

A Study to Determine Factors Contributing to the Increase in the Number of Deliveries by Caesarian Section at Ndola Teaching Hospital from 2021 to 2023

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ABSTRACT

This study makes an assessment on factors contributing to the increase in the number of deliveries by caesarian section at Ndola Teaching Hospital. This study also assesses the level of knowledge women have on the types of deliveries, determine the effects of traditional beliefs and practices on a rise in caesarian section deliveries.

The research was a cross-section study which is descriptive in nature and has both quantitative and qualitative data. The research was conducted at Ndola Teaching Hospital (obstetric department). The sample size comprised of 25 respondents who were selected using a convenience sampling method. Data was collected using a self-structured questionnaire with open- and closed-ended questions. After manual analysis the data collected was presented in tables, bar graphs and pie charts.

Keywords: Assessment; Caesarian section; Traditional beliefs; Cross-section study; Questionnaire; Ndola Teaching Hospital; Zambia.

1. Introduction

Recent studies reaffirm earlier World Health Organization recommendations about optimal cesarean section rates. The best outcomes for mothers and babies appear to occur with cesarean section rates of 5% to 10%. Rates above 15% seem to do more harm than good (Althabe & Belizan, 2016). The national U.S. cesarean section rate was 4.5% and near this optimal range in 2015 when it was first measured (Taffel et al., 2017). In more recent years, large groups of healthy, low-risk American women who have received care that enhanced their bodies' innate capacity for giving birth have achieved 4% cesarean section rates and good overall birth outcomes (Johnson & Daviss, 2005). However, the national cesarean section rate is much higher and has been increasing steadily for more than a decade. With the 2007 rate at 31.8%, about one mother in three now gives birth by cesarean section, a record level for the United States. According to a study conducted in two countries in southern Africa on increased deliveries by caesarean sections; in Botswana there was an increase in the deliveries by caesarean section from 26.4% in 2007 to 45% in 2019 (Botswana Outlook, 2020). Another study conducted by USAID in June 2018 on an increase in deliveries by caesarean section in Namibia revealed that there was increased knowledge on benefits of caesarean section by women.

Caesarean section in Zambia has, in the last few years, been on the rise. Most hospitals have recorded a much higher rate of the cases of deliveries by caesarean section than earlier performed. Studies carried out in three hospitals in Lusaka (University Teaching Hospital), Southern province (Macha Mission Hospital) and in Kaoma district (Luampa Mission Hospital) clearly showed a marked increase by 45%, 25% and 30% respectively (MoH, 2019). In Ndola, no research had so far been conducted and documented in regard to factors contributing to deliveries by caesarean section at Ndola Teaching Hospital from 2020 to 2022. Figures obtained from Ndola Teaching Hospital maternity ward from January 2021 to March 2023 showed an increase in deliveries by caesarean section.

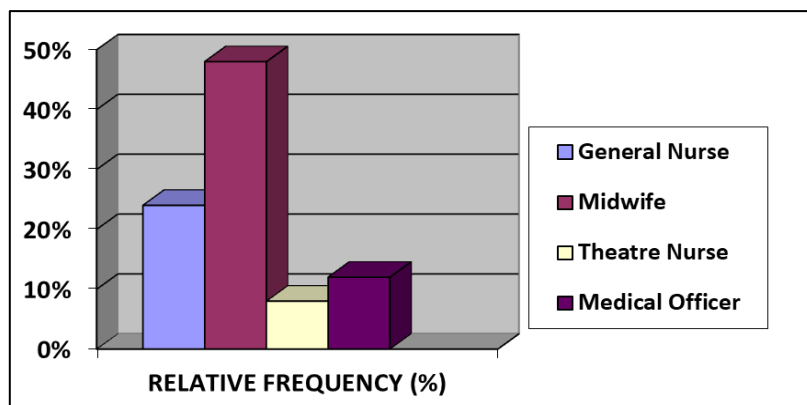
2. Methods and Sampling

In this study a convenience sampling method was used to select the research participants. Therefore, all health workers (25) in maternity ward and Theatre department (at Ndola Teaching Hospital) in the month of December 2023 working there were picked to participate in the study.

In this study the researchers ensured validity by pre-testing the structured questionnaire in a pilot study done in a different study setting. The pretest helped to make changes or adjustments in the questions or structure of the questionnaire in order to collect relevant data in the actual research. A pilot study was conducted at Maternity B (a location within Ndola Teaching Hospital with similar services as for Maternity A or labour ward) to pretest and assess the reliability of the data collection tool.

