



## Breastfeeding practices among the Gond tribe of Mandla District of Madhya Pradesh

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### Abstract

**Background:** breast feeding is the safest, least allergic and best infant feeding method. It has nutritional, immunological, behavioral and economic benefits and also provide desirable mother infant bonding. We did a cross-sectional household study to assess feeding practices of infants and young children in rural areas of study blocks. The infant feeding practices of 'Gond', one of the major (57.23%) tribal communities of Mandla District, Madhya Pradesh was studied in detail in the present investigation.

**Material and methods:** A comparative study conducted in the two blocks of Mandla district of Madhya Pradesh. The information was collected through interview method of 522 households which is has a child up to age group of 5 years with the help of predesigned and pre-tested schedules and through personal observation.

**Results:** The study revealed an encouraging fact that all the respondents fed their babies with breast milk. At the same time, it was observed that he households was introduced the breast milk within 24 hours of birth and in more than 99.2% of cases, colostrums was not discarded. Instead, varieties of pre lacteal foods were given little bit households prior to putting the child for breast feeding. Exclusive breast feeding was initiated on early time supplementary foods were introduced after the child attained about 6 months completed age. Mostly homemade cereal preparations were given daily as supplementary foods as when are required. Such time of initiating infant feeding practices, including early initiation of breast milk, supplementary food habits and exclusive breastfeeding practices found in the tribe.

**Conclusion:** Early initiation of breastfeeding (within an hour of birth) and other feeding practices were associated with community, type of family and education of mother. Efforts are needed to promote early initiation of breastfeeding, exclusive breastfeeding for 6 months and age-appropriate complementary feeding among infants.

**Keywords:** Prolacteal feeds, colostrum, Exclusive breastfeeding, knowledge, Gond tribe.

### 1. Introduction

Mother's milk is the nature's gift to the baby. Breast milk is the ideal food for all infants and provides adequate nutritional requirements up to the age of five months. Breast feeding lay the foundation for their healthy psychosocial development, besides providing perfect nutrition for infants (Dakshayani B, and Gangadhar M. R., 2008) . Breast-feeding has its socioeconomic, psychological, biological and immunological aspects. Human milk is known to be an ideal, safe and complete food for infants and being available at a suitable temperature, it helps promote normal dental and facial development. Biologically, it leads to earlier uterine involution, thereby restoring the size of the extended uterus, Further, it is known to enhance the child's immunity', and saves the additional cost of milk and fuel (Puri D., 1991). Human breast milk, nature great gift is best for newborn compare to anything made by human

being with advanced technology. Human breast milk is a complete food which is available at the no cost and an effective way to provide protection with a caring environment. Age, sex and inheritance are non modifiable factors that affect human health. The views of family members is also an important factor for affecting health of new born and his mother , but these views are influenced by socioeconomic determinants of health, cultures and experiences (Singh V., et al, 2013). Malnutrition is still considered as one of the major public health problems in many countries affecting more than 30% of children under 5 years of age. Under-nutrition is most important cause of death in this age group in developing countries in which nutritional deficit is common. The majority of deaths associated with malnutrition occur in children who are marginally malnourished. About 50% of the children less than 5 years of age in India are moderately or severely undernourished

(Renuka M, Rakesh A, Babu NM, Santosh KA, 2011). Breastfeeding is the healthiest way for a newborn child to get the best nutrition possible. However, practices such as late initiation of breastfeeding, no feeding of colostrum, faulty weaning practices, etc., are of particular concern, especially in tribal areas due to certain adverse conditions like lack of access to health services, illiteracy, unhygienic personal habits, etc. We studied infant-feeding practices among the Kol tribal community in Satna district of Madhya Pradesh and found that babies were not breast-fed for the first day after birth. Almost 70% mothers did not start breastfeeding their babies until after 3 days of life. According to National Family Health Survey for the state of Madhya Pradesh, 62% of the women started breastfeeding after the first day; and of these, 24% started after 3 days of childbirth. Colostrum, which is rich in a variety of immune and non-immune components, is not given to the newborn (Tiwari B K, et al., 2007).

