

THE "UNBOOKED MOTHER" AT A UNIVERSITY TEACHING HOSPITAL: FACTORS MITIGATING AGAINST ANTENATAL CLINIC ATTENDANCE

Lulu A. Al-Nuaim, MD; Babatunde Adelusi, MD; Noori Chowdhury, MPH;
Dustan Kangave, MS; Salah A. Moghraby, MD; Turki Al-Kharfy, MD

Ever since the publication of Bellantyne in 1901, advocating a promaternity hospital,¹ the concept of prenatal care has grown progressively to become a universal component of obstetrics care, not only in the developed world, but also in the developing countries. Nevertheless, the problem of the "unbooked mother" presenting for delivery in the labor ward has continued to create a dilemma for many practicing obstetricians and other health care providers. This is because many obstetric units have to decide whether to admit the unbooked mother and accept all responsibility for the possible complications and unfavorable outcome that may issue, or turn her away and bear the consequences for such drastic measures.

The question that often arises is why the unbooked mother has not bothered to attend the antenatal clinic,² and how her non-attendance might affect the outcome of her pregnancy, especially in view of the high perinatal and fetal wastage among these mothers.²⁻⁴ It may be possible that the unbooked mother requires little or no attention from the health care provider, because she receives no antenatal care and spends a relatively short time in hospital for delivery.^{2,5} Indeed, some studies contend that there is no apparent difference between the booked and unbooked mothers in terms of obstetric outcome.^{2,5-7} However, it has been shown that the unbooked mother contributes very substantially to the perinatal morbidity and mortality of the average obstetrics unit,^{5,8} and constitutes a large drain on the resources of the Neonatal Intensive Care Unit (NICU).^{9,10}

If a mother does not book for care in the hospital, there is little that can be done to ensure a favorable outcome. Adverse reactions by the health care provider to the mother who has failed to book her pregnancy for care in the hospital, on the other hand, can only be counterproductive,

pregnancies. In spite of the available resources, it can be observed that quite a number of the Saudi women still report to hospital as "unbooked mothers," for reasons not easily discernible.

The objective of this study was to discover the reasons why some pregnant women fail to seek antenatal care, and to find out the attitudes of the health care providers (obstetricians, obstetric nurses and neonatologists) towards the unbooked mother.

Material and Methods

During the period January to December 1996, 191 mothers who came to deliver at the Obstetric Unit of the KKHU without antenatal care were recruited into the study. For purposes of this study, a mother was considered "unbooked" if she had not seen any medical personnel in the hospital throughout her pregnancy, had had two or fewer visits to the antenatal clinic, or was referred to the unit as an emergency, but without any records of her antenatal care being forwarded to the unit.

Each unbooked mother was interviewed and questions were asked relating to sociodemographic characteristics,

TABLE 1. *Reasons for not using antenatal care in relation to age, parity and education.*

Reasons	n=191	Age			Parity			Education	
		<25	>25	0	1-4	≥5	PE	SE	
Booking unnecessary	23	30.4%	69.6%	13%	60.9%	26.1%	52.2%	47.8%	
Booked elsewhere (PHC)	73	35.6%	64.4%	19.2%	58.9%	21.9%	35.6%	64.4%	
Domestic reasons	24	29.2%	70.8%	4.2%	58.3%	41.7%	41.7%	58.3%	
Clinic too far	34	35.3%	64.7%	14.7%	58.8%	44.1%	44.1%	55.9%	
Not eligible	30	40%	60%	3.3%	76.7%	36.7%	36.7%	63.3%	
Other	7	71.4%	28.6%	42.9%	57.1%	28.6%	28.6%	71.4%	

PE: primary education; SE: secondary education

TABLE 2. *Reasons for not booking in hospital, in relation to other factors.*

From the Departments of Obstetrics and Gynaecology (Drs. Al-Nuaim, Adelusi, Chowdhury and Moghraby) and Paediatrics (Dr. Al-Kharfy), and the Research Center (Dr. Kangave), King Khalid University Hospital, Riyadh, Saudi Arabia.

Address reprint requests and correspondence to Dr. Adelusi, Department of Obstetrics and Gynaecology, King Khalid University Hospital, P.O. Box 7805, Riyadh 11472, Saudi Arabia.