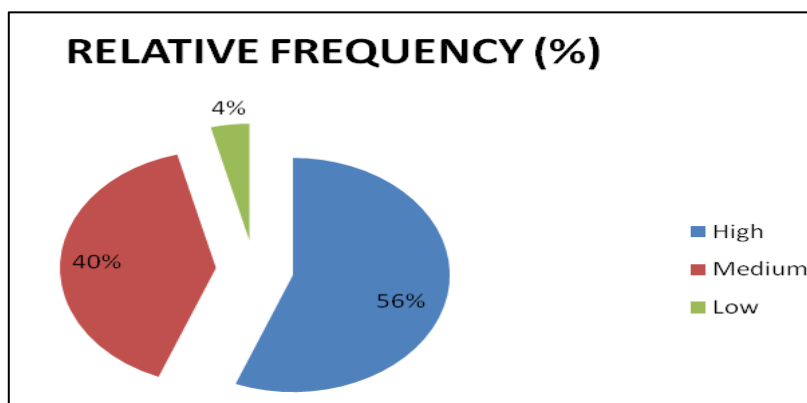
3. Findings from the Study

Data was presented and analyzed in frequency and cross tabulation tables, bar graphs and pie charts, organizing information according to research questions. A total of 25 respondents were conveniently selected at Ndola Teaching Hospital maternity and theatre departments. The data was sorted out and edited for completeness and accuracy.



The bar graph above shows that 48% of the respondents were Midwives, 24% were General Nurses, 8% were Theatre Nurses and 12% were Medical Officers.

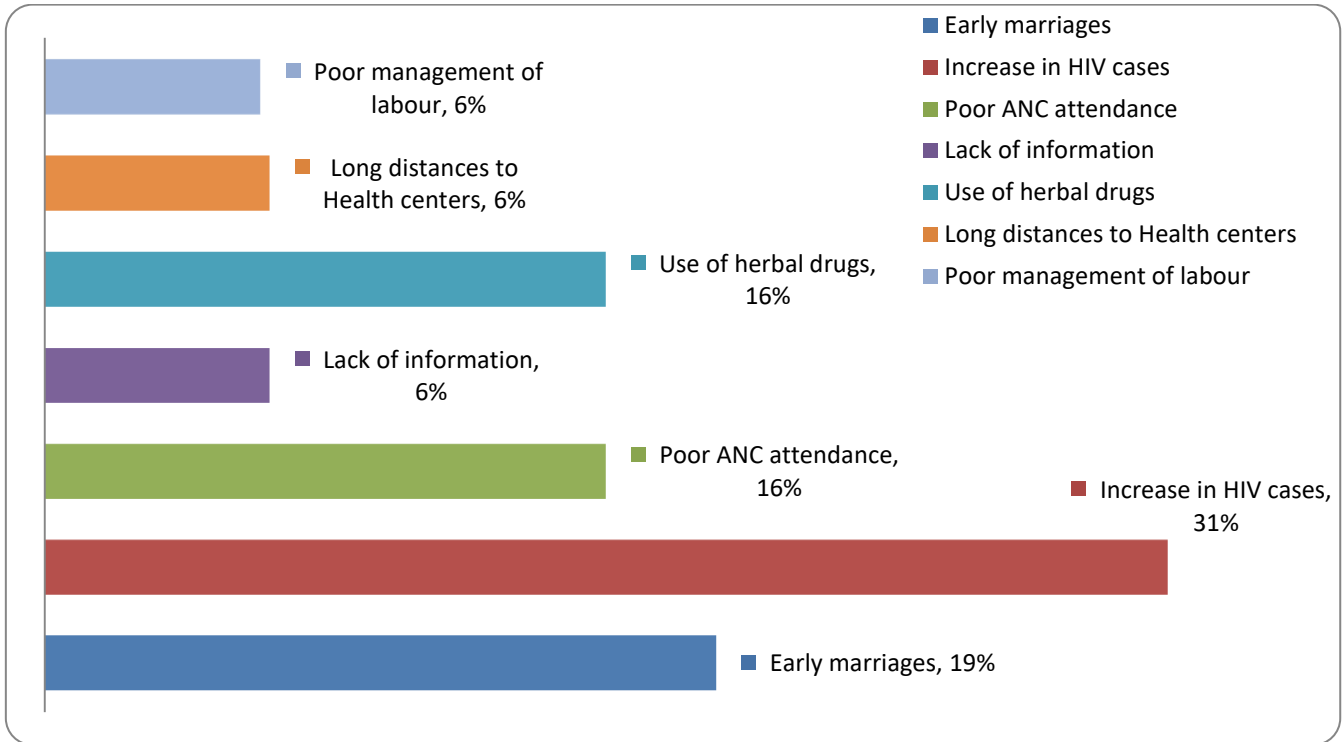
3.1. Respondents' knowledge on caesarean section



Pie chart shows that 56% of the respondents had high knowledge on caesarean section and 40% had medium knowledge on caesarean section while 4% had low knowledge on caesarean section.

