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A Comparative Study to Assess the Knowledge and Attitude Regarding Intra Uterine Growth Retardation and its Prevention Among Antenatal Mothers in Rural and Urban Areas

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Abstract

Intra Uterine Growth Retardation is an important cause of fetal and neonatal morbidity and mortality. The present study was undertaken to compare the knowledge and attitude regarding intra uterine growth retardation and its prevention among antenatal mothers in rural and urban areas Khammam, Telangana. The objectives of the study were to describe the levels of knowledge and attitude, to compare the levels of Knowledge and attitude in rural and urban areas, to find out the association between knowledge and attitude scores with their selected socio-demographic variables. A quantitative survey approach and comparative descriptive design was used for this study. The sample for current study is antenatal mothers who were residing at Raghunadhapalem rural area and Ballepalli urban area, Khammam. The sample size was 100((50 rural+50 urban) and the sample was selected by non-probability convenience sampling technique. Data was collected by using structure interview schedule. The Findings revealed that the knowledge means of antenatal mothers in rural and urban areas were 14.10 and 16.68 respectively. Standard deviations were 3.29 and 3.3 respectively. The 't' calculated value was 3.89 which is significant at 0.05. The attitude means of antenatal mothers in rural and urban areas were 36.08 and 36.02 respectively. Standard deviations were 2.15 and 2.48 respectively. The 't' calculated value was 0.12 which is significant at 0.05. The study concluded that the level of knowledge is low in rural area by comparing with urban area. There is an increased need for awareness program regarding intra uterine growth retardation and its prevention in selected setting in order to promote the health of the fetus and the mother.

Keywords: *Intra Uterine Growth Retardation; Antenatal mothers; Rural area; Urban area; Knowledge; Attitude*

Introduction

Intra Uterine Growth Retardation is a condition, where there is a problem of foetus to reach its optimum growth according to the gestational age. Intra Uterine Growth Retardation is usually classified as symmetric and asymmetric. Symmetric growth restriction implies a foetus whose entire body is proportionally small. Asymmetric growth restriction implies a foetus who is undernourished and is directing most of its energy to maintaining growth of vital organs, such as the brain and heart, at the expense of the liver, muscle and fat [1].

Intra Uterine Growth Retardation may be caused due to the genetic factors like structural and chromosomal/ genetic anomalies congenital infections and inborn

errors of metabolism, maternal age, malnutrition, Low socioeconomic status, Strenuous physical work, short stature of mother, Parity (none and more than 5 births), Interval between pregnancies, Maternal medical disorders like hypertensive disorders, Diabetes (gestational and non-gestational), Maternal infections [2].

The maternal clinical features include poor maternal weight gain, decreased fundal height, decreased abdominal girth, oligohydramnios, decreased foetal movements, fatigue and headaches. The foetal manifestations include large head when compared to rest of the body, loose skin, with decreased body fat, decreased body temperature, decreased blood sugar and low birth weight [3].

Several methods have been used in the detection of intra uterine growth retarded foetus, including abdominal palpation, measurement of symphysis fundal height, ultrasound biometry with estimated foetal weight, Doppler ultrasound, non-stress test and measurement of amniotic fluid volume. The deterioration of foetal condition due to severe Intra Uterine Growth Retardation is usually accompanied by signs of cardiovascular changes that can be shown by venous Doppler studies [4,5].

Reducing the incidence of Intra uterine growth retardation requires a comprehensive global strategy, which must include improving maternal nutritional status, diet rich in iron, folic acid, calcium and protein, treating pregnancy-associated conditions such as pre-eclampsia (hypertensive disease of pregnancy) Gestational diabetes; calcium supplementation for hypertension, antihypertensive for mild to moderate hypertension and providing adequate maternal care, perinatal services and social support. Regular antenatal check-ups, Affordable, accessible, and appropriate health-care is critical for preventing and treating intra uterine growth retardation [6,7].

