1755 of pregnant women were recruited from those attending antenatal care clinic before 20 weeks of gestational age, low risk women, both primipara and multipara until the second trimester. They were divided into two groups regular attendants and irregular attendants according to number of visits. Mothers who came four visits or more considered regular and those came less than four visits were considered irregular. Two hundred and eight of cases recruited (12%), were approached through home visit during the first four weeks after delivery.

Tools:

Interviewing sheet, which was designed by

the investigator to collect data related to demographic characteristics, the mother obstetric profile, antenatal follow-up record.

Methods of data collection:

The interviewing data collected by the investigator during the first contact with mother included: Personal history: Name, age, address and telephone number, date of interview and Educational level, medical history: Asked about Specific historical diseases and conditions as Hypertension, diabetes mellitus, heart diseases, chronic renal disease, epilepsy. Information about tetanus vaccination, number of previous pregnancies, number of living children, still birth, abortion, ectopic pregnancy and hydatiform mole. Current pregnancy: Last menstrual period and expected date of delivery.

Infant outcome: include examination of newborn for detecting any congenital anomalies, anthropometrics measurements done and include newborn weight, length, cephalic circumference and chest circumference. Evaluation of women's perception (opinion) toward antenatal care: include effect of care on the mothers and their infants, services during antenatal visits, women's opinion toward frequency of antenatal visits, toward care providers (physician and nurse) and mother's intention about antenatal follow-up at subsequent pregnancies.

RESULTS:

The study was conducted in antenatal care clinic evaluate antenatal care services in Assiut University Hospital. mother's perception about antenatal care at Assiut University Hospital.

The mean age of studied sample was 24.7 +5.6 years. Regarding residents, 88% of the women were from rural areas, while only 11.9% lived in urban areas. Regarding mother's education, 42.5% were illiterate, compared to

1.6% was highly educated (Table 1).

Table (2): In relation to attendance of women to antenatal clinic. This table show that one hundred percent attendant at initial visit, and more than half (52.5%) attended at second visit and attendance at the forth visit was 37.6%.

Table (3): showed the sample's sociodemographic characteristics in relation to their attendance for ANC visits. According to women's age. The mean age of regular group was 24.7+5.6 and the mean age of irregular was 26.8+7.3 (T=16.5) and that revealed highly significant difference at P=0.00. According to residence eighty percent was regular from rural area, while the majority (92.8%) was irregular, and nearly twenty percent (19.9%) was regular women from urban area, while 7.2% was irregular attendant. Chi-square ($\chi^2=62.4$, P=0.00), and that revealed statistical significant difference according to educational level. Regular and irregular groups were comparable in non education percent about 40.9% and 43.4% women respectively, and more than half (58.2%) of educated women (primary to high education level) were regular, and 55.9% were irregular. Chi-square ($\chi^2=16.2$, P=0.00) and that revealed statistical significant difference.

Table (4): Blood pressure assessment and albumin test during antenatal visits. The majority (99.4%) of women's were within normal B.P. at first visit, and one hundred percent at the fourth visit. Only 0.6% were hypertensive at first visit and 0.3% at third visit. Regarding Albumin test, the majority (98.9%) were negative albumen at first visit, and also the majority (99.5%) at fourth visit, while 1.1% were negative at first visit, and 0.5% at fourth visit.

Table (5): Showed the distribution of the study by delivery process in relation to their attendance. Regarding the delivery sitting 85% of regular attendant mothers delivered in hospital, and 60.6% were irregular attendant mothers, 21.3% of regular attendant delivered at home, and 28.8% were irregular, (Z= 9.6, P=0.00) that showed statistical significant difference was found between two groups in relation to regularity of visits and choice of delivery sitting. Regarding the delivery supervisor the majority (90.3%) of regular attendant done by doctor, while more than two third (78.8%) were irregular attendant and 9.7% done, by Daya and nurse, were from regular attendant while (21.2%) were irregular. (Z= 11.5, P=0.00) that showed statistical significant difference. Regarding to mode of delivery the majority (92.9%) of regular attendants had spontaneous delivery, and two third (76.7%) were irregular. On the other hand 7.1% of regular attendant mothers had caesarean section, while 23.3% were irregular, (Z=14.5, P=0.00) and that revealed statistical significant difference.

Table (6): Distribution of the sample by their neonate measurements in relation to their attendance. Regarding birth weight, the mean weight was 3484.0±604.1gm, for regular attendants women, while the mean weight of irregular was 3467.3±448.9gm.with no statistical significant difference.

Table (7): The distribution of the studied sample by the cause of irregular attendance, 14.2% were from far distance, 8.1% said their husband refused to follow-up, 11.1% prefer private clinic. 16.1% said they follow-up in MCH center and 10.1% didn't have transport costs.

