

Original Research Article

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## A Study of Anthropometry Measurement of Shariya Tribe Lactating Women in Baran District of Rajasthan, India

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### ABSTRACT

The present study was conducted with an objective to assess Anthropometry measurement of lactating women. The study was conducted at Kishanganj and Shahbad panchayat samitie of Baran district of Rajasthan. One twenty participants range between 18-45 years lactating women (0-12 months). The data was collected in Again 60-60 lactating women from two panchayat samities Kishanganj and Shahbad was selected for imparting nutritional education from the above 120 sample. The data obtained was analyzed using frequency, mean and percentage. All respondents selected (lactating women 0-12 months) were lying in the age group of 18-45 years. Among them 70% lactating women (0-6 months) were in the age group of 15-25 year and in similar percentage of women (23.33% and 26.66%) were in age of 26-35 year. The anthropometric indices like mean, height and mean weight of lactating women was 154.03 cm (0-6 months), 155.18 cm height (6-12 month) and 49.36 kg (0-6 month) and other 52.08 kg weight (6-12 month) of lactating women respectively and Distribution of lactating women on the basis of BMI showed that although 66.66% (0-6 month), 61.66% (6-12 month) respondents were in normal range but 38.33% were under weight. It can be concluded that the nutritional knowledge of the participant was very low. Anthropometric measurements showed that majority of the lactating women were underweight.

#### Keywords

Anthropometric measurement, Shariya tribe lactating women.

#### Article Info

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### Introduction

About half of the World's total population of indigenous people, often referred as tribals, is living in India. The tribal population in Indian language known as "Adibasi", stands for original inhabitants, constitutes 8.1 per cent of the total Population of India. A general feature of the tribal population of the country is their exclusive geographical habitat. But there are certain communities among them, who live in more or less total isolation in a life style, which shows only a little change from that of centuries ago. The Shariya is one of those primitive tribes inhabiting 'Baran'

district in the State of Rajasthan. The total population of Shariya is 79,312 with sex ratio of 951 females per 1000 males. A majority (93%) of the Shariya population is inhabitants of Kishanganj and Shahbad blocks of Baran district. The health problems of any community are influenced by interplay of various factors including social, economic and political ones. The common beliefs, customs, practices related to health and disease in turn influence the health seeking behavior of the community. There is a consensus agreement that the health status of

the tribal population is very poor and worst among the primitive tribes because of their isolation, remoteness and being largely unaffected by the developmental processes going on in the country. Food is a pre-requisite not only for attaining good health but also for maintaining adequate growth and body equilibrium (Rao *et al.*, 2006). The poor are caught in a vicious cycle of: poverty breeds ill-health, and ill-health keeps poor people poor (Wagstaff, 2000). Kapoor *et al.*, (2009) studied the Shariya, a primitive tribe of central India, with an objective to assess the nutritional profile and associated socio-economic factors. A cross sectional sample of 364 adult males and females aged 18-60 years was studied. Stature, body weight, skin fold thickness, circumferences, fat percent, grip strength and blood pressure were measured on each subject. Body mass index, Trunk extremity ratio and Grand mean thickness were computed statistically. A higher percentage of chronic energy deficient (CED) males and female subjects indicated a poor nutritional status of Shariya. A few overweight males were also found. More females were found to be undernourished than males as per the cut off values of MUAC.

All the subjects were found to have normal blood pressure with the exception of a few hypertensive cases among males in overweight category. An influence of changing life style among Shariya males was more noticeable. Bakheta and Jain (2007) conducted a study on 100 lactating women. In their study height, weight, mid-upper arm circumference and skin fold thickness of the subjects were measured by standard methods and then compared with standards of ICMR (Indian Council of Medical Research) and NCHS (National Center for Health Statistics). Study reported that height and weight of the subjects were higher than the ICMR standard and weight, mid – upper arm circumference and skin fold thickness were lower than the

NCHS standard. A positive co-relation between distance covered with height ( $r = 0.319$ ) and weight ( $r = 0.205$ ) suggests that the lactating women with proportionately higher height and weight had better physical performance.

