

Knowledge and Attitude of Mothers on Risk Factors Influencing Pregnancy Outcomes in Qassim, Saudi Arabia: A Cross-Sectional Study

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ABSTRACT

Background: One of the goals of the antenatal clinic is to prevent and recognize adverse pregnancy outcomes (APO). APO include hypertensive diseases of pregnancy, pre-term birth, pregnancy loss and maternal death. Our objective is to investigate the knowledge and attitude of mothers on risk factors of developing APO in Saudi Arabia.

Methods: A cross-sectional study of female school teachers was conducted. 195 women were selected from four different schools in the region. Inclusion criteria were women of reproductive age who had at least one previous pregnancy. A self-administrated questionnaire on the knowledge and attitudes of risk factors that influence pregnancy outcomes were used.

Results: 192 out of 195 mothers completed the questionnaire (98.4% response rate). The mean age of those women was 33.6. Responses revealed that most women have good knowledge about the risks resulting from malnutrition, diabetes, and drug abuse as the agreement on all of these statements were 80%. However, their knowledge about the importance of maternal education and their attitude towards cesarean section was not satisfactory.

Conclusion: Although our sample was an educated group; low knowledge was detected in essential items. This study revealed that the public had extremely low knowledge regarding cesarean section, the importance of maternal age during pregnancy and how mother education can affect the delivery of her newborn. We recommend that pregnant women should be educated in the importance of attending the antenatal clinic regularly.

Keywords: Pregnancy; outcomes; knowledge; attitude; Saudi Arabia.

INTRODUCTION

One of the most essential goals of every antenatal clinic (ANC) in every primary healthcare center is to prevent and immediately recognize the occurrence of adverse pregnancy outcomes (APO). Although no specific definition was to be found, this broad term can include hypertensive diseases of pregnancy such as (gestational hypertension, eclampsia and preeclampsia), pre-term birth, pregnancy loss, maternal death and having birth to an infant with a low birth weight ¹.

Results of epidemiological research in developing countries prove the magnitude of this problem. Maternal mortality reaches a very high level where every woman out of six will die during labour or the postpartum period. In contrast, the risk of dying during childbirth in more developed countries is substantially lower (one in every 30,000) ². In Saudi Arabia, an Islamic middle eastern country, the maternal mortality ratio has declined from 46 to 12 per 100,000 during the last 27 years ³.

Our aim from this study is to add to the current literature in our understanding of these risk factors. Knowledge and attitude of mothers in our society

need to be studied thoroughly to prevent such complications.

With the increased in the incidence of low birth weight worldwide, assessing the contributory factors on adverse pregnancy outcomes is of great value. Especially since these complications arise from underprivileged uneducated females with high pregnancy rate, a scene commonly observed in rural areas where the only available healthcare service is ANCs.

METHODOLOGY

This research was conducted as a cross-sectional study in Al -Qassim region from August 2015 to May 2016. The target population was female school teachers from three cities in Qassim.

The schools were selected based on random cluster sampling. Four schools from three cities in Qassim were selected; two from Buraydah, the other two were from Onizah and Ar Rass. Our participants were all the school teachers present at the selected schools in the days of data collection except for those who are not married and have not experience pregnancy. The instrument used to elicit responses from the participants was a 4-point Likert scale questionnaire designed by the Eni-olorunda

research group from Nigeria which had similar objectives to our study ⁴. The questionnaire was used with several modifications; Questions regarding (mother's age, the number of children, weight gain during last pregnancy) were added. The preliminary questions were followed with 16 questions; 9 to measure the respondent knowledge and 7 concerning her attitude towards pregnancy related risk factors. By taking into consideration specificities of Middle Eastern culture, one question regarding alcohol consumption was not added to our study.

The questionnaire had been translated into Arabic language and after obtaining verbal consent, 195 women were selected and offered to complete this 5-minute self-administrated structured questionnaire.