Table (8): Examine the relation ship between attendance and ANC outcome. Regarding ANC services, 67.3% of attendant mothers was satisfied, while 34.5% were from irregular attendant, and 65.5% of irregular attendant mothers were not satisfied versus 2.7% were from regular group. Chi-square ($\chi^2=37.4$, P=0.00) that revealed statistical significant difference.

Table (1): Distribution of the sample by sociodemographic characteristics among whole sample

Sociodemographic characteristics	Number N = 1755	Percentage %
Age (years):		
Range	15-35	
Mean+ SD	24.7+ 5.6	
Residence:		
Rural	1545	88.1
Urban	210	11.9
Mother's education:		
Illiterate	745	42.5
Read and write	14	0.7
Primary education	204	11.6
Secondary education	765	43.5
High education	27	1.6

Table (2): Distribution of the whole sample by regular attendance of antenatal visits during pregnancy period

Number of visits	Attendance	
	N	%
First visit	1755	100
Two visits	921	52.5

Three visits	825	47.0
Four visits	660	37.6

Table (3): Distribution of the sample by sociodemographic characteristics in relation to their attendance to ANC visits

Sociodemographic Characteristics	Attendance				(X ²)	P.V
	Regular		Irregular			
	N=660	%	N=1095	%		
Age (Years):	15-35		19-35		T=16.5	0.00
Range	24.7±5.6		26.8±7.3			
Mean ±SD						
Residence:					62.4	0.00
Rural	529	80.1	1016	92.8		
Urban	131	19.9	79	7.2		
Mother's education:					16.2	0.00
Illiterate	270	40.9	475	43.4		
Read & write	6	0.9	8	0.7		
Primary education	58	8.8	146	13.4		
Secondary education	310	47.0	455	41.5		
High education	16	2.4	11	1.0		

Table (4): Distribution of the whole sample by blood pressure measurements and albumin tests at antenatal visits

Examination	First visit		Second visit		Third visit		Fourth visit	
Blood pressure:	N= 1755	%	N= 921	%	N=825	%	N= 660	%
Normal	1745	99.4	914	99.3	822	99.6	660	100
Hypertension	10	0.6	7	0.7	3	0.4	0	0
Albumin test:	N= 1755	%	N= 921	%	N=825	%	N= 660	%
Negative	1736	98.9	891	96.7	819	99.3	657	99.5
Positive	19	1.1	30	3.3	6	0.7	3	0.5

Notice: Hypertension: on border line: 140/90

Table (5): Distribution of the study by delivery process in relation to their attendance

Delivery characteristics	Regular N=113	%	Irregular N=99	%	Z	P
Delivery sitting:					9.6	0.00
Hospital	85	75.3	60	60.6		
At home	24	21.3	28	28.2		
Health center	2	1.7	4	4.1		
Private clinic	2	1.7	6	6.1		
Delivery supervisor:					11.5	0.00
Doctor	102	90.3	78	78.8		
Nurse	5	4.4	6	6.1		
Daya	6	5.3	15	15.1		
Mode of delivery					14.5	0.00
Spontaneous	105	92.9	76	76.7		
Caesarean section	8	7.1	23	23.3		

Table (6): Neonate Birth weight and their anthropometrics measurements

Infant measurements	Regular	Irregular	T-test	P.V
	N= 113	N=99		
Weight:			0.22	NS
Mean ±SD	3484.0±604.1	3467.3± 448.9		
Length :			2.1	*
Mean ±SD	49.6± 1.2	50± 0.8		
Head circumference:			0.14	NS
Mean ±SD	34.8± 1.6	34.7± 1.5		
Chest circumference:				

Mean +SD	33.8+ 3.0	33.1+ 2.2	1.9	NS
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Note: There was 2 cases of this sample had twins their weights ranged: 2000- 2250

Length ranged: 45- 48

Table (7): Distribution of the study by their cause of irregular attendance during antenatal care visits Characteristics

Cause of irregular attendance	N=99	%
Far distance	14	14.2
Husband refuse	8	8.1
Private clinic	11	11.1
Follow up in MCH center	16	16.1
Need more ANC	16	16.1
Traveling to another city	9	9.1
Transport costs	10	10.1
More than one	15	15.2

Notice: 70% of not satisfied cases asking for increase free medical supplementations.

Table (8): Distribution of studied sample according to attendance in relation to ANC services and frequency of visits

ANC outcome	Attendance				(X ²)	P.V
	Regular		irregular			
ANC services:	N=113	%	N= 99	%		
Satisfied	76	67.3	34	4.5	37.4	0
Not satisfied	37	2.7	6.5	65.5		

Notice: 70% of not satisfied cases asking for increase free medical supplementations.

DISCUSSION:

The present study was conducted to evaluate antenatal care services mother's perception about ANC .

