

Compare the Mood of Delivery between Booked and Un-Booked Primigravidae

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Abstract: **Background:** Antenatal care is a process by which a pregnant lady is given health care and advice regarding her pregnancy and delivery to ensure a healthy mother and baby. ANC is usually given by health care facilities to discover and manage pregnancy complications and determine the mood of delivery. Selecting the best mood of delivery for each pregnant lady will reduce maternal and fetal complications. In Sudan, most other pregnant ladies do not utilize the available antenatal care services; therefore, so many complications are recognized among patients who do not attend antenatal care during the period of their pregnancy. The study aimed to compare the mood of delivery between booked and un-booked primigravidae who attend Omdurman New Hospital, Sudan. **Methods:** This cross-sectional and hospital-based study was conducted in 290 primigravidae who attended in labour and the study duration was 4 months. Those who consented to participate in the study were included. The data were collected by questionnaire by medical staff and analyzed by SPSS version. Tr5Tr5. **Results:** The results showed that booked primigravidae were 166 (57.2%) compared to un-booked) 124(2.8%). The age group 18-30 years was the main, never the less; there were younger ladies among un-booked primigravidae. Regarding mood of delivery, the majority of booked patients were delivered vaginally (94 (75.8%) and the rest by caesarian section (30 (24.2 %) while in un-booked group vaginal delivery was 57.2% and caesarian section was 42.8 % that mean un-booked ladies usually have a higher number of caesarian delivery in compare to booked ladies which expose them to more complications. On the other hand baby's outcome, un-booked mothers in this study have preterm and postdate babies with lower birth weight, 29.6% compared to only 1.6% of the booked group. Also, un-booked patients have more IUID and early neonatal death compared to booked mothers. **Conclusion:** Most of the primigravidae in Omdurman maternity hospital were un-booked, therefore, they receive no medical services this can lead to a high rate of delivery by a caesarian section which can lead to many complications regarding the mother and baby. Increasing the accessibility and awareness about ANC would promote more safe pregnancy and delivery.

Keywords: caesarian section, Ante Natal care

1.Introduction

Pregnancy and childbirth are physiological events that carry significant stress, especially during the first pregnancy. The mode of the first delivery can play an important role in the next deliveries. The mode of delivery can be defined as selecting either vaginal delivery which includes instrumental delivery or Cesarean section (1). Vaginal birth is considered the natural way of birth. The majority of vaginal births are safe with less than a 10% rate of complications. On the other hand, Cesarean section is decided to be a surgical intervention to facilitate delivery to prevent maternal or fetal mortality and morbidity (2-4).

World widely, the rate of cesarean section is increasing, which reaches 35.8% in the university hospitals in Sudan (5). This figure is higher than the WHO recommendation, which is that C/S are no more than 10-15% of all

deliveries (6). It has been confirmed that morbidity and mortality of cesarean sections are greater than vaginal deliveries in addition, to increasing financial cost up to three times in comparison with vaginal deliveries (7). Many studies showed a positive effect of antenatal care on perinatal outcome and reducing the rate of many complications, WHO recommend at least four antenatal visits for low-risk pregnant ladies (9-10). Furthermore, antenatal care protects pregnant women from unnecessary medical interventions, which is one of the WHO strategies to improve maternal health. (8). In this study, we aimed to study the effect of antenatal care on the mode of birth in the Primigravidae.

2.Methodology

This is a hospital-based, cross-sectional study. A medical professional interviewer used a questionnaire and checklist to collect the data from 290 Primigravida who

gave their informed consents and accepted to participate in this study which was conducted in Omdurman New Hospital, Khartoum, Sudan between October 2019 and June 2020.

We included any Primigravida who came in labour during the study period and gave informed consent. A pregnant woman who was not in labour or had delivered at home before attending the hospital was excluded from the study.

Data were analyzed using SPSS version 20. A Chi-square test was employed to compare qualitative data and a p-value of less than 0.05 was considered significant. Ethical approval was obtained from the Federal Ministry of Health (FMOH) ethics committee.

3.Results

Table (1) represents the distribution of the sociodemographic factors of the sample as booked

compared to un-booked pregnant women. Subjects who were less than 18 years old in the un-booked group were 79.2% compared to 20.8% of the booked group. Women older than 30 years among the booked and the un-booked groups were 44.2. % and 55.8% respectively. Most of the women in this study belonged to the age group 18-30 years (54.3%) for the booked and (45.7%) for the un-booked group. For the booked group, women who had primary, secondary and university education were 24.2%, 45.5%, and 82.2% respectively. For the un-booked group, women who had primary, secondary and university education were 75.6%, 54.5%, and 17.9% respectively. Women who had no education were 10.8% and 89.2% for the booked and un-booked, respectively. Most women in the booked group were having jobs (85.3%) while most women in the un-booked group were housewives (72.1%). Most women in the booked group reside in urban settings (57.4%) while most women in the un-booked group reside in rural settings (82.2%).