Statistical analysis on knowledge level and attitude towards adverse pregnancy outcomes were analyzed using descriptive statistics such as frequency, counts, and percentages. All data were processed and analyzed using the IBM SPSS 21 software.

ETHICAL APPROVAL

Ethical approval for this study was obtained from the research and publication committee in Qassim region.

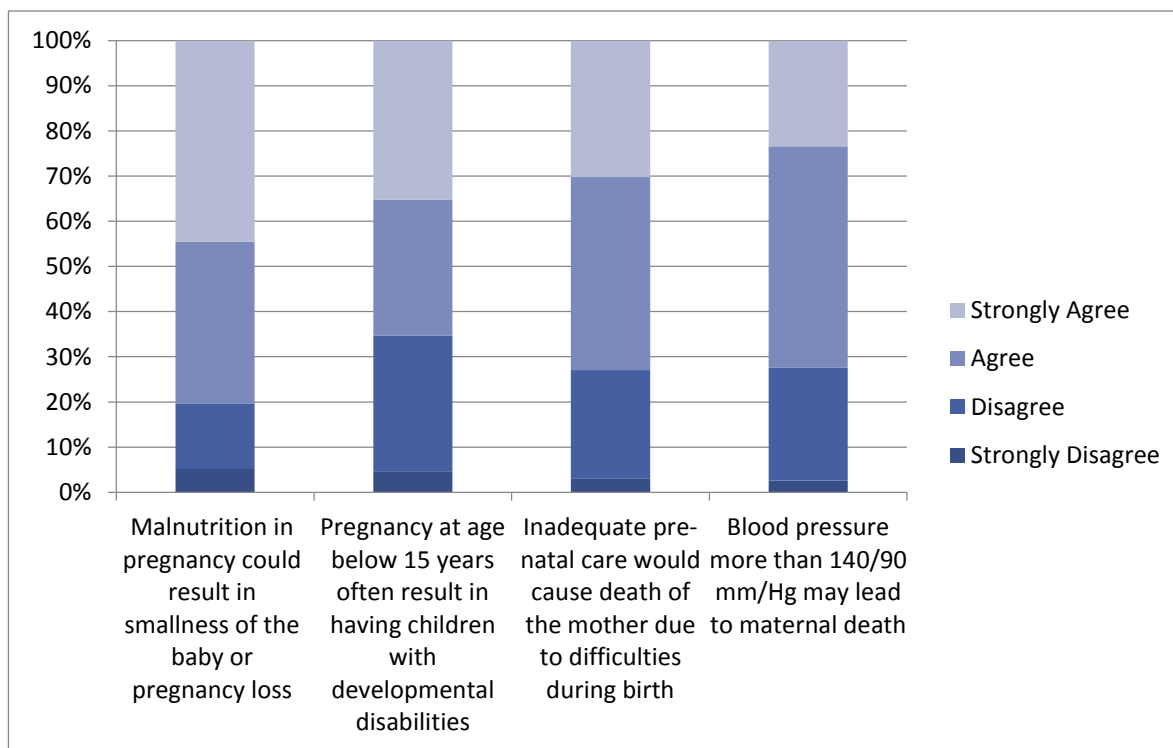
RESULTS

192 out of 195 mothers completed the questionnaire (98.4% response rate) with a mean age of 33.6±7.5 SD. About one third of participant have a child aged 1 year or less.

As to the question concerning weight gain during pregnancy, 183 mothers answered it with the mean being 6.6 kilograms ± 5.4 SD.

The number of children per women have varied from having one to twelve children but the majority of our sample (20.9%) were primiparas.

The first section of the questionnaire was to measure women's knowledge about risk factors influencing pregnancy outcome. The two graphs below (Figs 1 and 2) demonstrate the number and the percentage of women who agreed - or disagreed - on any of the nine statements mentioned in the questionnaire.