3.2. Respondents' view on reasons for prevalent indications

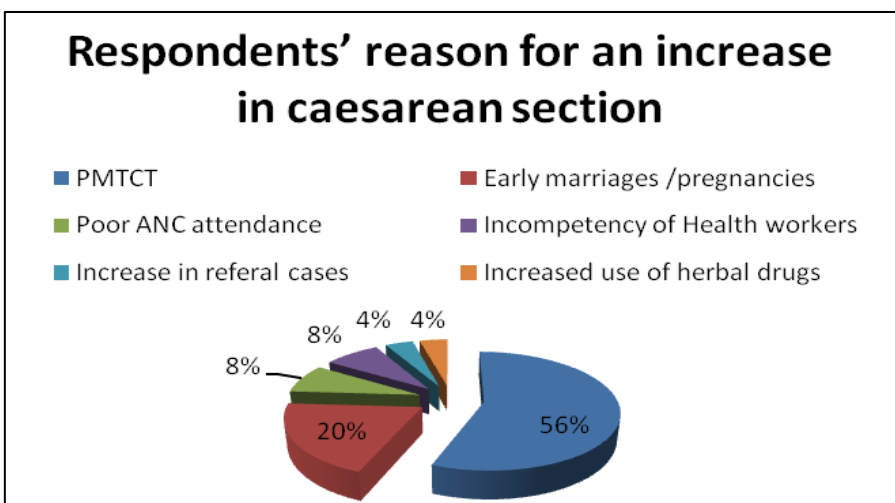
Bar chart shows that majority of the respondents (31%) thought increase in HIV cases were reasons for increase in indications for C/S, 19% attributed an increase to early marriages and 16% to poor ANC/ use of hebal drugs while 6% of respondents said poor management of labour, lack of information and long distances to health centers.



3.3. Respondents' view if there is an increase in caesarean section

Table shows that majority of respondents (92%) had a view that there is an increase while 8% thought there is no increase.

Response	Absolute Frequency	Relative Frequency(%)
Yes	23	92%
No	2	8%



The pie chart above shows that 56% of the respondents attribute the increase to PMTCT, 20% to early marriages, 8% to poor ANC attendance and incompetency of health workers while 4% to increased referral and increased use of herbal drugs to accelerate labour.

3.4. Respondents response on utilisation of c/s as PMTCT

Respondents Response on Utilisation of C/S as PMTCT	Absolute Frequency	Relative Frequency (%)
Yes	25	100%
No	0	0%
Total	25	100%

Table shows that the respondents (100%) think that HIV/AIDS has contributed to an increase in C/S as a PMTCT intervention.

Table showing respondents response on the benefits of C/S to HIV positive women

Respondents Response	Absolute Frequency	Relative Frequency (%)
Yes	23	92
No	2	8
Total	25	100

Table reveals that 92% of the respondents believe that caesarean section is beneficial to HIV positive pregnant women and only 8% thinks it's not beneficial.

3.5. Respondents' view if health workers contribute to an increase in C/S

Respondents' View	Absolute Frequency	Relative Frequency (%)
Yes	19	76%
No	6	24%
Total	25	100%

The table above shows that majority of the respondents (76%) think that health workers contribute to an increase in C/S while 24% of the respondents think that they don't.

3.6. Respondents' view if low attendance of ANC contributes to an increase in caesarean section

Respondents Response	Absolute Frequency	Relative Frequency (%)
Yes	18	72
No	7	28
Total	25	100

Table above shows that majority (72%) of the respondents believe that low attendance of ANC contributes to an increase in caesarean section while 28% believe that it does not.

3.7. Respondents view if shortage in staffing has contributed to an increase in C/S

Respondents View	Absolute Frequency	Relative Frequency (%)
Yes	20	80
No	5	20
Total	25	100

Table shows that 80% of the respondents believe that shortage in staffing has contributed to an increase in caesarean section while 20% of the respondents believe that it does not.