Encouraging mother to take proper rest and sleep, avoid strenuous exercises and avoid intake of any medications, which is not prescribed by the physician. Early identification of the Intra Uterine Growth Retardation through ultrasonography and physical examination is a pivotal step in the management of Intra Uterine Growth Retardation [8].

Once delivery is planned, the presence of a qualified neonatology team and a tertiary-level neonatal intensive care unit is an important initial step in managing growth-restricted neonates [9].

Need for the Study

According to WHO, 2018 report the world statistics of IUGR is observed in about 24% of new-borns; overall, nearly 75% of all affected new-borns are born in Asia--mainly in South-central Asia 20%, in Africa and in Latin America about 5%. In South Asia, about 74% children are not weighed at birth. Foetal growth restriction affects approximately 5-15% of all pregnancies in the United States and Europe. In developing countries like India, the occurrence varies widely between 10 and 55%, impacting about 30 million new-borns per year. According to WHO 2017, the mean IUGR rate is 23.8%, ranging from 9.4% in China to 54% in India [10].

According to UNICEF 2017 statistics the rates of IUGR respectively in India 28%, Bangladesh 50% and Pakistan 25%. In other Asian countries like Sri Lanka 19%, Cambodia 18%; Vietnam and the Philippines 11%; Indonesia and Malaysia 8%, 4%; Thailand 8%, and the People's Republic of China 6% [11].

According to UNICEF 2017, estimates that in the most developed countries 7% of babies are of low birth weight, whereas in less developed, and the least developed countries, rates of low birth weight deliveries caused due to IUGR increased from 16.5 to 18.6%, respectively, representing more than 22 million babies annually [12,13].

According to American journal of public health 2013, in Japan, the prevalence of pregnancy hypertension 19%, smoking habit 3% and foetal anomaly 3.5% were higher in Intra Uterine Growth Retarded cases than normal growth pregnancies [14].

According to International Journal of Medical Research in the year 2015-2016 approximately 30 million infants suffer from Intra Uterine Growth Retardation every year. The results shows that in Telangana, Hyderabad the incidence of IUGR is observed in about 24% of new-borns [15]. According to International journal of Paediatrics journal, 2019, in Telangana among 1699 deliveries, 211 (49.53%) were Term Intra Uterine Growth Retarded [16].

The purpose of this study is to highlight the clinical and translational gaps in our knowledge that hamper our collective efforts to improve the decline in the rates of Intra Uterine Growth Retardation. Based on literature investigator is interested to find out the antenatal mother's knowledge, attitude regarding Intra Uterine Growth Retardation and its prevention.

Methods: The Survey approach was used for the study with Comparative descriptive design. Study was conducted at Raghunadhapalem rural area and Ballepalli urban area at Khammam, Telangana. The sample for current study was antenatal mothers. The sample size was 100 ((50 rural+50 urban) and the sample was selected by non-probability convenience sampling technique. Data was collected by using structure interview schedule. Non- probability Convenience sampling technique was used. The data was collected by using structured interview schedule. Research variables used in the study was knowledge and attitude of antenatal mothers. The research tool was developed after doing extensive literature reviews of primary and secondary sources of data, the expert's suggestions were incorporated, and the research tool is organized into 3 sections (Socio-demographic data, knowledge questions and attitude rating scale).

Results

This chapter deals with analysis and interpretation of the data collected from 100 samples to compare the knowledge and attitude regarding Intra Uterine Growth Retardation and its prevention among antenatal mothers in rural and urban areas, Khammam, Telangana.

Table 1: Distribution of levels of knowledge among antenatal mothers in rural and urban areas (n=100).

Levels of knowledge	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Inadequate knowledge (0-33.3%)	05	05	05	05
Moderately adequate knowledge (33.4-66.6%)	41	41	41	41
Adequate knowledge (66.7%-100%)	04	04	04	04
Total	50	50	50	50

The above table shows the comparison of levels of knowledge among Antenatal mothers in rural area among 50, Majority of them 82% had moderately adequate knowledge, 10% had inadequate knowledge and 8% had adequate knowledge. Whereas in urban area among 50, Majority of them 70% had moderately adequate knowledge, 28% had adequate knowledge and 02% had adequate knowledge.