Table 1: Difference in social characteristic of booked and non-booked pregnant women

Social characteristics	Booked		Un-booked		Total No. (%)	p
	No.	%	No.	%		
Age/ years						
Less than 18	11	20.8	42	79.2	53 (18.3)	<0.001
18-30	69	44.2	87	55.8	156 (53.8)	
More than 30	44	54.3	37	45.7	81 (27.9)	
Occupation						
Housewife	60	27.9	155	72.1	215 (74.1)	<0.001
Employer/ worker	64	85.3	11	14.7	75 (25.8)	
Education						
None	5	10.8	41	89.2	46 (15.9)	<0.001
Primary	19	24.4	59	75.6	78 (26.9)	
Secondary	45	45.5	54	54.5	99 (34.1)	
University	55	82.1	12	17.9	67 (23.1)	
Residence						
Urban	105	57.4	78	42.6	183 (63.1)	< 0.001
Rural	19	17.8	88	82.2	107 (36.9)	

Table 2 represents the results of the delivery outcome according to the gestational age at the time of labour. There were 25.3 % preterm deliveries among the unbooked group compared to 15.3% in the booked group. The un-booked group had 28.3 postdate deliveries

compared to 15.3% among the booked group. The un-booked had 46.4% term deliveries compared to 69.4% for the booked group. The delivery outcome is statistically significant with booking status (p<0.001).

Table 2: Baby outcomes according to the gestational age in both booked and un-booked pregnant women

Baby Outcomes	Booked		Un-booked		Total No. (%)	p
	No.	%	No.	%		
Preterm	19	15.3	42	25.3	61 (21)	<0.001
Term	86	69.4	77	46.4	163 (56.2)	
Postdate	19	15.3	47	28.3	66 (22.8)	

Table 3 shows the delivery mode of the booked and un-booked pregnant women. Normal vaginal deliveries among un-booked group were 43.3% compared to 65.3% among the booked group. Instrumental deliveries were 13.9% among un-booked group compared to 10.5%

among the booked group. Women delivered by cesarean section were 42.8% among un-booked group compared to 24.2% among the booked group. The mode of delivery is statistically significant with booking status (p<0.001).

Table 3: Comparison of Mode of delivery between booked and un-booked pregnant women

Mode of delivery	Booking status		Total	P
	Booked No. (%)	Un-booked No. (%)		
Vaginal	81 (65.3)	72 (43.3)	153 (52.8)	<0.001
Instrumental	13 (10.5)	23 (13.9)	36 (12.4)	
Cesarean section	30 (24.2)	71 (42.8)	101 (34.8)	
Total	124 (42.8)	166 (57.2)	290 (100.0)	

4. Discussion

Booking status reflects the medical services given to the pregnant ladies that determine the mood of delivery and reduces obstetric complications. In our study we observed that most pregnant women who are less than 18-year-old (79.2%) are un-booked ladies, the age group in which delivered by caesarian section and maternal complication usually are more compared to only (20.8%) are booked, if we looked to the ladies who are living in the urban area 57 % in contrast to only 17.8% live in rural and obviously booking status is more in an urban area this can be explained by either their financial status and education is better or the awareness about ANC is better or both, these facts are similar to study done by Adekanle DA, Isawumi AI, who which concluded that women who are less than 25 years old were less educated and earning lesser income and more likely to register late in ANC clinics (11-12-13).

The rate of C. S and instrumental delivery is statically significant more in the un-booked group of Primiparity 71%, this finding is supported by Danish N who did a study in Pakistan that showed the rate of CS is reaching 76.5% in un-booked group, compared to 23.5% in the booked group of pregnant women (17) and a similar result in Nigeria found a higher rate of CS in un-booked primigravidae (61.2 %) compared to (42.3 %) in the booked group (18). Kalim D et al reported that the rate of Emergency CS is 8.89% in un-booked women while only 4.15 % in the booked group (19). That means un-booked ladies usually have a higher number of caesarian delivery in comparison to booked ladies which expose them to more complications either pregnancy complications or complication related to the surgical procedure itself and these complications can easily be reduced by following antenatal care.

Neonatal outcome either term, Preterm or post-term is statistically significant with better outcomes in the booked group of patients. This result is similar to a study done by Abbas et al, (14), who found that there is a better neonatal outcome in Primigravida with regular ANC compared to irregular ANC Primiparity. At some times, this result is similar to a study done by Ahmed et al, (15), who found in Pakistan that women with more than 4 ANC are 6 times more likely to deliver normal weight babies compared to those who did not attend regular ANC. Furthermore, our result agrees with Raatikainen, Heiskanen, Heinonen (16), who found that there is a significant association between low birth weight and neonatal death in the under - and non-attendant group.

5. Conclusion

Booking status has a great influence on determining the mood of delivery; un-booked primigravidae increases the rate of caesarian section and consequently the rate of maternal complications.

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