Knowledge and awareness about obesity complications in pregnancy among reproductive women

Abstract

Background: obesity in general predisposes expected to various noncommunicable diseases but its awareness in regards to the complications posed by it in reproductive women is underseen.

Method: cross sectional study using an structured questionnaire.

Goal : To access the knowledge and awareness about complications of obesity in pregnancy among reproductive women

Statistical analysis used: Data was entered in excel spreadsheet and analysed using SPSS version 16.

Results: Majority of the participants [129 (86%)] knew that obesity affects reproductive health causing problem problems like just gestational diabetes mellitus GDM [136 (90.6%)], difficulties during labour, higher Chance of Caesarean [91(60.6)] section, Increased risk for hypertension [120 (80%)] infertility [53 (35.3%)], during pregnancy. Almost all of them know That obesity can increase problems in pregnancy for both mother and for the baby. Majority of them we are not sure if obesity causes increased chance of Foetal malformations [75 (50.2%)]Increased bleeding after delivery[103 (68.8%)]Most of them don't know that obesity can cause increased bleeding after delivery, stillbirth[125 (83.3%)], miscarriage[111(74%)] , difficulties in Ultrasound examination of the abdomen[81 (54%)]Most of them thought that obesity does not cause difficulties in measuring BP [79 (52.6)], delivery of big baby [98 (65.3%)], premature delivery [56 (37.3%)]

Conclusion: Generating Awareness about obesity and its complications in pregnancy is required to prevent those complications in future and bring behavioural and lifestyle modification for sustainability in the long run.

Keywords: obesity, complications, awareness, women, reproductivehealth, education

INTRODUCTION

The prevalence of obesity is rocketing, with its wide arsenal it poses one of the biggest threats towards mankind. Obesity being a rapidly growing problem in India like elsewhere, and maternal obesity not being an exception is also taking a leap. As per the recent national family health survey[1] (NFHS-5) 41.6% of women in Tamilnadu where obese which is almost 26% more than the previous NFHS-4, which also followed the same pattern from the previous enough NFHSs. This situation is serious in both rural and urban population but urban being far more serious in urban population with 43.3 being obese or overweight.

Obesity predisposes as a factor for various diseases on the long run. Reproductive women have effect in the form of poor reproductive outcomes. Extensive research and studies have been done regarding this and have found that 99 bill period obesity causes increased risk of infertility[2,3], miscarriage[4,5], preterm delivery[6], pre-eclampsia[7,8], and just stational diabetes metres[9] (GDM). And in intra and postnatal period increased risk of cesarean sections[10,11], prolonged labour[12], postpartum anaemia[13] as complications of obesity are seen.

Studies also have found that neonatal complications such as stillbirth[14,15], congenital[16,17] anomalies, macrosomia[6] as well as gynecological problems like risk of breast cancer and endometrial cancer[18] due to obesity[19].

Apart from these complications, during antenatal visits the post technical difficulties such as reduced ultrasound accuracy, requirement of larger cuffs for blood pressure measurement and difficulty in external electronic fetal monitoring[20] due to excess adipocytes deposition.

Very few similar studies have been done in the past. The current obesity epidermic reflects the deep-rooted influence of cultural practices in the society which prevents behavioral changes among people in the developing world.[21,22] Here is where Health education comes into play where it helps women enlighten the risks posed by the obesity and helps in understanding how few lifestyle and behavioral modifications[16] can reduce the threats posed by obesity, which If successful can reduce poor pregnancy outcomes.

Hence this study is done to assess the knowledge and awareness about complications of obesity in pregnancy among reproductive woman in a tertiary care Hospital. The study also helps to understand how far health education had come since the previous study was done

METHODOLOGY

The present cross-sectional study was conducted in obstetrics and gynecology department of Savita medical College and Hospital Chennai. A sample size of 135 participants was calculated at 95% confidence and 5% margin error. Adding a non-responsive rate of 11% of the total sample size was calculated as 150.

The study period was from January 25 to 20 June 2021. Institutional ethical committee clearance (IEC) Was applied and obtain before starting the study. The study population was chosen from the patients visiting the obstetrics and gynecology OPD. Any woman aged Greater > 18 years, and consenting to participate was enrolled in this study. Menopausal woman and those who are not willing to participate we are excluded from the study. All the participants Who took part in the study was briefed About the nature and the purpose of the study.

Data was collected using a structured self-administered questionnaires printed in English and Tamil. Questionnaire was distributed after describing the purpose of the study. Written consent was obtained through the questionnaire. Only the questionnaires in which the consent was filled properly were included in the study. The participants parachute participation is voluntary and confidentiality will be maintained.

The reliability of the questionnaire was determined in a pilot study among 10 non-randomly chosen participants who are not part of the main study. The cronbachs Alpha value of internal consistency of the questionnaire was found to be 0.82 indicating good level of reliability.