Accepted for publication. March 1998. Received 23 July 1997.

and would not serve any useful purpose. Unless she is made aware of the reasons for attending clinics, the unbooked mother is also unlikely to book again in her future

Reasons	n=191	K/ANC	K/GA	Unplanned pregnancy	No domestic help
Booking unnecessary	23	87%	34.8%	13%	65.2%
Booked elsewhere (PHC)	73	93.2%	38.4%	5.5%	50.7%
Domestic reasons	24	87.5%	45.8%	8.3%	62.5%
Clinic too far	34	97.1%	44.1%	20.6%	73.5%
Not eligible	30	96.7%	36.7%	16.7%	73.3%
Other	7	85.7%	57.1%	–	71.4%

K/ANC: knowledge of antenatal care; K/GA: knowledge of ideal gestational age for booking.

TABLE 3. *Opinion of patients about the hospital after delivery in relation to reasons for not booking.*

Reasons	n=191	Patients pleased	Patients indifferent	Patients displeased
Booking unnecessary	23	9 (39.1%)	3 (13.1%)	11 (47.8%)
Booked elsewhere	73	56 (76.7%)	7 (9.6%)	10 (8.3%)
Domestic reasons	24	6 (66.7%)	6 (25%)	2 (8.3%)
Clinic too far	34	23 (67.6%)	6 (17.7%)	5 (14.7%)
Not eligible	30	24 (80%)	5 (16.7%)	1 (3.3%)
Other	30	4 (57.1%)	1 (14.3%)	2 (28.6%)

such as age, marital status, level of education, and socio-economic status. Other issues included marital decision-making, knowledge of the availability of antenatal care and location of the clinic, the women's attitude towards the hospital and staff, and reasons for not using the clinic facilities.

The health care providers involved with care of the unbooked mothers and their babies in KKHU were also interviewed. The questionnaire was structured to cover personal and sociodemographic characteristics, including sex, marital status, level of experience and rank of the staff, parity and number of children, and the attitude of the individual to the unbooked mother.

Results

A total of 191 mothers were recruited into the study. The youngest of these was 15 years old, and the oldest was 44 years old (mean±SD=27.4±6.0), and parity ranged from 0 to 10 years (mean±SD=3.0±2.5). Of the doctors, 29 were obstetric staff (5 consultants, 7 registrars and 17 residents), and 11 neonatal (NICU) staff (2 consultants, 3 registrars and 6 residents). Responses from the nursing staff were from the 28 obstetric nurses involved in the management of the patients in labor.

Of the 191 mothers interviewed, 23 (12%) felt that booking was unnecessary, while 73 (38.2%) said that they were booked elsewhere (primary health center), and 24 (12.6%) gave domestic reasons. In 34 cases (17.8%), the mothers thought that the hospital waiting time was far too long, they expressed their dislike of male doctors examining them, or of the attitude of the hospital staff. However, 30 patients (15.7%) were told that they were not eligible for booking in the hospital.

With regards to the mothers' knowledge of the value of antenatal care and the location of the clinic, 177 mothers (92.73%) said they were knowledgeable. In contrast, however, only 107 (56%) of the women knew that it is ideal to register for care early in the pregnancy (≤ 12 weeks), while 39 (20.4%) believed that the ideal booking age was 13-26 weeks, and 4 (2.1%) thought it was after the 26th week of pregnancy. On the other hand, 16 women (8.4%) believed that booking could be done any time during the pregnancy, and 25 (13.1%) did not know. The majority of the women (88%) had no complications in previous pregnancies, while hypertension (4.2%), anemia (4.7%), and gestational diabetes (3.1%) were reported as complications.

Table 1 shows the reasons for not using antenatal care in the hospital in relation to age, parity, and education of the women. A total of 69.6% of the older women (≥ 25 years) felt that booking was unnecessary, compared to 30.4% among the younger women (≤ 25 years). Of the women who were para 1-4, 76.6% were ineligible for booking, compared to 3.3% among those who were primigravida. On the other hand, while 52.2% of the women with primary education or less described their booking as being unnecessary, the ones with higher education gave other reasons.

