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Original article

Prevalence and Determinants of First Antenatal Care Visit among Pregnant Women Attending Public Health Institutions at Damietta Governorate, Egypt

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ABSTRACT

Background: Regular antenatal care [ANC] attendance is surely lead to healthier pregnancies and reposeful deliveries. Therefore, women with late visits considered at risk of poor pregnancy outcomes.

Aim of the work: This study aimed to explore factors affecting early initiation of ANC attendance in Damietta governorate, Egypt.

Patients and Methods: An institutional based cross-sectional study of 160 pregnant women that collected for five months from October 2019 to February 2020 in public health facilities in Damietta Governorate, Egypt were included in the study. The time of their first antenatal [early or late] had been documented. In addition their sociodemographic data were registered. Other obstetric factors were collected and include parity, past history of obstetric complications, previous antenatal care visits and intention of pregnancy, access to information about ANC and interaction with health professional. Reinforcing factors [e.g., perception of mothers of the advantages of the ANC, intention of partner toward ANC service utilization, reasons that initiate mothers to start ANC after 13 weeks timing of ANC visit and frequency of the ANC, and a decision made to seek ANC].

Results: The mother's age, husband's age, number of living children and age of the youngest child were significantly lower in the early than late ANC groups [23.75±5.74, 29.11±6.54, 0.95±0.92, and 2.55±2.60 vs. 28.20±6.91, 34.16±7.98, 1.73±1.14, and 4.17±3.37, respectively]. Females from rural area were significantly increase in early ANC than late ANC [70.1% vs 29.9%], while urbans were lower in early than late ANC visits [47.9% vs 52.1%]. Early ANC visits were significantly associated with high income, gravidity, parity, mode of delivery, follow up status of the past pregnancy, number of visits in the past pregnancy, place of the last delivery, and planning for pregnancy.

Conclusion: There are numerous factors affecting early or late first ANC visit including mother and husband age, residence, gravidity, parity, and mode of the past delivery.

Keywords: Antenatal Care; Timing of first antenatal visit; Determinants of ANC visit; Obsteric History; Last Delivery.

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* Main subject and any subcategories have been classified according to the research topic.

INTRODUCTION

Many pregnancy - related health problems are preventable and treatable if they are early detected. Regular ANC attendance play an important role to guarantee healthier pregnancies and uneventful deliveries [1].

Postponement of well-timed imitation of ANC has a main impact on adverse pregnancy outcome that represent a burden on any health care system especially in developing countries including Egypt [2]. In Damietta governorate, despite of wide-spread availability of free ANC services, the utilization of service by the pregnant woman remains low. Women in under privileged places attend late for their antenatal care and fail to return for ANC follow up, actually leading to perinatal morbidity and mortality complications. Studies have recognized numerous factors that affect the use of ANC in developing countries, though there are little studies concerning factors influencing the timing of first ANC visit. These factors embrace, among others, availability of health service, cost maternal education, and husband's education, household income, media exposure women's employment, and having a past history of obstetric problems and complications [3-4].

AIM OF THE WORK

This study aimed to explore factors affecting early beginning of ANC attendance in Damietta governorate, Egypt.

PATIENTS AND METHODS

Study setting: The governorate consists of four subdivisions, 10 cities, which include Damietta General Hospital, Damietta Specialized Hospital, El-Zarqa Central Hospital, Kafr Saad Central Hospital, Kafr El-Batekh Central Hospital, Faraskur Central Hospital, and Out Patient Clinics of Al-Azhar University Hospitals New Damietta.

Study Design: An institutional based cross-sectional study conducted from october2019 to February 2020 at public health facilities in Damietta Governorate. Our study granted ethics approval by Institutional Research Board [IRB] of The Faculty of Medicine, Al-Azhar University [Damietta]. In addition, an informed consent obtained from each participant sharing in the study. Confidentiality and personal privacy of participants respected in all levels of the study.

Patient's selection: The study cases were 160 pregnant women who came for the first ANC visits during their pregnancy in the selected health facilities during the study period. History of previous antenatal care visit and intention of pregnancy, accessibility of information about ANC and interaction with health professional, were collected. Reinforcing factors, which include intention of partner toward ANC service utilization. perception of mothers on the advantage of the ANC, timing of ANC visit reasons that initiate mothers to start ANC after 13 weeks, frequency of the ANC, and a decision made to seek ANC.

