

## Nutrition Congress 2015: Pregnant women's dietary practices in relation to anthropometric status of infants aged 0-6 weeks in Vhembe district, Limpopo Province- Mushaphi L F- University of Venda

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### Abstract

**Background:** Diet of the many South Africans consists of porridge as staple food which is typically consumed with vegetables, legumes and a little amount of animal derived food. Poor consumption of balanced diet could end in poor weight gain during pregnancy increasing the danger of premature delivery, low birth weight and birth defects.

**Aim:** To work out the maternal dietary practices in reference to anthropometric status of infants aged 0-6 weeks.

**Setting:** The study was carried out in four clinics of Vhembe district, Limpopo Province, South Africa.

**Methods:** A cross sectional expressive study was passed out amongst two hundred and forty (240) pregnant women and their toddler were nominated conveniently from four clinics in Vhembe District. Anthropometric measurements were taken following standard techniques. Data on dietary practices and socio-demographic information were collected using a questionnaire, permission and clearance were obtained and participant's rights were respected.

This study is the first to provide data on the dietary practices of pregnant women, association between the mother's weight during pregnancy and their infant's weight in rural villages of South African. The finding revealed that most of the participants in the current study were very young. Adolescent often lack adequate knowledge of exactly what is needed nutritionally during pregnancy. Perhaps this could be attributed to the fact that adolescent at stage require a varied diet in order to meet the increased nutrient and energy requirements of pregnancy and support adequate weight gain. The findings revealed that majority of participants in the current study gained poor weight during pregnancy. Poor women tend to gain less weight during pregnancy, have lower micronutrient intake and this could have detrimental effects on the pregnancy outcome.

The findings of the study revealed that majority of the participants were unemployed. Surprisingly there is no significant difference between the employment status of the mother and Z-scores of children (WAZ ( $p=0.700$ ), HAZ ( $p=0.553$ ) and BAZ ( $p=0.728$ )). However, women living in low socio economic status are often malnourished before pregnancy due to inadequate food intake putting them at

higher risk of having low birth and preterm delivery. Nevertheless, unemployment did not affect the z-scores of the infants in the current study. These findings are congruent with previous study done in Nigeria which indicated that majority of pregnant mothers were unemployed. In addition, poor weight of the pregnant women influenced by the socio-economic status of her family has a direct effect on the birth weight of her child. About 41.7% of the participants in the current study spend R1000-R2000 on food while 36.7% of the participants spend R500-R1000 on food. Perhaps this variation on money spend on food could be attributed to the household income and employment status of the members of household. Studies have shown relationship between dietary diversity, socioeconomic status and demographic characteristics.

The findings of the study revealed that participants ate three meals per day. Regular meals are not expected to be skipped during pregnancy, nutritious foods are directly linked to higher chance of a normal birth weight, improving brain development and reducing the risk of many birth defects. "Post-partum outcomes for mother and infants are linked to maternal consumption habits during pregnancy.

In addition, one of the main meals in the current study comprised of starchy foods. Starchy foods eaten in the present study include porridge, rice, samp and bread. The findings of the current study correlate with the study done in Ethiopia. "Adequate consumption of starchy food during pregnancy is known to support rapid growth of the foetus and also assist in maintaining weight gain during pregnancy". The participants in the current study ate meat, legumes and dairy product. "Outcome of the pregnancy depends on the mother's health. Consumption of protein food during pregnancy is vital to support growth of the foetus and this is linked to low risk of neonatal death and birth defects". These findings are congruent with study done in Nigeria where it was reported that participants ate meat and meat products including those from home owned animals.

The most indigenous vegetables consumed in the current study were Delele, Vowa and Phuri. Access to indigenous food has been shown to be key determinant of

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dietary adequacy and consumption of these foods high in iron content. "Access to indigenous food has been shown to be key determinant of dietary adequacy therefore consumption of these foods is a key consideration during pregnancy".

The findings of the study revealed that participants had pica during pregnancy. Consumption of non-food items in large quantities is common among pregnant women in rural villages and this could cause intestinal obstructions interfering with the absorption of essential nutrients which are vital for the growth of the foetus [26]. This is due to the fact that women lack of knowledge concerning the effects of pica on the foetus. Non-food items consumption during pregnancy can lead to malnutrition and deficiencies of vitamins and minerals. These findings are congruent with previous studies which indicated that pregnant women have been practicing pica and this can cause complication during pregnancy.

During pregnancy women are restrict to eat certain food items according to culture and this could result in fewer food consumption which in turn can lead to underweight and overweight. Surprisingly our study indicates negative correlation between mother's BMI and the infant's WAZ ( $r=-0.48$ ;  $p=0.515$ ). These indicate that the mother's weight during pregnancy is not only the contributing factor to infant's weight during birth. Factors such as dietary practices during pregnancy should be considered when studying the relationship between the mother's weight during pregnancy and their infants during birth. However, women who have poor weight gain during pregnancy face greater risks of delivery preterm babies and their infants set off on a weaker development path, both physically and intellectually.<sup>25</sup> Furthermore, Girls born with low birth weight are more likely to become poorly nourished children and poorly grown women and are, therefore, likely to give birth to low birth weight infants resulting in the vicious cycle of malnutrition [14]. In addition, nutritional status of mothers is one of the most important factors of foetal growth and development.

**Results:** 45 percent of the study participants have eaten carrots, bananas, apples, spinach, cabbage and beetroots during pregnancy while 26.7% of the study participants reported that they need eaten carrots, oranges, bananas, apples, spinach, cabbage and beetroots during pregnancy. The majority of participants (91.7%) received folate and iron supplements while 8.3% received iron, folate and calcium supplements during pregnancy. Half of the participants at the time of pregnancy had normal BMI, 13.3% were underweight, 30% were observed overweight and 6.7% were observed obese. More than third quarter of infants (80%) at birth had normal WAZ ( $-1SD$  to  $\leq +2SD$ ), 6.7% of infants were underweight ( $<-3SD$  to  $<-2SD$ ) while 11.7% of infants were mildly underweight ( $-2SD$  to  $<-1SD$ ).

**Conclusion:** Maternal age and dietary practices during pregnancy have a significant impact on the birth outcomes.

The mother's weight during pregnancy is not the only the contributing factor to infant's weight during birth. Factors such as dietary practices during pregnancy and socioeconomic status need to be considered when studying the association between their mother's weight during pregnancy and their infants. Prevalence of underweight, wasting and stunting is due to low weight gain during pregnancy and improper maternal diet (imbalanced diet). Mothers who were undernourished during pregnancy had given birth to low birth weight babies.

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