The tribal population of Mandla district is about 57.2% of the total population, Mandla is a tribal dominated district, in the hilly and forest areas of Maikal hill range of the Satpura, in mostly scattered habitation. The district Mandla is situated in the east-central part of Madhya Pradesh. The district lies almost entirely in the catchment of river Narmada & its tributaries. A district with glorious history, Mandla comprise of numerous rivers and endowed with rich forest. The world's famous Tiger Sanctuary, Kanha National Park located in the district, is one of the hottest targets for both the domestic as well as foreign tourists. The extreme length of the district is about 133Kms. From north to south and extreme breadth is 182 Kilometers from east to west, it covers a total area of 8771 Square Kilometer and consists a total population of 10, 53,522. There are 9 blocks 6 Tehsils and 1247 villages in the district. Mandla city was capital of the Gond dynasty who built a palace and a fort to inadequate care has turned into ruins. The town of Mandla is administrative headquarters of the district. It is part of Jabalpur Division. The Mandla is not probably the name of a place, as it means only a district. The original name might have been Mahishmati-Mandla, of Mahesh-Mandla, which has now become simply Mandla. Mandla is one among the 20 most backward district of India.

The present study was undertaken to investigate the infant feeding practices among *Gond* tribe of Mandla district, Madhya Pradesh. A with certain specific objectives such as, to study breast feeding status of the community, use of colostrum, time of initiation of breast milk, use of pre lacteal feeds, period of exclusive breast feeding, reasons of stopping breast feeding, age of introduction of supplementary feeding, types of supplementary foods etc.

## 2. Material and Methods

According to census 2001, the total population of Madhya Pradesh state was 6,03,48,023 persons (7<sup>th</sup> populous state of the country) and out of which 1,22,33,474 were tribal persons. Though only 20.3 percent of its population is tribal population but it's have highest number of tribal person in the country. The two numerically dominated tribes are Gonds and Bhils there are 48 districts in Madhya Pradesh of which the district Mandla is having total populations 8,94,236 and which accounts for about 5,11,798 (57.23%) of its population as scheduled tribe. Gonds were the overwhelming majority among the tribal population of the district. Looking into two higher tribal concentrations of the district the present study has confined among the Gonds of Mandla district to understand the child care practices and the data thus generated will help design any future intervention strategy for the community and will be a strong welfare measure useful for covering a larger section of the tribal population in the district. Since these are multiethnic but Gond dominated villages, assuming availability of 20 households (having children in the age group up to 5 years in a village) at the time of the survey. The study has restricted to two blocks viz., Bijadandi (adjacent to urban areas) and Niwas (away from urban areas). The number of villages to be studied is estimated and its proportionate of the blocks is shown as, if 20 households are to be surveyed in one village than number of villages required to cover a sample of 522 women's interviewers (doing one interview in one household).

A pre designed survey instrument (interview schedule) containing relevant questions on objective pertaining to the field has been canvassed among the Gond women who had surviving children in the age group 0 to 5 years. Care to be taken together information about the youngest child to minimize the error due to recall lapse. The list of Gond households in a village having children in the age group 0-5 years have collected from village level health workers (Anganwari workers) and all the households visited to canvass the schedule. This process has been continued until the desired sample size is achieved. Skipping pattern adopted to save the wastage of time during the survey and smooth interviewing. Some in depth interviews have undertaken among few households' heads of the women interviewed village head, and traditional birth attendant (Dai), village level health workers, traditional medicine man.

To understand the community perception of government health services /posts and felt needs of the people some Participatory Rural Appraisal (PRA) tools such as focused group discussions (FGDs), matrix ranking and resource mapping will be undertaken with the help of young mothers under 30 years of age and also those above 30

years. Similar exercises have conducted among the fathers too. Data will be entered in **Microsoft excel** Data Based Management file software **2007**. After entry data will be completely cleaned before it is exported to **SPSS version 13 & 16** analytical software for analysis. Both bivariate and multivariate including controlled variable analysis has been adopted. Suitable test of significance and other statistical tests and techniques are adopted as and when required. Focus Group Discussions (FGDs) and in depth interviews in verbatim have been analyzed and to be coded at suitable places to give a qualitative support to the quantitative data and also to light the issues that will be capture by quantitative methods.