When reasons for not using the clinic facilities were analyzed in relation to other factors (Table 2), it was observed that over 85% of the women in any category were knowledgeable about the availability and location of antenatal care in the hospital. However, the percentage of those who had knowledge of the ideal gestational age for booking in the hospital was much lower. This varied from a high of 57.1% among the patients who refrained from having antenatal care in order to avoid examination by male doctors, to a low of 34.8% for women who felt that antenatal care was unnecessary in any case.

When logistic regression analysis was used to investigate, in a multivariate manner, the factors that tended to determine mothers' knowledge of the ideal gestational age for booking, only education was selected as the covariant that significantly related to this. The significance of association was indicated for secondary or university education levels. The odds that a mother with secondary or university education was ignorant of the ideal booking age were: 0.349 with 95% CI=0.415-0.837, and 0.289 with 95% CI=0.115-0.724, respectively. This implies that the higher

the educational level, the more likely it was that the mother would know the ideal gestational age for booking.

The reasons given by the mothers for wanting to deliver their babies at KKHU varied from the mothers' being referred from the hospital or clinic where they were originally booked (100%), the expensive nature of the hospital where they were booked (100%), absence of delivery facilities (69.5%), husband's choice (60% of those booked into another hospital), and the mothers' presence in Riyadh where they were visiting relatives (72.4% of those booked in another hospital). A higher percentage of the women, however, chose to deliver at KKHU because they believed the hospital was safer.

When asked about their attitude to the hospital after delivery (Table 3), 80% of those who were unbooked because they were ineligible felt pleased with their experience, compared with only 39.1% among those who felt that booking was unnecessary. The reverse was the case among those displeased with the hospital, where 47.8% of those who felt that booking was unnecessary felt displeased, with only 3.3% of the patients who were ineligible sharing this sentiment.

Thirty-one mothers felt displeased with the services of the hospital. Of the women who resented examination, particularly by male doctors, 63.6% had antipathy to the hospital, and decided that booking was unnecessary in the first place, or had no domestic help (100%). Similarly, 60% of the women with hostile attitudes toward the hospital were among those who felt the hospital was too far. On the other hand, 100% of the women not eligible felt that the waiting time was too long.

With regards to the attitude of the staff, a higher percentage (64.7%) of the older members of staff (≥ 35 years) were more sympathetic towards the patients' being admitted than the young staff (≤ 35 years), and 66.7% of the male members of the staff were also more sympathetic towards the women, compared to the female staff (60%) (Table 4). However, marital status, parenthood and rank of the members of the medical staff did not significantly influence the attitude of the staff to admission of the unbooked mother. Many of the married staff members (64%), and particularly those with children, were more sympathetic towards to the unbooked mother.

Discussion

In spite of the easy availability of booking facilities for mothers in Saudi Arabia, a high percentage of them still remain unbooked for prenatal care. Reasons for not booking varied from being prevented from registration in the hospital because of departmental policy, to the belief that booking is unnecessary because they want to avoid

TABLE 4. Attitude of the obstetric medical staff to admission of the unbooked mother in relation to age, sex, marital status and rank.

n	Would refuse	Reluctant	Sympathetic
---	--------------	-----------	-------------

Age of staff (yrs)				
<35	12	2 (16.7%)	3 (25%)	7 (58.3%)
≥ 35	17	3 (17.6%)	3 (17.6%)	11 (64.7%)
Sex				
Male	9	2 (22.2%)	1 (11.1%)	6 (66.7%)
Female	20	3 (15%)	5 (25%)	12 (60%)
Marital status				
Single	4	1 (25%)	1 (25%)	2 (50%)
Married	25	4 (16%)	5 (20%)	16 (64%)
Rank				
Resident	17	1 (5.9%)	6 (35.3%)	10 (58.8%)
Registrar	7	2 (28.6%)	–	5 (71.4%)
Consultant	5	2 (40%)	–	3 (60%)

examination, particularly by male doctors. It would appear that the older (≥ 25 years) and more educated women were the ones more likely to give the non-importance of booking and non-availability of domestic help as reasons for their not being booked into KKHU.

Most of the women were aware of the availability of antenatal care at KKHU, even if many of them were not certain of the ideal gestational age for booking. Using logistic regression analysis to investigate, in a multivariate manner, the factors that tended to determine the mothers' knowledge of the ideal gestation age for booking, only education was selected as the covariant that significantly related to this. The significance of association indicated that mothers with education beyond primary school level were more inclined to be knowledgeable about the ideal gestational age for booking.