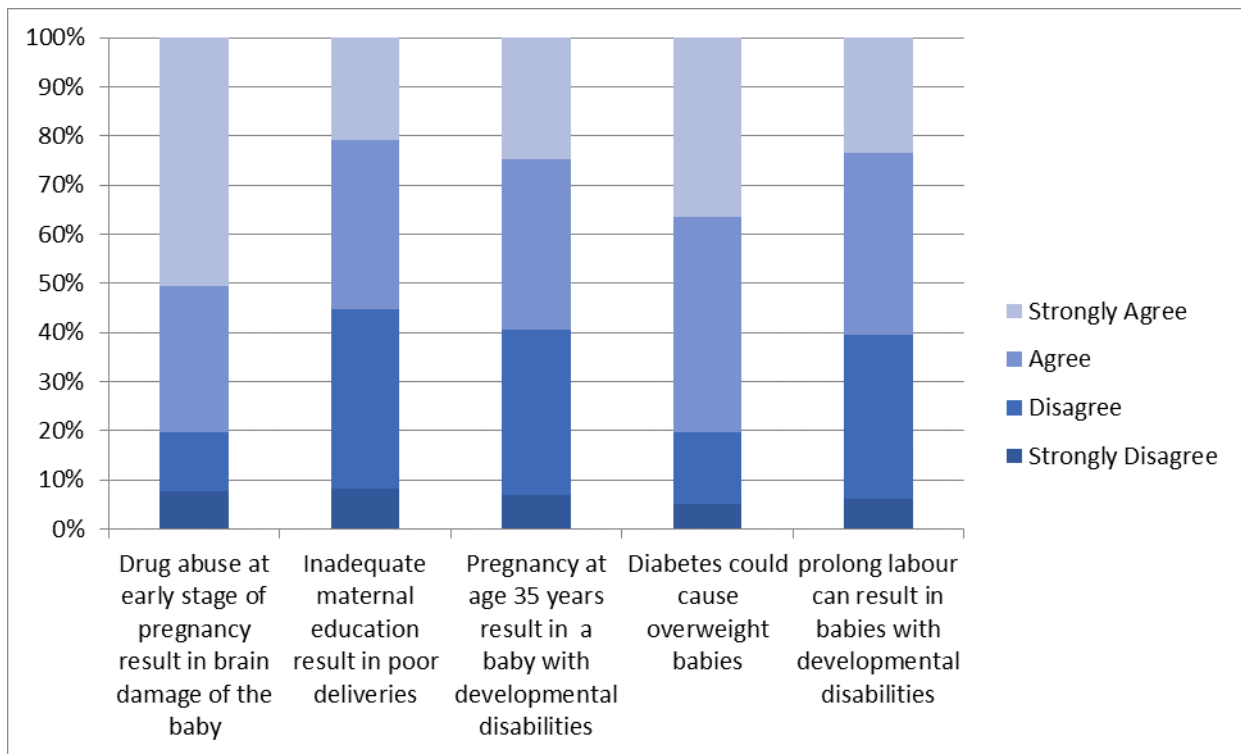
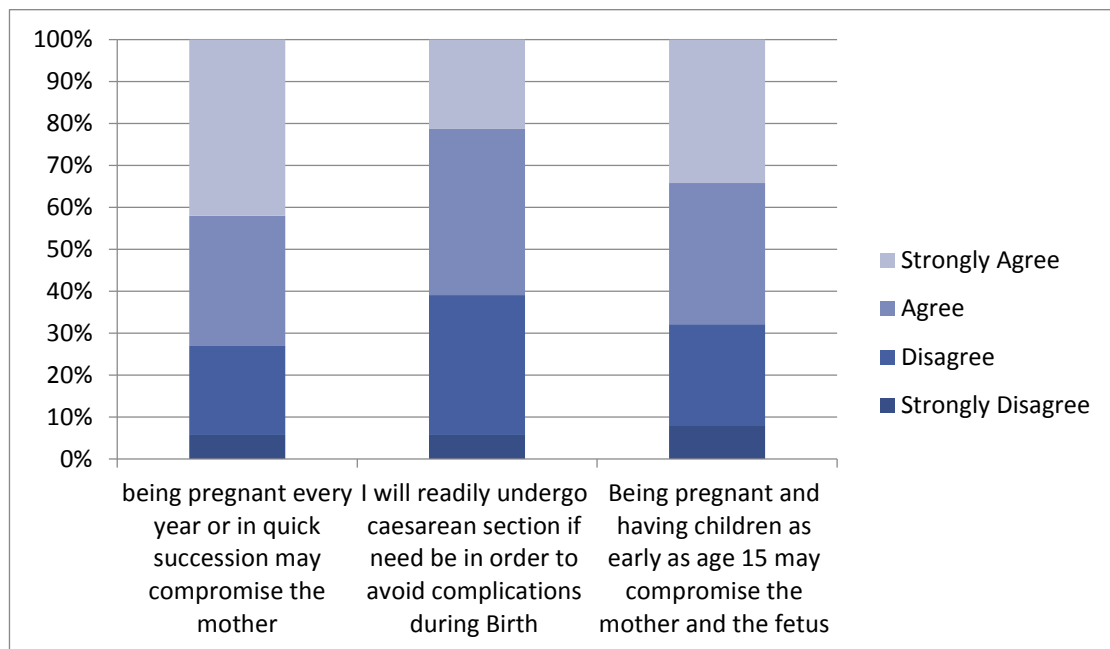


