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ORIGINAL ARTICLE

Pattern of Dietary Restriction in Pregnancy and Lactation in Mothers of Children with Severe Acute Malnutrition

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ABSTRACT

Objective: To identify the misconceptions related to food during pregnancy and lactation in mothers of Severe Acute Malnutrition children.

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Study Design: Cross sectional study.

Place and Duration of Study: The study was conducted at Nutritional Rehabilitation and Stabilization Centre, Children Hospital & Institute of Child Health, Multan from 1st June 2018 to 1st June 2019.

Material and Methods: Total 230 cases were enrolled by simple random sampling. All were mothers of Severe Acute Malnutrition children at Nutrition Rehabilitation Centre of Children Hospital & Institute of Child Health, Multan. A questionnaire was deigned earlier and used to collect data.

Results: In this study 80% females had myths related to restrictions of food. Most of the nutritional deficiencies in babies during neonatal and infancy period are due to mother's avoidance of specific foods containing essential nutrients for both baby and herself. 40% children of the mothers enrolled were categorized as Medium Acute Malnutrition and 40% were diagnosed as Severe Acute Malnutrition.

Conclusion: It is concluded the majority of females believed in myths and misconceptions regarding various nutrient rich foods during pregnancy and lactation, thus they avoid the intake of these foods. This results in nutritional deficiencies in both the mother and the fetus. As beginning of a healthy life for a newborn depends on maternal diet, the nutrient intake during first golden 1000 days is essential for optimum child growth and development.

Key Words: *Food taboos, Pregnancy, Lactation, Malnutrition, Myths, Medium acute malnutrition, Severe acute malnutrition*

INTRODUCTION

Pregnancy is a crucial phase of life for both the fetus and mother.¹ A balanced diet and nutritional intake ensure enough reserves to meet numerous physical adjustments, placenta increase and hormonal changes during pregnancy. Pregnant

ladies with adequate nutrients reserves, healthy eating habits and normal body weight have greater probabilities of a healthy pregnancy and better fetal development.²

The requirement for essential nutrients increases during gestation as both the mother and fetus are

going through periods of rapid growth. Commonly pregnant ladies require additional 500 kilocalories/day and the daily requirement of folate also increases up to 600 µmg/daily.^{3,4} It is frequently noticed that in pregnancy the craving and longing for certain food increases in most of the females. At the same time some pregnant females may also experience aversions and precise dislike for certain foods, while others show craving and longing for certain foods. Every country and culture harbors distinctive attitudes towards meals, some of these concepts are entirely based on myths and investigations can offer beneficial insights towards certain foods and ingredients.⁵

Malnutrition and undernourishment is predominant in third world countries. The fundamental purpose of this study was to discover a few myths and nutritional taboos amongst mothers of malnourished children. The main purpose of avoiding such taboos foods is to prevent abortion, excessive bleeding and miscarriage. For the protection of newborn and infant, similar food myths are common in different cultures.⁶

In India there is a common myth that eating papaya in pregnancy may cause lapse and is extremely harmful for pregnant women, where as in reality raw papaya is a substantially good source of nutrients.⁷ Similarly, it is commonly believed that foods high in spices consumed in pregnancy and lactation causes heartburn; but projects no danger to fetus^{8,9}. BMI less than 19 during pregnancy is known to be a contributory factor for elevated intrauterine growth restriction (IUGR) rates in developmental countries. IURG is additionally related to intellectual and neural growth deficiencies for the babies, high risk of disabilities nephrological disease.¹⁰ Malnutrition is still an alarming problem in third world countries and is a significant cause for infection and high mortality in mothers and infants.¹¹

MATERIAL AND METHODS

A cross sectional study was designed and conducted at Children Hospital and Institute for Child Health Multan for 12 months; from 1st June 2018 to 1st June 2019. Total 230 cases were selected by simple random sampling. All the selected cases were mothers of children suffering from Severe Acute Malnutrition (SAM) registered

at Stabilization center of Children Hospital & The Institute of Child Health, Multan. Severe acute malnutrition was defined by a very low weight for height (below -3z scores of the median according to WHO growth standards), by visible severe wasting, or by the presence of nutritional edema.² A questionnaire was designed earlier and was used to collect data regarding the sociodemographic information, cultural dietary beliefs, taboos, myths and misconception of food intake during pregnancy and lactation.