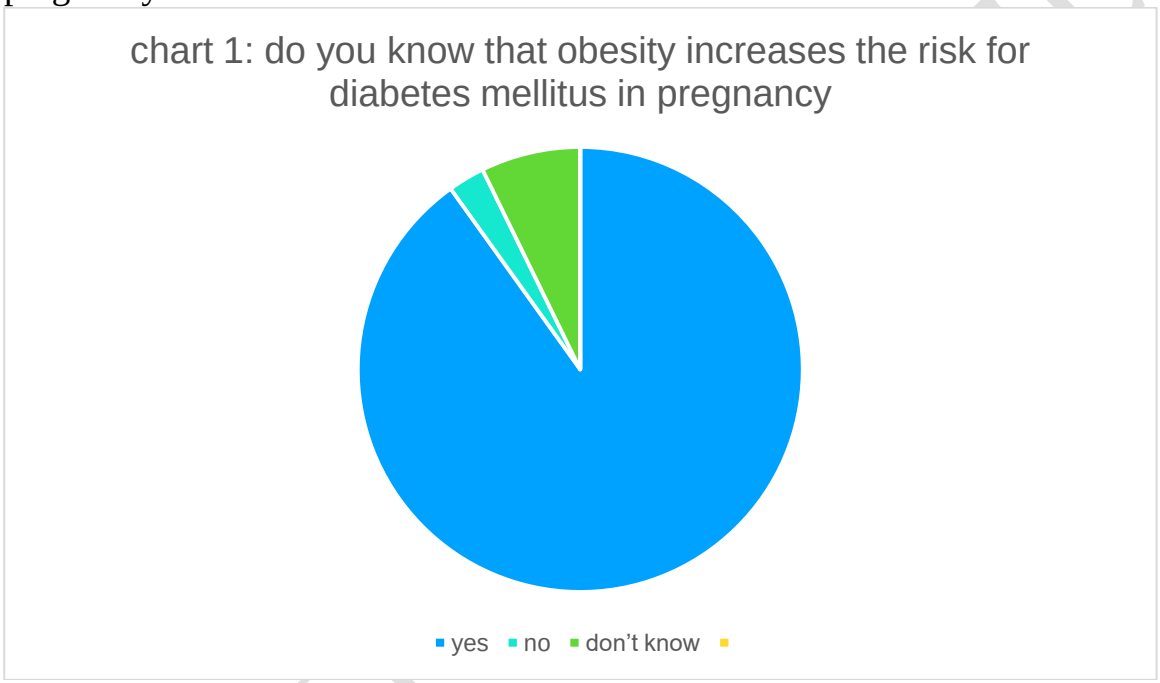
The questionnaire contained questions related to Awareness regarding complications of obesity in pregnancy during antenatal internal and postnatal periods. The questionnaire was devised and pre-tested based on previous research studies, current literature on the complications of obesity on reproductive outcomes and in consultation with a faculty member from the Department of obstetrics and gynecology.
Language validation of questionnaire for Tamil was done by translating it into Tamil and then back translating into English by two different language experts.

Awareness level of participants was categorized as poor, average and good if the cumulative score was in the range 0 to 4, 5 to 10 and 11 to 15 respectively. These categories were defined based on the total possible scores for “must know” and “nice-to-know” questions. The cut-off value for points below which performance was labelled as poor was based on the cumulative points allocated to “must know” questions in the questionnaire. Similarly, the lower limit for good performance was based on the cumulative points for “nice to know” questions made less from the maximum score of 15. The must know questions were questions related to awareness of study participants regarding role of obesity in conditions like GDM, pregnancy induced hypertension (PIH) and difficulties during delivery.

After collecting the data, it was entered in the Excel spreadsheet and was analyzed using statistical package for social science software (SPSS Inc., Chicago, ILIL) version 13 And frequencies and percentages were obtained and presented with graphs and charts.

RESULTS

Majority of the participants [129 (86%)] knew that obesity affects reproductive health causing problem problems like just gestational diabetes mellitus GDM [136 (90.6%)], difficulties during labor, higher Chance of Caesarean [91(60.6)] section, Increased risk for hypertension [120 (80%)] infertility [53 (35.3%)], during pregnancy.