Figure 1 and 2: comparison between the responses to different statements in the questionnaire: knowledge section "adopted from the Eni-olorunda study"

The last seven questions were for measuring their attitude towards risk factors related to adverse pregnancy outcomes. (Figs 3 and 4)



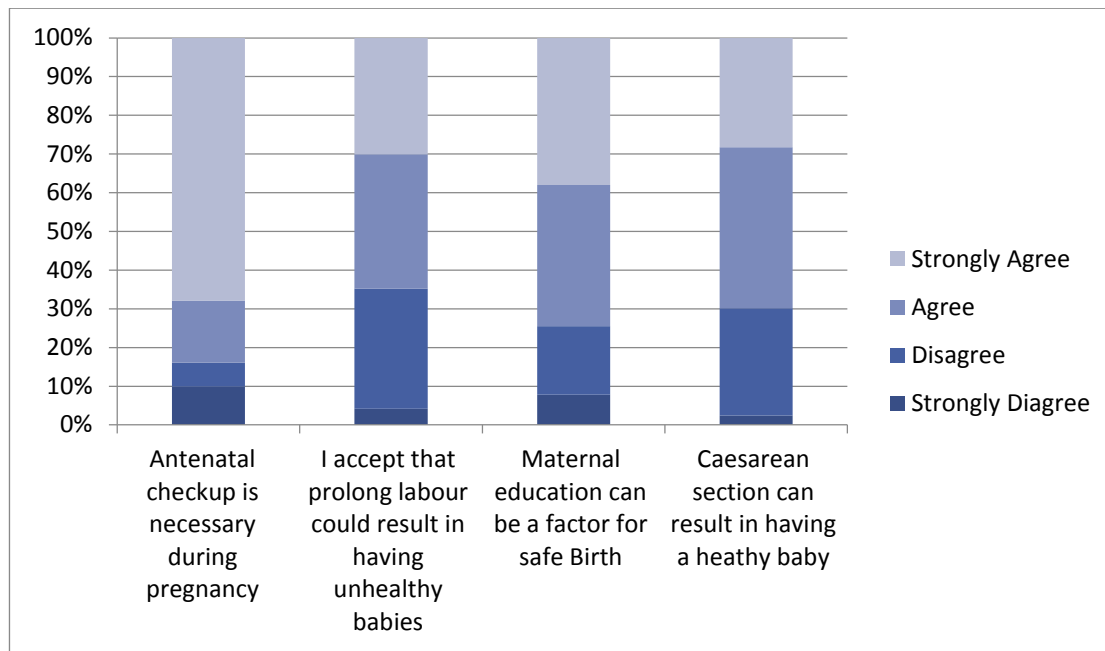


Figure 3 and 4: comparison between the responses to different statements in the questionnaire: attitude section "adopted from the Eni-olorunda study"

DISCUSSION

The research objective of our study was to measure mothers’ knowledge and attitude toward risk factors of developing adverse pregnancy outcomes. This objective was fulfilled by the survey we used in this study.