Consent was obtained from the participants and only adult females more than 18 years of age were included in the study. Those females who refused to give consent and were less than 18 years of age, and whose children were diagnosed as not malnourished were excluded from this study.

Total 230 females were interviewed and their answers were recorded on a predesigned questionnaire by the trained nurses of Stabilization Centre. A detailed and thorough history along with complete anthropometry was done to calculate BMI of all females. Severe acute malnutrition is defined by a very low weight for height (below -3z scores of the median WHO growth standards), by visible severe wasting, or by the presence of nutritional edema.² The collected data was entered and later analyzed by using SPSS version 21.0.

RESULTS

Total 230 women from rural and urban areas of Multan were interviewed and their mean age was 24 ± 2 years. Females who were more than 18 years old were enrolled in the study. Most of the women were between 24-30 years age group.

Among the enrolled women; 75.22% were illiterates. In this study it was found that 80% women had one or more myths related with certain foods. The literacy status of females has no impact on the myths related to food.

The study shows that common causes of malnutrition in babies during lactation are mother's avoidance of specific foods containing essential nutrients for both the child and herself. Most of the mothers 192 (83.48%) have myths regarding eggs, as eggs are considered "hot foods" during pregnancy.

TABLE1: Distribution of study population according to education status, residence and nutritional status

Characteristics	Frequency (n)	Percentage
Educational status		
Literate	57	24.78
Illiterate	173	75.22
Residence		
Urban	60	26.09
Rural	170	73.91
Nutritional status of mothers		
Healthy weight	164	71.30
Under weight	54	23.48
Overweight	12	05.22

TABLE 2: Different myths during pregnancy present in study population

Foods	Myths	Percentage
During pregnancy		
Legumes, pulses, chickpeas	Cause gas	132 (57.39)
Meat (beef)	Cause pain	136 (59.13)
Eggs	"Hot food"	192 (83.48)
Saag	Causes bloating	115 (50.00)
Papaya	Miscarriage	132 (57.39)
Vegetables		
Bringles	Hot food	115 (50.00)
Cauliflower	Causes bloating	174 (75.65)
Potatoes	Causes heartburn	164 (71.30)
Dry fruit	"Hot food"	167 (72.60)
During lactation		
Banana	Causes pneumonia	156 (67.82)
Rice	Causes chest infection and cough	147 (63.91)
Eggs	"Hot food"	137 (59.56)
Milk	Causes constipation	67 (29.13)

It is most common practice that mothers 162 (70.43%) consider their breast milk to be poisonous for baby and 174 (75.65%) mothers discard colostrum milk and do not feed it to the child.

TABLE 3: Common practices during lactation

Characteristics	Frequency n (%)
Poisonous milk	162 (70.43)
Discard of colostrums	174 (75.65)
Aunt dip test	151 (65.65)

Most of mothers followed certain restrictions during pregnancy. Some mothers [163 (70.87%)] avoid breast feeding their babies after bath and wait to dry their hair.

Table 4: Restricted activities during pregnancy

Restrictions	Frequency n (%)
Mopping	115 (50.00)
Regular weight lifting	162 (70.43)
Funeral avoidance	181 (78.69)
Avoid newborn delivered	167 (72.61)
Avoid women with miscarriage	149 (64.78)
Avoid breast feeding after bath wait for drying hair	163 (70.87)
Cold water shower in summers	161 (70.00)

DISCUSSION

Food myths during pregnancies among rural women have been recognized as one of the major causes of malnutrition in both the child and the mother.^{12,13} Undernutrition is prevalent in developing countries. The basic aim of this study was to explore some myths and nutritional taboos among mothers of malnourished children. The studied subjects believed that pregnancy and lactation is a period during which women have to take special restricted diet.