It was observed that, certain factors affect women's attendance to antenatal care which were maternal sociodemographic characteristics. The results of our study revealed that the young women with their ages ranged between 15-35 and mean age was 24.7±5.6 had more regular attendance to ANC than the older women which their ages reach to 42 years. The same characteristics were reported^[1,2]. It has been suggested that young women tend to book earlier than older females 40.

Looking at the residence condition in this study the majority (80%) of studied sample residing in rural areas was regular attendance more than urban areas. This can be explained by availability of maternal services in Assiut university hospital or in Assiut city and this agree^[2] who go in line with findings of this

study. Contrary^[4,5] in their study which women living in urban areas are generally twice as likely as those living in rural areas to report four or more antenatal care visits. Overall, some 86% of women in urban areas report at least one antenatal visit and 61% report four or more visits.

Concerning the level of education this study revealed that a highly significant difference between level of education and attending of mothers. This agree with data from a Survey and demographic analysis was done^[15], it was observed that the percentage of non educated pregnant women that received ANC was 17.2% while in educated pregnant women was 45.2%. And also agree^[2]. This could be explained by the fact that the more educated women have a more health awareness and this was supported^[10], and the same reported^[6], these results agree^[24], who reported that the higher the maternal education the higher the seek for ANC and meet agreement^[13]. The same agreement was

reported^[5], the data confirm that in developing countries as a whole, educated women are more likely to receive antenatal care and the likelihood of their using antenatal care is associated with their level of education. Educated women are also more likely to report four or more visits. The regular attendance to ANC in the present study was significantly influenced by obstetric history as parity, the majority of regular attended women (80.0%) was primigravida and primiparas, while the lowest percentage (4.5%) of women was multiparas. These results agree^[2] who reported that the use of prenatal care was higher for primiparas and grand multi paras and so^[1], who reported that pregnant of high gravidity had the least frequencies for late booking (73.7%) compared to those with low gravidity (84.5%). The same line of agreement^[5], also reported that Higher-parity women have lower levels of antenatal care in all regions of developing countries except sub-Saharan Africa, where differences are small. In the vast majority of countries, women expecting their first child are the most likely to present for antenatal care.

The findings of present study declared that 47.0% of women had attended less than 4 visits and 37.6% had attend 4 visits or more. That agreed^[13], who reported that 43.1% of women attended less than 5 visits and 36.6% attended 5 visits or more and also agree^[20]. On the other hand the findings of Vanden *et al.* study in zimbabwe who reported that 97% of pregnant women attend antenatal clinic once and these findings meet agreement with this study which reported that 100% of women attend one visit. Other relevant studies^[17]. stated that while the content of prenatal care recommended 10 visits for nulliparas and 8 visits for multiparas with a preconception visit within one year before conception, the average antenatal care

attendance was 5 or less in most developed countries.

Also^[17,18] in a study that was conducted in Harare, Zimbabwe, achieved a reduction in the number of visits from six in control group to four in the intervention group. In multicentric studies done in Cuba, Argentina, Saudi Arabia and Thailand about the compliance of the pregnant women with the traditional model of antenatal care,^[19] found that a total of 15 or 16 visits was seen only in Cuba.

In Upper Egypt, the percentage of pregnant women that had a regular antenatal care visits was 27.2%, and those who had any antenatal care during pregnancy was 44.3%^[3] reported that in all developing regions, most women using antenatal care report four or more visits. Surprising finding is the frequency of four or more antenatal visits in Sub-Saharan Africa, with at least 70% of women reporting four or more visits in Ghana, Nigeria, Tanzania and Zambia In Rwanda and Senegal, on the other hand, 75% and 72% of women report only two or three visits^[5].

In the present study, in the majority of regular group and more than two thirds of irregular group, respectively had normal vaginal deliveries, on the other hand caesarean sections were 7.1% and 23.3%, these results agree^[99] whereas reported that one in ten deliveries in five-year period before the survey was by caeserean section. This proportion is somewhat higher than that in the 1995 EDHS when 7% of deliveries were by caesarean section^[25].

In this study, in both regular and irregular groups, infant measurements did not show significant difference; only was significant in the infant length. Other studies^[7], who reported that the number and adequacy of antenatal care affect, expected that patients with preterm birth

have shorter gestations and therefore are expected to have fewer prenatal visits, and this result contrary to our study findings, which the infant measurements were within normal full term infant measurements except 0.9% of cases have twins was preterm infants but they were regular attendants to ANC visits.

RECOMMENDATIONS:

- 1-Promotion of the outreach home visiting programs for detecting and /or promoting the pregnant women awareness about maternal services and refer them to antenatal care clinics.
- 2-Adoptions of the new WHO antenatal care model in our maternal care services to eradicate of women's barrier to attending regularly for antenatal care visits, and that revealed early detection of pregnant complication and that promote maternal health care in our society.
- 3-Applied training programmes of skilled attendants for nurses to improve their quality of care as a health care provider at antenatal clinic.