## **Materials and Methods**

The study was conducted in Kishanganj and Sahabhad panchayat samities of Baran district (Rajasthan). The random selection method was used in selection of village as well as sample. The list of villages was obtained from tehsil head quarter of Kishanganj and Shahbad. From the list the villages namely Kapri kheda, Bilasgar-I, Bilasgar-II, Bhanwar garh, Tejaji Ka Danda, Kamdha, Kakarda, Ranibadod-I, Ranibadod-II were selected from Kishanganj and Seemlya, Khushiyara, Mamoni-I, Mamoni-II, Mundiyyar, Deori, Shahbad, Kotra, Khushalpur, were selected from Shahbad respectively. The anganwadi centers of each village were visited personally. It consisted of particulars related to the respondents of lactating women *i.e.* name, age, Anthropometric measurements: - with the determination of weight, height. The values were used to calculate the Body Mass Index (BMI). The obtained values were interpreted as per the classes of BMI given by WHO (2000).

## **Results and Discussion**

All respondents selected (lactating women 0-12 months) were lying in the age group of 18-45 years. Among them 70% lactating women (0-6 months) were in the age group of 15-25 year and in similar percentage of women (23.33% and 26.66%) were in age of 26-35 year. The anthropometric indices like mean, height and mean weight of lactating women was 154.03 cm (0-6 months), 155.18 cm height (6-12 month) and 49.36 kg (0-6 month)

and other 52.08 kg weight (6-12 month) of lactating women respectively and Distribution of lactating women on the basis of BMI showed that although 66.66% (0-6 month), 61.66% (6-12 month) respondents were in normal range but 38.33% were under weight (Table 1). In a study conducted by Ongosi *et al.*, (2010) of the lactating women (98%) had a BMI 18.5kg/m<sup>2</sup>, Only two per cent women had a BMI slightly less than 18.5kg/m<sup>2</sup>, *i.e.* they had 18.4kg/m<sup>2</sup> and 18.2kg/m<sup>2</sup> respectively. On the other hand, ten per cent

women had a BMI above 27.0 kg/m<sup>2</sup> with the highest BMI being 29.6kg/m<sup>2</sup>, thus giving the study group a mean BMI of 23.9kg/m<sup>2</sup>. The results of the anthropometric indices are in line with study conducted by Mittal (2013), who found that the mean height, weight, BMI and waist hip ratio of the samples were 152±5.9 cm, 49.3±9.4 kg, 21.12±3.7 kg/m<sup>2</sup> and 0.79±0.04 respectively, of the rural women in age group of 18-40 years (Tables 2 and 3).

**Table.1** Percentage distribution of respondents in view of general information

Age	0-6 Month n=60	6-12 Month n=60	Overall N=120
15-25 year	70% (42)	66.66% (40)	68.33% (82)
25-35 year	23.33% (14)	26.66% (16)	25% (30)
35-45year	6.66% (4)	6.66% (4)	6.66% (8)

**Table.2** Per cent prevalence of malnutrition among the lactating women (N=120)

Anthropometry indices	Type of malnutrition	0-6 Month N=60	6-12 month N=60
<b>BMI (kg/m<sup>2</sup>)</b>			
<b>&lt;18.50</b>	<b>Underweight</b>	<b>33.33% (20)</b>	<b>38.33% (23)</b>
<16.00	Severe thinness	6.6% (4)	6.6% (4)
16.00-16.99	Moderate thinness	6.6% (4)	10% (6)
17.00-18.49	Mild thinness	20% (12)	33.33% (13)
<b>18.50-24.99</b>	<b>Normal Range</b>	<b>66.66% (40)</b>	<b>61.66% (37)</b>
<b>&gt;25.00</b>	<b>Overweight</b>	-	-
25.00-29.99	Pre-obese	-	-
<b>&gt;30.00</b>	<b>Obese</b>	-	-

Source: World Health Organization, 2000

**Table.3** Mean ± SD value of anthropometric indices lactating women (N=120)

	0-6 Month N=60	6-12 Month N=60
<b>Anthropometry indices</b>	<b>Mean ± SD</b>	<b>Mean ± SD</b>
<b>Height(cm)</b>	154.03±2.67	155.18±3.93
<b>Weight (kg)</b>	49.36±2.19	52.08±3.00
<b>BMI(kg/m<sup>2</sup>)</b>	20.77±0.88	21.63±0.68

It can be concluded that the nutritional knowledge of the participant was very low. Food consumed by the lactating women was

inadequate in most of the food groups when compared with balance diet and inclusion of protein and fruit was low. Anthropometric

measurement showed that majority of the lactating women were underweight.

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