This current study revealed that the main purpose of avoiding taboo foods was health consequences of mothers and their fetuses, such as miscarriage, abortion, excessive bleeding and also for the safety of their child during birth. Similar concepts and myths related to food were also found in many other cultures where women avoid many nutritious foods to evade unfavorable pregnancy outcomes i.e. hemorrhages during delivery, abortions and still births.¹⁴⁻¹⁷ Food restrictions and myths were slightly less common during lactating period as compared to pregnancy. Ali et al have shown in a hospital based study that after birth, first 21-30 days were considered crucial and most of the food restrictions were during this period.¹⁸ Our results also revealed that post-partum, lactating mothers were often advised not to take bath especially with cold water as it causes pneumonia in newborn.

In another study by Black et al., the educational status of females had no direct impact on their

beliefs regarding these food myths and similar findings were recorded in our study. Females follow and believe these myths regardless of their literacy status.¹⁹ Pregnant and lactating females have no to little understanding about the benefits and nutritional value of each food and these myths and taboos are often followed as per instructions of mother-in-laws, mothers and elders.²⁰

The prevalence of food myths and nutritional taboos observed in this study is very high as compared to studies in other regions of the world.^{17,21} Mohamad and Ling reported that 70.2% of the participants did not consume one or more food items due to certain myths related to that food, these results were quite high according to current study²⁰. Hot foods (47.1%) and cold foods (12.5%) were avoided by pregnant women, eating practices based on food myths were significantly high and most of the women follow these myths.²⁰ A similar study also stated the same that food considered "hot" were avoided during pregnancy because it is supposed to induce abortions and miscarriages whereas "cold" foods such as citrus foods were restricted during lactation to ensure adequate breast milk supply and to avoid chest congestion in newborn. Lactating females were often forbidden to consume foods that can induce diarrhea, colic and acidity in the baby.²¹

The foods that were commonly avoided and considered harmful for both fetus and mothers were egg (83.48%), cauliflower (75.65%) and dry fruits (72.60%) in our study. Similar results were also declared by a study in Nigeria where pregnant women were forbidden to eat eggs, peanuts and twin bananas as it leads to irregular menstruation or infertility, still birth and twin birth. In Nigeria, all pregnant and lactating females are supposed to avoid animal food and its by products i.e., such as meat, milk and cheese. This is a primary concern regarding food myths as the animal foods are major resources of high-quality protein which is essential for both mother and the fetus.²²

Another study shows that 84% women during pregnancy and lactation avoid food like beef, eggs, brinjal, fish and citrus fruits which are considered to be hot and cold respectively. These foods have a bad impact on newborn and in this study these numbers were higher as compared to

previous studies.²³ It is also believed by the participants in our culture that certain fruits like papaya can cause miscarriage 132 (57.39%). Same results were obtained in a study conducted in India where people believed that papaya is unsafe for consumption of pregnant women.²⁴

Most of the pregnant and lactating females have insufficient information about certain foods and their benefits; therefore, they are forced to believe these myths and traditions as narrated by their elders.²⁵ Proper nutritional information and education during pregnancy and lactation by nutritionist must be provided in maternal and newborn centers. De-mything these restrictions should be done to ensure adequate and well-balanced diet for both mothers and newborns.

CONCLUSION

It is concluded the majority of females believed in myths and misconceptions regarding various nutrient rich foods during pregnancy and lactation, thus they avoid the intake of these foods. This results in nutritional deficiencies in both the mother and the fetus. As beginning of a healthy life for a newborn depends on maternal diet. The nutrient intake during first golden 1000 days is considered essential for optimum child growth and development.

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