Statistical analysis: Data analyzed using Statistical Program for Social Science [SPSS] version 24 [IBM®SPSS® Inc., Chicago, USA]. Quantitative data expressed by their arthimatic means and standard deviations [SD]. Qualitative data in the form of frequency and percentage distribution. Student *t*- and Chi-square tests were used f or comparison between groups for parameteric and nonparametric data respectivley.

Data collection: After obtaining written consents of patients and approval from the local ethics committee, the patients interviewed for an average of 15 minutes of verbal interview. The aim of the interview was explained to each patient. Data collectors were nurses who received training on the objective of the study, interview technique and details of the questionnaire.

Women who are seriously ill at the time of data collection and unable to give consent excluded from the study**.**

Intervention: The questionnaire used in the collecting data was derived from related questions used in other similar studies. The questionnaire was then evaluated for its clarity and completeness. Some skip patterns were corrected, questions difficult to ask were rephrased and the consent form was modified. Information collected in separate questionnaire. The information collected include Socio-demo-graphic factors that include age, religion, ethnicity, marital status, educational level, average monthly income. Obstetric factors which include: parity, history of obstetric complications, history of previous antenatal care visit and intention

of pregnancy, Accessibility of information about ANC and interaction with health professional. Reinforcing factors, which include: perception of mothers on the advantage of the ANC, intention of partner toward ANC service utilization, reasons that initiate mothers to start ANC after 13 weeks timing of ANC visit and frequency of the ANC, a decision made to seek ANC.

RESULTS

Regarding the time of the first antenatal care visit, the cases divided into two groups; the early first ANC visit [13 weeks or earlier] and the late first antenatal care visit [after 13 weeks]. The mother's age, husband's age, number of living children and age of the youngest child were significantly lower in the early than late ANC groups [23.75±5.74, 29.11±6.54, 0.95±0.92, and 2.55±2.60 vs. 28.20±6.91, 34.16± 7.98, 1.73± 1.14, and 4.17±3.37, respectively] [Table 1].

Females from rural area were significantly increase in early ANC than late ANC [70.1% vs 29.9%], while urbans were lower in early than late ANC visits [47.9% vs 52.1%]. In addition, early ANC visits were significantly associated with high income, gravidity, parity, mode of delivery, follow up status of the past pregnancy, number of visits in the past pregnancy, place of the last delivery, and planning for pregnancy [Table 2].

Table [1]: Comparison between means of different factors in early first antenatal care visit [13 weeks or less] and late first antenatal care visit [More than 13 weeks].

Variables	Early ANC [n=96]	Late ANC [n=64]	Df	95% CI of difference		P value
				Lower	Upper	
Mother's age	23.75±5.74	28.20±6.91	158	-6.43	-2.46	<0.001*
Husband's age	29.11±6.54	34.16±7.98	158	-1.11	-0.46	<0.001*
Number of living children	0.95±0.92	1.73±1.14	158	-1.11	-0.46	<0.001*
Age of the youngest child	2.55±2.60	4.17±3.37	158	-2.56	-0.69	<0.001*

* indicates significant difference [p- value < 0.05]; Df: Degree of freedom

Table [2]: Relation between time of the first ANC visit and the mother factors [personal history and obstetric &past history].