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تقييم الخدمات الصحية المقدمة للسيدات الحوامل ومدى إدراك السيدات لهذه الخدمة في مستشفى أسيوط الجامعي

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أجريت هذه الدراسة على ١٧٥٥ سيدة حامل تم اختيارهن على أساس خلوهن من الأمراض المزمنة مثل الضغط والسكر وأمراض القلب، وذلك في الفترة من ٢٠٠٢/٩/١م حتى نهاية ٢٠٠٣/٩/٣٠م بعيادة الحوامل بمستشفى أسيوط الجامعي. مجموعة الحوامل التي تأتي إلى عيادة الحوامل بانتظام وكان عددهن ٦٦٠ حالة أتت بحد أدنى لمدة ٤ زيارات للمتابعة. مجموعة الحوامل التي لم يأتين بانتظام وكان عددهن ١٠٩٥ حالة بحد أقصى ٣ زيارات فقط. وتم متابعة نسبة من أولئك المنتظمات وأيضاً الغير منتظمات من خلال زيارة واحدة في فترة النفاس خلال الأسبوعين الأول بعد الولادة. وكانت نسبتين تمثل ١٢% من عدد الحالات أي عددهن ٢١٢ حالة منهم ١١٣ حالة أتت بانتظام و ٩٩ حالة لم يأتين بانتظام. وقد صمم نموذج الأسئلة لتقييم الرعاية المقدمة أثناء فترة الحمل واستخدام أيضاً نموذج آخر لفترة النفاس لتقييم الاستفادة من تلك الرعاية وتأثيرها على الحمل ومضاعفات ما بعد الولادة وكذلك تقييم حالة الطفل حيث الولادة. وقد سجلنا النتائج التالية في المجموعتين: عن الانتظام في الحضور للزيارات وعلاقته بالحالة الديموغرافية (العمر ومرحلة التعليم وأيضاً مكان الإقامة) وفحص الحالات واستبعاد الحالات المرضية (مثل ارتفاع ضغط الدم والسكر.. الخ). وقد تم متابعة وفحص الوالدات ومواليدهن في الزيارة المنزلية في خلال أسبوعين من فترة النفاس ومعرفة ظروف الولادة من حيث (المكان - مشرف التمريض - طريقة الولادة) ومقاييس المولود والاطمئنان على صحة الأم بقياس ضغطها وفحص الرحم. كذلك معرفة تعرضهن للمضاعفات بعد الولادة. أسباب عدم حضورهن بانتظام للمتابعة وآرائهن في مقامي الرعاية واقتراحاتهن التي يمكن أخذها في الاعتبار في تعديل الرعاية المقدمة لهن. أغلب المعلومات التي تم الحصول عليها من خلال الدراسات المشاهدة والملاحظة اكتشفت ان اللاتي يلتزمن بالحضور بانتظام للرعاية أثناء الحمل ويكون حضورهن في الفترة المبكرة من الحمل يحصلن على نتائج جيدة لحملهن أكثر من اللاتي يأتين في الأشهر الأخيرة للحمل ومن أولئك اللاتي لا يأتين مطلقاً للحصول على تلك الرعاية. طبقاً لهذه الدراسات أيضاً تبين أن ٢٠% من معدلات الوفيات للأمهات تمثل ٧٤% منها اللاتي لم يسعين للرعاية أثناء الحمل مبكراً بل بعد الشهر السادس من الحمل. وبذلك فإن الرعاية أثناء الحمل تمثل معامل خطورة في وفيات الأمهات إذا تم إهمالها من قبل أولئك السيدات مما سبق ندرج إلى أن الرعاية المقدمة أثناء الحمل تعتمد على نموذج معين في كيفية تقديمها فهناك النموذج التقليدي الذي يعتمد على عدد من الزيارات تتراوح بين ثمانية إلى اثني عشر زيارة أثناء فترة الحمل وتقوم بها الأم كالاتي: من الشهر الأول حتى السادس زيارة واحدة شهرياً ومن الشهر السابع حتى الثامن زيارتين شهرياً وأخيراً خلال الشهر التاسع مرة كل أسبوع حتى ميعاد الولادة. فإن مكان الإقامة لعب دوراً هاماً في متابعة السيدات لزيارات الحمل معظم الحالات وتمثل ٨٨% منهم من سكان الريف، وذلك بعكس قلة الخدمات المقدمة في المناطق الريفية ومستوى التعليم كان له نصيباً في ذلك حيث أن ٥٨% من منتظمي الحضور كانوا من المتعلمات ما بين التعليم الابتدائي حتى الجامعي و ٤٠.٩% كن من غير المتعلمات.