Even though various reasons were given by the mothers for choosing KKHU for their delivery, it would appear that there is a belief among the patients that delivery in this hospital is safer than in some of the other hospitals and clinics where they were booked. However, it is evident that irrespective of the standards in the hospital, many of those who felt that booking was unnecessary and who wanted to avoid male examination in the first place were displeased with their experience in the hospital. This is in contrast to those who were told that they were not eligible for booking, or who had domestic problems, as only a few of these appeared to be displeased with the services offered by KKHU. This is not surprising, though, as the opportunity offered by the hospital would be more appreciated by those who would have been denied the chance to have their babies there otherwise. In contrast, those who were biased against hospital examination would still be expected to be biased, no matter what benefits were offered by the hospital.

In the present study, the attitude of the majority of the staff was sympathetic to the unbooked mother, in spite of the possible adverse effects that the pregnancy outcome in these mothers might have on the statistics of both the obstetric and neonatal care units. Indeed, there was sympathy to the unbooked mother, irrespective of the age, sex, marital status or rank of the obstetric staff. It is

interesting to note that none of the staff considered that the possible unfavorable obstetric outcome, or the increase in the workload, might determine their attitude to the unbooked mother, in contrast to other findings.^{4,8,10}

The older and male members of the medical staff were inclined to be more sympathetic to the unbooked mother. While it can be explained that the older and, therefore, more mature members of the staff, would be sympathetic to the unbooked mother, one would have expected the female members to be more sympathetic. With regards to the nursing staff, it is interesting to note that the single people, and those without children, were more sympathetic to the unbooked mother, although one is at a loss to explain why this should be so, and no other studies are available for comparison. It is probable, of course, that the nurses who are mothers react adversely to the unbooked mothers because of their feelings of concern for the babies, who are exposed to danger by not receiving proper prenatal care.

Overall, there is a need to educate the patients, especially those who believe they do not need hospital care for their pregnancy, because in many cases, these are the very mothers who may require greater care in the postpartum period. On the other hand, it is pertinent to review the booking regulations in the hospital to take in

more of the patients who are refused booking at present, based on their parity (1-4), as many of these may present with problems when admitted only in labor. It is essential to highlight the need for prenatal care for all, even if it is at the Primary Health Care level, judging by the level of demand for hospital delivery by the majority of women.

References

1. McClure-Browne JC, Dixon G. Browne's Antenatal Care. 11th edition Edinburgh: Churchill Livingstone, 1978.
2. Hamilton RA, Perlmann T, de Souza JJJ. The unbooked patient. I: Reasons for failure to attend ante-natal clinics. *S Afric Med J* 1987;81:28-31.
3. Dott AB, Fort AT. The effect of availability and utilization of prenatal care and hospital services on infant mortality rates. *Am J Obstet Gynecol* 1975;123:854-60.
4. Larsen JV, van Middelkoop A. The "unbooked" mother at King Edward VIII Hospital, Durban. *S Afric Med J* 1982;62:483-6.
5. Pattinson RC, Rossouw L. The unbooked mother at Tygerberg Hospital. A prospective controlled study. *S Afric Med J* 1987;71:559-60.
6. Naeye RL, Ross SM. Amniotic fluid infection syndrome. *Clin Obstet Gynecol* 1982;9:593-603.
7. De Jong G, Pattinson RC, Odendaal HJ. Influence of perinatal care on still births in patients of low socio-economic class. *S Afric Med J* 1988;74:53-4.
8. Ryan GM, Sweeney PV, Solola AS. Pre-natal care and pregnancy outcome. *Am J Obstet Gynecol* 1980;137:876-81.
9. Abudu OO, Awonuga AO. Fetal macrosomia and pregnancy outcome in Lagos. *Int J Gynecol Obstet* 1989;28:257-62.
10. Klufio CA, Kariwiga G. A comparison of unbooked mothers delivering at Port Moresby General Hospital with mothers seen antenatally: socio-economic and reproductive characteristics. *Papua NG Med J* 1992;35:3-9.