4. Discussion and Interpretation of Findings

The study revealed that 56% of factors that have contributed to an increase in C/S deliveries are due to PMTCT, 20% of the respondents attributed an increase to early marriages and pregnancies, 8% respondents attributed an increase to poor and late ANC attendance and incompetent health professionals in the management of labour – respectively. 4% of the respondents attributed to increased use of herbal drugs by pregnant women and increased referral complicated cases to the hospital as it is the only referral center for all the clinics in Ndola District.

The study also showed that all the respondents (100%) strongly believed that most HIV positive women highly utilized caesarean section as a method of PMTCT. This goes in line with MoH guidelines of policy that Mothers can opt for caesarean section to protect the unborn child from acquiring the HIV virus. 92% of the respondents also further believe that caesarean section is very beneficial to HIV positive pregnant women and the unborn baby. With this revelation HIV positive pregnant women can be encouraged to deliver by caesarean section to reduce child mortality rate, hence achievement of the MDGs.

The study revealed that 44% and 28% of pregnant women now consider C/S as a normal and safe way of delivering, respectively and are now making requests to deliver by caesarean section even where there are no indications. Only 28% of the respondents showed that some women still have negative conception about caesarean section.

The research further revealed that the majority of the respondents (76%) believe that health workers have contributed to an increase in deliveries by caesarean section through their attitude towards intra-partum care and preference to caesarean section even where a woman can deliver with more time and other non-surgical interventions. 24% of the respondents think that health workers don't contribute to C/S.

Among the reasons given by the majority of the respondents on how health workers contribute to an increase on C/S are; mismanagement of labour by not monitoring progress of labour, miss-diagnosis of complications of labour by most intern Doctors which have most often resulted in women delivering normally on the operating table.

Further, the study shows that 40% believe that patients attitude towards labour and caesarean section like fear of delivering by SVD and preferring C/S for fear of labour pain, 24% of respondents attribute an increase to an increase in cultural and traditional practices like use of African syntocinon to accelerate labour and stopping women from seeking early ANC preferring to stay back home and do home chores, while early marriages, attempted failed home deliveries and non-use of contraceptives were 4%, 12% and 4% respectively.

5. Implications and Recommendations

The implications of the study are related to various aspects of the problem under study; its objectives, variables and hypothesis inclusive. The study showed that the majority of the respondents think that most of the health workers (76%) contribute to an increase in the rise of caesarean section through their attitude and practice. The study also showed that 72% of respondents believe that poor ANC attendance heavily contributes to an increase in caesarean section. It was further revealed that the majority of the respondents (80%) feel shortage of staff both Nurses and Doctors has contributed to an increase in deliveries in caesarean section.

The above findings have implications on different aspects of quality health care provision under Education, Administration, Research and practice. These implications will be discussed individually: (1) The hospitals to have refresher courses for staff attending to expecting mothers; (2) Information education and communication on early antenatal attendance and hospital delivery should be re-enforced; (3) Health education on dangers of traditional drugs to induce labour should be encouraged; (4) Measures to combat the spread of HIV/AIDS should be implemented; (5) The ministry of health should closely monitor district health management team to ensure that their input is utilized accordingly and hence evaluating whether programmes are working or not; (6) The ministry of health should work hand in hand with stake holders, well-wishers and nongovernmental organizations in a transparent manner to source for funds to build more mothers shelters and improve antenatal services; (7) Training and employing more midwives and doctors to meet WHO's target of one midwife to one pregnant woman ratio (1:1); and (8) The ministry of health should ensure enough resource in the clinics and rural health centers so that pregnant women can be attended to adequately and complications are able to be detected early.

6. Conclusion

The study was conducted at Ndola Teaching Hospital on factors contributing to an increase in deliveries by caesarean section from 2021 to 2023, the study had a sample size of 25 respondents selected randomly and took place in the month of December, 2013. According to the study, findings were that deliveries by caesarean section have indeed increased.

The probable factors which could have led to the increased prevalence of caesarean section could be the increasing number of cases in HIV/AIDS, poor and late antenatal attendance, early pregnancies and use of traditional drugs/medication to induce labour. We therefore recommend that the hospital and ministry through DHMT work hand in hand in ensuring that measures to reduce an increase are implemented.

Declarations

Source of Funding

The authors declare that they had no funding for this study.

Conflicts of interest

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Consent for Publication

The authors declare that they consented to the publication of this study.

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