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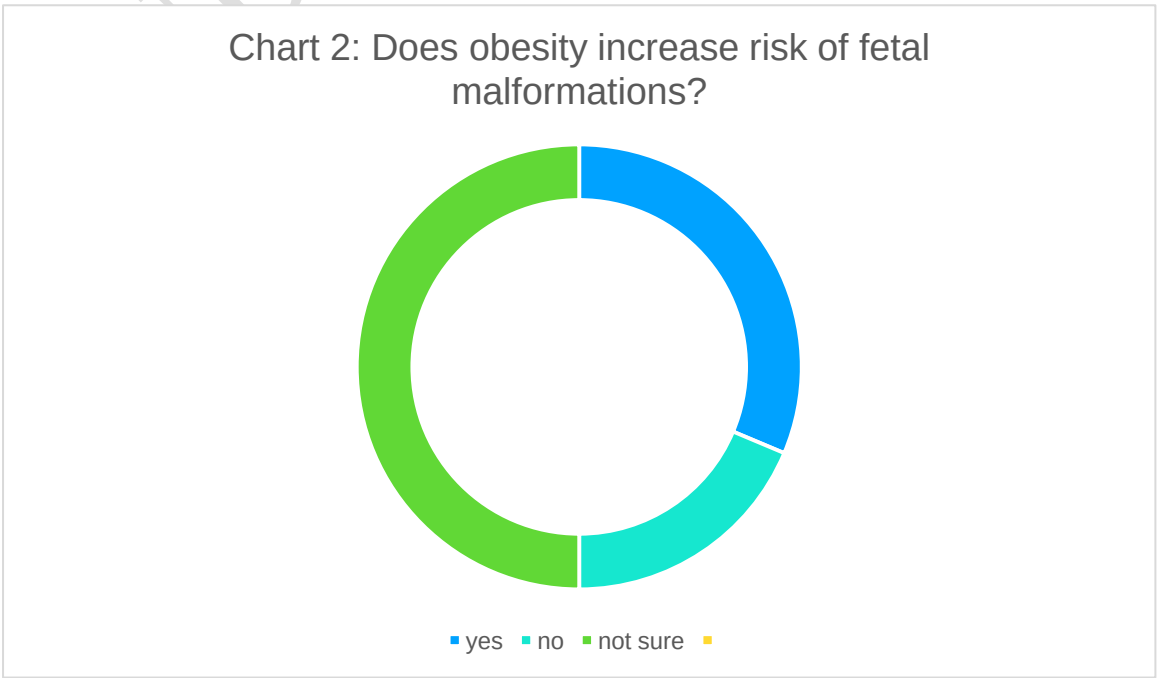
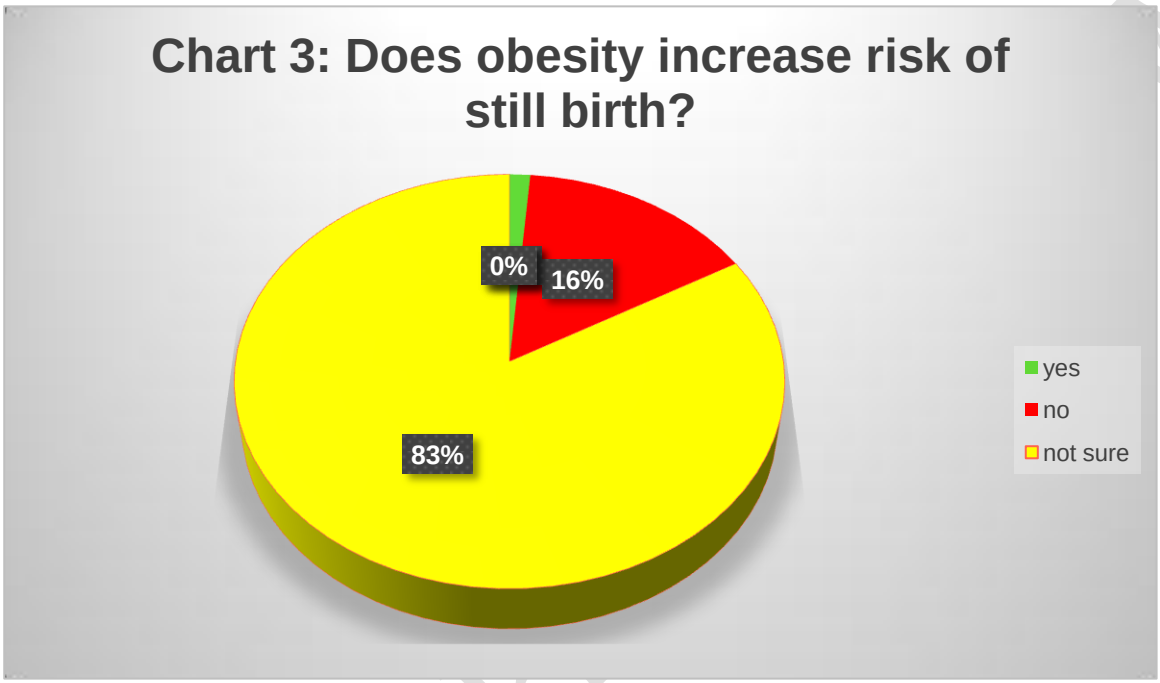