The results from the first part of the questionnaire revealed that most women have good knowledge about the risk factors of developing APO. About 80% of them agreed on that malnutrition during pregnancy can lead to a child with a low birth weight or pregnancy loss and exactly the same percentage recognized diabetes as a cause of having overweight babies.

The medical community now agrees on that giving birth to an infant with high birth weight is a well-known complication of Gestational Diabetes. This information was confirmed by the Centers for Disease Control and Prevention (CDC):

Gestational diabetes that is not controlled can give to overweight baby who in turn can lead to problems with the birth of the baby. A large baby born through the birth canal can injure nerves in their shoulder; break their collarbone, be more likely to become overweight or obese during childhood or adolescence, which in turn can give rise to type 2 diabetes⁵.

Interestingly, most respondents have extremely poor information about the significance of maternal education for better deliveries, in spite of the fact that the specimen was from educated women.

Maternal education is an important factor for safe delivery, as seen in the findings of Karlsen and Say study which proved that women with no education had 2.7 times the risk of maternal mortality than women with more than 12 years of education⁶. The same applied to statements about age during conception (less than 15 and older than 35) and the complications of prolong labour.

67 women - which represented one-third of the participants - disagree on the fact that pregnancy below 15 years old can lead to a child with developmental disabilities. However, adolescent pregnancy is not just associated with having a child developmental disabilities, but also increase risk of dying compared to women aged above 20⁷.

On the other hand, this study additionally revealed that numerous women (40%) did not see any issues in being pregnant at age more than 35 years; this was in contrary to other findings where maternal age was associated with having a number of APO related to infant health as pre-term birth and stillbirth⁸. Pregnancy over the age of 35 can also affect mother’s health with a significant increase in cesarean section rate⁹. Though other studies had speculated that this increase in risk of APO in this age group was the result of confounders such as hypertension and diabetes which increases in incidence with advanced age¹⁰.

The results concerning their attitude towards APO was variable. For example, results of one statement about ANC was satisfactory with more than 80% agreement on the necessity of ANC check-up during pregnancy.

However, this study additionally revealed that numerous women (40%) will refuse to have cesarean section if needed during labour. As far as we know, this is the first study where women's knowledge towards cesarean section was measured in Saudi Arabia.

No study has yet published any results concerning Saudi women knowledge and attitude towards non-elective cesarean section and the reasons behind it. With the rate of cesarean section being on the rise for the past 30 years¹¹, the need for studies investigating Saudi women knowledge about this surgical procedure is essential.

CONCLUSION

Although our sample was from an educated group; low knowledge level was detected in essential items. One reason we can suggest for this is that cultural behavior and attitude in Qassim region can have a great impact on many of our result, as most women in this example have mothers with lower education.

This study revealed that the public had extremely low knowledge regarding cesarean section, the importance of maternal age during pregnancy and how mother education can affect the delivery of her newborn.

Limitations of this study include the small sample size that may not represent the population under study. The other drawback was the use of a 4-point Likert scale which offer less variance to our answers.

One advantage was the many aspects that was not investigated in the Saudi population until now, which will need further assessment in the future.

RECOMMENDATION

We recommend that pregnant women should be educated in the importance of maternal education. The role of primary health care physicians in pre-natal education and recognizing the earliest manifestation of APO is crucial.

Women should talk thoroughly during her visits to the ANC about the need of a caesarean section in some specific situations. The safety of

this procedure and the need for it to avoid some complications during delivery should be emphasized upon.

For future research, we recommend to study the association between mothers' knowledge regarding these risk factors and having adverse pregnancy outcomes.

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