Table 2: Distribution of attitude scores of antenatal mothers in rural and urban areas (n=100).

Levels of Attitude	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Favorable Attitude (66.7%-100%)	50	100	50	100
Total	50	100	50	100

The above table shows the comparison of attitude scores of antenatal mothers in both rural and Urban area 100% had favourable attitude and none of them had moderately favourable and unfavourable attitude.

Table 3: Difference in levels of knowledge between rural and urban areas (n=100).

Knowledge Levels	Mean	Standard deviation	Mean difference	't' calculated value	't' Table value	Significance
Rural	14.10	3.29	2.58	3.89	3.37	S*
Urban	16.68	3.3				

S: Significant at 0.05*

The above table describe that the knowledge means of antenatal mothers in rural and urban areas were 14.10 and 16.68 respectively. Standard deviations were 3.29 and 3.3 respectively. The mean difference was 2.58. The unpaired 't' calculated value was 3.89.

Table 4: Difference in attitude scores between rural and urban areas (n=100).

Attitude scores	Mean	Standard deviation	Mean difference	't' calculated value	't' Table value	Significance
Rural	**36.08**	**2.15**	**0.06**	**0.12**	**3.37**	**NS**
Urban	**36.02**	**2.48**				

Non-Significant at 0.05

The above table describe the attitude means of antenatal mothers in rural and urban areas were 36.08 and 36.02 respectively. Standard deviations were 2.15 and 2.48 respectively. The mean difference was 0.06. The unpaired 't' calculated value was 0.12.

Discussion

In the present study the comparison of knowledge levels of antenatal mothers in rural area regarding IUGR and its prevention among 50, Majority of them 82% had moderately adequate knowledge, 10% had inadequate knowledge and 08% had adequate knowledge and in Urban area among 50, Majority of them 70% had moderately adequate knowledge, 28% had adequate knowledge and 02% had adequate knowledge. The knowledge mean of rural and urban areas were 14.10 and 16.68 respectively. Standard deviations were ± 3.29 and ± 3.3 respectively. The mean difference was 2.58. The unpaired 't' calculated value regarding knowledge was 2.58, which is more than table value (3.37) at $p<0.001$ level.

Regarding comparison of attitude scores of antenatal mothers in both rural and urban areas 100% of them had favourable attitude, and none of them had moderately favourable and unfavourable attitude scores. Related to the attitude of rural and urban areas were 36.08 and 36.02 respectively. Standard deviations were ± 2.15 and ±2.48 respectively. The attitude unpaired 't' calculated values are 0.06, which is less than table value (3.37) at $p<0.001$ level. The unpaired t-test has statistically proved that H1 is rejected.

Since expected values are smaller than <5 chi square cannot be calculated. Hence proportions are calculated.

Implications

Intra uterine growth retardation is a condition, in which the baby is smaller than it should be because it is not growing at a normal rate inside the womb.

The investigator has drawn the following implications from the studies which are vital concern for education, practice, community health practice, administration, and research.

The educators can enable and incorporate the knowledge on the intra uterine growth retardation and its prevention among antenatal mothers. Educators can conduct workshops, seminars regarding intra uterine growth retardation and its prevention and also educate the antenatal mothers and their family about preventive measures

The findings suggest that there is an increased need for awareness program regarding intra uterine growth retardation and its prevention in selected setting in order to promote the health of the foetus and the mother.

Thus, researcher should conduct studies related to fill the gaps in levels of knowledge and attitude regarding intrauterine growth retardation and its prevention. Hence this will enable the antenatal mothers to follow the proper care during their pregnancy avoiding the risk of developing and giving birth to a intra uterine growth retarded baby.

Recommendations

- Similar studies can be replicated on larger samples for wider generalization of the findings.
- A similar study can be conducted at different settings.
- A similar study can be conducted by using different intervention.

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