Majority of them we are not sure if obesity causes increased chance of Fetal malformations [75 (50.2%)] Increased bleeding after delivery [103 (68.8%)]

Most of them don't know that obesity can cause increased bleeding after delivery, stillbirth [125 (83.3%)], miscarriage [111(74%)], difficulties in Ultrasound examination of the abdomen [81 (54%)]



Most of them thought that obesity does not cause difficulties in measuring BP [79 (52.6)], delivery of big baby [98 (65.3%)], premature delivery [56 (37.3%)]

Table 1: Association between awareness and socio demographic variableAge of study participant

Socio demographic variables	Number of participants	Mean score
age		
18-25	37	9.31
26-35	57	7.52
36-45	56	9.63

Table 2: Association between awareness and socio demographic variable educational status of study participant

Socio demographic details	Number of participants	Mean score

Educational status		
Upto 10th standard	13	6.67
PUC	35	8.01
undergraduate	88	8.56
Postgraduate	14	9.15

Table 3: Association between awareness and socio demographic variable Number of previous pregnancies of study participant

Socio demographic details	Number of participants	Mean score
Number of previous pregnancies		
0	44	8.79
1	37	6.88
2	58	7.46
>3	11	8.43

DISCUSSION

In a dynamic population with very drastically increasing non communicable diseases with obesity being a major task force in posing one of the biggest threats towards the maternal services today.So, it is very crucial to improve women's awareness on risks reduce cost by obesity in order to prevent obesity during pregnancy and its complications (for that matter to anyone any time). Improvingwomen's awareness on theshort- and long-term risks of obesity to both self and their offspring's health is likely to be an important initial step in preventing obesity during pregnancy.[23]

The awareness of fetal anomalies was 23.7% in a study done in Chicago and 58% in a study done in Brisbane[23]Australia ,26.4% in a study done in Karnataka[31] in comparison to 34.1% reported by the participants in this study
Mostly in Karnataka observe role of obesity complications was much more for maternal the new natal complications which is not similar to our findings.
With an ultimate goal of antenatal care being birth of a healthy baby, awareness about neonatal complications helps them become more conscious about obesity and may prevent obesity before pregnancy.[23,27]

The study found that 73% woman knew that obesity adversely affect reproductive health outcomes which is slightly less than that reported by the previous study done in Karnataka[31] with 80% and 75% in Australia[23] and 49% in Chicago[24]. However,you level of awareness in the present study was good only in about 9% participants in comparison to 49.8% and 10% in Karnataka. While over our poor virus in the study has seen about 20% what is the point in comparison to 39.5% and 14% reported in the Nigeria[25] and Karnataka[31] -based studies respectively

A women of reproductive age will be responsive to education consequences of obesity and health information needs to be widely disseminated in the community to bring about behavioral modification.
There was anin awareness about increased risk of cesarian section delivery and infertility, Gestational diabetes mellitus and hypertension in comparison to previous studies. However, awareness regarding stillbirth, Premature deliveries and miscarriages, where more than those reported by the participants in this study. Other figures features of diseases likeGDM pregnancy inducedhypertension(PIH)

Educational status significantly influencing awareness among participants as observed in the study whichwas supported by findings of several other studies. This supports the fact that the female literacy is the main determinant to be considered before designing education campaign. only the study done in Nigeria[25] showed no association of level of education status of participants in the awareness of obesity as a risk factor adverse report in health outcomes

In comparison with previous study made in Karnataka[31] where the awareness level was found to be significantly decreased with increasing gravida. This phenomenon is getting changed where no decrease in knowledge with increasing gravida was not seen and either increasing knowledge was seen, indicating that more education interventions medical personnel regarding complications of obesity during pregnancy and in after repeated pregnancies. This enhances how important is the role of educating women during pregnancy. Lois et al,[30]where they easily lean towards healthy practices in concern towards the health of the baby so it's an ideal period to plan such interventions.

CONCLUSION

Surprisingly the results have improved since the previous study[31]. In comparison with previous study there is more intervention by the medical personnel between the pregnancies and it has helped gaining better understanding and awareness towards it. This knowledge is not necessarily to be imparted only to the obese women as this in Future may make them self-conscious about becoming obese and the problems they have to face.And this acts through word of mouth as a route, where its reached tovery minimal population but with a high success rate ,so on the long run it might create an impact. Obesity and it's complications to be covered along with other common and preventable diseases with sanitary measures under a subject called health education at school level. Multiple campaigns across the country greatly supports such cause.

Limitations of the study:
Done in an urban setting, so can't assess knowledge and awareness in the rural population. And as far creating awareness goes how far successful those are practiced

in real time can't be assessed in this study. BMI (body mass index) assessment among the participants (in order to create consciousness about their wight and help them correct if any needed) can't be done due to limited time.

COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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