			Weeks of pregnancy at first visit groups		χ2	P-value
			Early ANC	Late ANC		
Mother education		Educated	77 [61.1%]	49 [38.9%]	0.31	0.86
		Highly educated	14 [56%]	11 [44%]		
		Not educated	5 [55.6%]	4 [44.4%]		
Mother job		House wife	95 [60.1%]	63 [39.9%]	0.08	0.77
		Private work	1 [5%]	1 [5%]		
Mother religion		Muslim	93 [59.6%]	63 [40.4%]	0.39	0.54
		Christian	3 [75%]	1 [25%]		
Residence		Rural	61 [70.1%]	26 [29.9%]	8.13	<0.001*
		Urban	35 [47.9%]	38 [52.1%]		
Husband education		Educated	76 [61.8%]	47 [38.2%]	0.71	0.7
		Highly educated	13 [54.2%]	11 [45.8%]		
		Not educated	7 [53.8%]	6 [46.2%]		
Husband job		Private work	83 [64.3%]	46 [35.7%]	5.35	0.07
		Not employed[worker]	11 [40.7%]	16 [59.3%]		
		Government employee	2 [5%]	2 [5%]		
Husband religion		Muslim	93 [59.6%]	63 [40.4%]	0.39	0.54
		Christian	3 [75%]	1 [25%]		
Income		Enough	79 [60.3%]	52 [39.7%]	**7.73**	**0.02***
		More than enough	10 [90.9%]	1 [9.1%]		
		Not enough	7 [38.9%]	11 [61.1%]		
Obstetric history	Gravidity	Gravida two and above	67 [54.5%]	56 [45.5%]	**6.774**	**0.01***
		Prime Gravid	29 [78.4%]	8 [21.6%]		
	Parity	No parity	38 [79.2%]	10 [20.8%]	**10.49**	**<0.001***
		Parity one or more	58 [51.8%]	54 [48.2%]		
Past history	History of abortion	No abortion	66 [57.39%]	49 [42.61%]	1.159	0.56
		Abortion once or twice	24 [66.67%]	12 [33.33%]		
		Abortion more than twice	6 [66.67%]	3 [33.33%]		
	Complication of past pregnancy	No complications	75 [57.69%]	55 [42.31%]	6.788	0.15
		Abortion	18 [72%]	7 [28%]		
		Hypertension	0 [0%]	2 [100%]		
		Diabetes	2 [100%]	0 [0%]		
		DVT	1 [100%]	0 [0%]		
	Mode of past delivery	No	38 [79.2%]	10 [20.8%]	14.928	**<0.001***
		VD	15 [39.5%]	23 [60.5%]		
		VD and CS	1 [33.3%]	2 [66.7%]		

		Weeks of pregnancy at first visit groups		χ2	P-value
		Early ANC	Late ANC		
	CS	42 [59.2%]	29 [40.8%]		
Place of primary ANC of past pregnancy	No	36 [75%]	12 [25%]	8.214	0.02*
	Private hospitals	48 [57.1%]	36 [42.9%]		
	General hospital	12 [42.9%]	16 [57.1%]		
Follow up status of past pregnancy	Irregular	6 [26.1%]	17 [73.9%]	20.323	**<0.001***
	No	39 [81.3%]	9 [18.8%]		
	Regular	51 [57.3%]	38 [42.7%]		
Number of visits of past pregnancy	No visits	37 [80.4%]	9 [19.6%]	13.924	**<0.001***
	5 visits or less	8 [36.4%]	14 [63.6%]		
	More than 5 visits	51 [55.4%]	41 [44.6%]		
Place of past delivery	No	38 [79.2%]	10 [20.8%]	15.713	**<0.001***
	private hospitals	39 [60.9%]	25 [39.1%]		
	General hospital	12 [4%]	18 [6%]		
	Home	7 [38.9%]	11 [61.1%]		
Planning for pregnancy	Planned	89 [64%]	50 [36%]	9.352	0.05*
	Unplanned over COC	2 [66.7%]	1 [33.3%]		
	Unplanned over IUD	3 [23.1%]	10 [76.9%]		
	Unplanned over LA	1 [33.3%]	2 [66.7%]		
	Unplanned over No contraception	1 [5%]	1 [5%]		

* indicates significant difference; ANC: Antenatal care; COC: Combined oral contraceptive; CS: Cesarean section; DVT: Deep venous thrombosis; IUD: Intrauterine device; LA: Lactation Amenorrhea; VD: vaginal delivery

DISCUSSION

This study showed that the mothers' age were a significant factor that affects the time of the first antenatal care visit where the mean age of the mothers' that seek 1st antenatal care early were lower [younger] than the mothers' that seek first antenatal care after 13 weeks [older]. In line with these results, it was found that the age was significantly associated with time of the first ANC visit. The delay was significantly higher in women aged 25 years or higher than in the ones under 25 years of age.

Studies conducted in Ethiopia by Birmeta et al. [5] and in Nigeria by Oladokun et al. [6], found comparable results. besides, in Kenya Magadi et al. [7] have found similar results. This is probably attributed to litraracy of younger than elder pregnant mothers. Alternatively, elder mothers might consider delayed ANC starting is not as a problem from their previous experience.

The number of living children was significant factor where the mothers' that seek first antenatal care early had a lower number of living children than the mothers' that seek 1st antenatal care after 13 weeks. The age of youngest child was also a significant factor where the mothers' that seek first antenatal care early had a younger children. In addition, the gravidity and parity were significant factor where the prime gravid mothers' and the mothers that has no children present early for first antenatal care.

In the same line, it found that parity was a predicting factor that affected delayed initiation of ANC where, nulliparous women were less likely to have delayed initiation of ANC as compared to prime para and multiparous females [8].

Similarly, Andrew et al. [9] found that parity and past experiences affected the initiation of ANC. In general, there is a delay of ANC initation by multiparous women compared to prime gravid. This may be due to nervousness experienced by females during their first pregnancy and they seek ANC as soon as they knew they were pregnant. On the other side, multiparous females had no desire to attend early and sometimes attend only once close to the time of delivery [9]. In addition, multiparous women had a significantly higher risk of late first antenatal care compared to prime para women[8]. Another study found that birth experience was associated with early booking for ANC [10].

It is similar with the study found that parity was a significant factor that influence timing of first Antenatal care booking [11].

This study is also in line with previous trial showed that pregnant multiparous women decreased the likely-hood of early ANC attendance than their reference control and it was done in Adigrat, Tigray, Ethiopia [12]. Moreover, this study is also coincides with the studies from Zambia [13] and United Kingdom[14], showed that multiparous females were less likely to initiate ANC early compared to primiparous women.

In the current study the type of past delivery, place of primary ANC of past delivery, follow up status of past delivery, number of visits of past delivery and place of

past delivery found to be significant factors that affects the time of the first ANC visit. In addition, planning for pregnancy was found to be a significant factor that affects the time of the first ANC visit. This finding was in line with previous study conducted in Debre Markos Ethiopia, as it found that intention of pregnancy was significantly associated with delayed ANC initiation of the first visit. Females with unintentional pregnancy 3.6 times more likely delayed to initiate first ANC visit those mothers with planned pregnancy [15].

This is coincides with Alemu and Aragaw [16] where they found that mothers who want her pregnancy were more likely to early initiate the follow up than their counterparts.

The finding in our study also in line with previous studies conduct in Ethiopia [16-18].

Alemu and Aragaw [16] explained the reason for that to the mother, as when she desires the pregnancy she is keen to keep the health of her baby. Thus, they are excited to attend and initiate the follow up earlier. In addition, Ewunetie et al. [15] concluded that the possible reason is the mother's intent.

Strengths and limitations: The findings in this study help in identifying different factors that affect the timing of the first Antenatal care visit and helps the health care providers to predict why mothers present early or late for their first antenatal care as it conducted in all centers of all the governate of Damietta.

Limitations of this study is that it conducted in one governorate so the results cannot applied on other geographical regions.

Also one of the limitations is that the primary health care units in rural areas were not included due to lack of medical equipment specially ultrasound.

Recommendations: Further studies on different governates and other geographical regions such as the south of the north coast, middle of the delta or Upper Egypt needed to help future strategies for providing antenatal care. Further studies with questionnaire including interviews with couples provide additional or different information on their perspective regarding factors that lead to delay in seeking antenatal care. Further studies on women attending the primary health care units in rural areas.

Conclusion: Factors affecting early initiation of ANC attendance in Damietta Governorate including, the mothers' and husbands' age, the residence, planning for Pregnancy, mode of past deliver, place of primary ANC of past pregnancy, follow up status of past pregnancy, number of visits of past pregnancy, and place of past delivery affect the time of the first antenatal care visit. The socioeconomic status also affects the time of the first antenatal care visit, where the mothers' in low monthly income families resented.

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REFERENCES

1. World Health Organization. Global health observatory [GHO] data. URL. Available form: http://www.who. int/ gho/publications/world_health_statistics/2011/en/. 2015 Mar.
2. Villar J, Ba'aqeel H, Piaggio G, Lumbiganon P, Miguel Belizán J, *et al*.; WHO Antenatal Care Trial Research Group. WHO antenatal care randomised trial for the evaluation of a new model of routine antenatal care. Lancet. 2001 May 19;357[9268]:1551-64. doi: 10.1016/ s0140-6736[00]04722-x.
3. Simkhada B, Teijlingen ER, Porter M, Simkhada P. Factors affecting the utilization of antenatal care in developing countries: systematic review of the literature. J Adv Nurs. 2008 Feb;61[3]:244-60. doi: 10.1111/ j.1365-2648.2007.04532.x.
4. Nigusie A, Azale T, Yitayal M. Institutional delivery service utilization and associated factors in Ethiopia: a systematic review and META-analysis. BMC Pregnancy Childbirth. 2020 Jun 15;20[1]:364. doi: 10.1186/s12884-020-03032-5.
5. Birmeta K, Dibaba Y, Woldeyohannes D. Determinants of maternal health care utilization in Holeta town, central Ethiopia. BMC Health Serv Res. 2013 Jul 3;13:256. doi: 10.1186/1472-6963-13-256.
6. Oladokun A, Oladokun RE, Morhason-Bello I, Bello AF, Adedokun B. Proximate predictors of early antenatal registration among Nigerian pregnant women. Ann Afr Med. 2010 Oct-Dec;9[4]:222-5. doi: 10.4103/1596-3519.70959.
7. Magadi MA, Madise NJ, Rodrigues RN. Frequency and timing of antenatal care in Kenya: explaining the variations between women of different communities. Soc Sci Med. 2000 Aug;51[4]:551-61. doi: 10.1016/ s0277-9536[99]00495-5.
8. Somé A, Baguiya A, Coulibaly A, Bagnoa V and Kouanda S. Prevalence and factors associated with late first antenatal care visit in Kaya Health District, Burkina

Faso. African Journal of Reproductive Health 2020; 24[2], 19-26. doi; 10.29063/ajrh2020/v24i2.2

9. Andrew EV, Pell C, Angwin A, Auwun A, Daniels J, Mueller I, *et al*. Factors affecting attendance at and timing of formal antenatal care: results from a qualitative study in Madang, Papua New Guinea. PloS one 2014; 9[5]: e93025. doi: 10.1371/journal.pone.0093025
10. Tufa G, Tsegaye R, Seyoum D. Factors Associated with Timely Antenatal Care Booking Among Pregnant Women in Remote Area of Bule Hora District, Southern Ethiopia. Int J Womens Health. 2020 Aug 24;12:657-666. doi: 10.2147/IJWH.S255009.
11. Tesfaye G, Loxton D, Chojenta C, Semahegn A and Smith R. Delayed initiation of antenatal care and associated factors in Ethiopia: a systematic review and meta-analysis. Reproductive Health 2017; 14[1]: 150. doi: 10.1186/s12978-017-0412-4.
12. Lerebo W, Kidanu A, Tsadik M. Magnitude and associated factors of late booking for antenatal care in public health centers of Adigrat Town, Tigray, Ethiopia. Clin Mother Child Health 2015;12:171. doi: 10.4172/2090-7214.1000171
13. Banda I, Michelo C, Hazemba A. Factors associated with late antenatal care attendance in selected rural and urban communities of the Copperbelt province of Zambia. Med J Zambia 2012; 39[3]:29-36.
14. Cresswell JA, Yu G, Hatherall B, Morris J, Jamal F, Harden A, Renton A. Predictors of the timing of initiation of antenatal care in an ethnically diverse urban cohort in the UK. BMC Pregnancy Childbirth. 2013 May 3;13:103. doi: 10.1186/1471-2393-13-103.
15. Ewunetie AA, Munea AM, Meselu BT, Simeneh MM, Meteku BT. DELAY on first antenatal care visit and its associated factors among pregnant women in public health facilities of Debre Markos town, North West Ethiopia. BMC Pregnancy Childbirth. 2018 May 16; 18 [1]: 173. doi: 10.1186/s12884-018-1748-7.
16. Alemu Y, Aragaw A. Early initiations of first antenatal care visit and associated factor among mothers who gave birth in the last six months preceding birth in Bahir Dar Zuria Woreda North West Ethiopia. Reprod Health. 2018;15[1]:203. doi: 10.1186/s12978-018-0646-9.
17. Gidey G, Hailu B, Nigus K, Hailu T, G/Her W, Gerensea H. Timing of first focused antenatal care booking and associated factors among pregnant mothers who attend antenatal care in Central Zone, Tigray, Ethiopia. BMC Res Notes. 2017 Nov 21;10 [1]: 608. doi: 10.1186/s13104-017-2938-5.
18. Gebremeskel F, Dibaba Y, Admassu B. Timing of first antenatal care attendance and associated factors among pregnant women in Arba Minch Town and Arba Minch District, Gamo Gofa Zone, south Ethiopia. J Environ Public Health. 2015;2015:971506. doi: 10.1155/2015/971506.

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