Consent was taken before initiating the interview. A pre-tested semi-structured interview schedule was used for interviewing the study subjects. The interview schedule included information on socio-demographic profile, place of delivery, any complications, place of referral, relevant role of ASHA worker too asked. The Rani Durgavati Vishwavidyalaya, Jabalpur research development committee (RDC) approved for the study.

### 3. Results

Health is concerned with the well-being of a common man and it is a pre-requisite for human development.1 Mother and child health is an important dimension of community health aspects. The main aim of the maternal and child health care is to improve the availability and accessibility of the high quality services and primary health care for all the women of the reproductive age group, i.e., 15-45 years, and the children born by them (Basu S., 1996).

#### Type of families

Distribution of households presents the percentage (Table. 1) according to their type. Among Gonds 63.2 percent households (60.1 percent in Bijadandi and 67.4 percent in Niwas) are having nuclear family and 36.8 percent households (39.9% Bijadandi and 32.6% Niwas) are belongs to the joint family. It is observed that the tribes has influenced by other cultural societies, so a majorities of household are having nuclear family.

#### Household size

Presents percentage distribution of households according to their family size, it is evident from the table. 2 that 27.2 percent (27.9% Bijadandi and 26.2% Niwas block) of the household have size of 4 persons; nearly 27.4 percent ( 25.2% Bijadandi and 30.3% Niwas) of household have size 5 persons, while at 20.5 percent (22.6% Bijadandi and 17.6% Niwas) of households have size of 6 persons; and another 15.1 percent (15.3% Bijadandi and 14.9% Niwas) of households have size of 3 persons; some are 7.7 percent (7.0% Bijadandi and 8.6% Niwas) of

households have size of 7 persons; here are minimum respectively 1.3 percent (1.3% Bijadandi and 1.4% Niwas) of households have size of 8 persons; or less persons while at 0.6 percent (0.7% Bijadandi and 0.5 % Niwas) of households have size of 9 persons. Only 0.2 percent (0.0% Bijadandi and 0.5% Niwas) of household have a family size. Here are eight types of family size within both blocks.

#### Educational status of household

The percentage of educational status of household of both blocks as per table presents in the Table. 3. A minority of households 30.5 percent households is illiterate (25.9% Bijadandi and 36.7% Niwas). A majority of households are literate in the both blocks of Mandla district. 43.3% of household have primary education (43.9 % Bijadandi and 42.5 % Niwas), 21.3 percent households have middle education (24.3 % Bijadandi and 42.5 % Niwas). A minimal of households have educational status as high school 2.3 percent (3.7 % Bijadandi and 0.5 % Niwas), 1.3 percent households have intermediate (1.0% Bijadandi and 1.8 % Niwas), 0.4 percent of households have graduate (0.3 % Bijadandi and 0.5 % Niwas), only one percent of households are reads and writes status (1.0% Bijadandi and 0.9 % Niwas).

#### Main occupation of household

The distribution of main occupation of households according to occupation percentage present in Table 4. A minority of household 5.4 percent (8.3% Bijadandi and 1.4% Niwas) are engaged in agriculture or cultivator work, a majority of households are engaged as agriculture labour work 47.5 percent (45.2% Bijadandi and 50.7% Niwas), 35.6 percent households (29.6% Bijadandi and 43.9% Niwas) are housewife, 9.6 percent of households engaged in labour work (14.6% Bijadandi and 3.2% Niwas). Only 1.3 percent of households are engaged in government services (1.7% Bijadandi and 0.9% Niwas), and 0.4 percent households engaged as a private services (0.7% Bijadandi and 0.0% Niwas).

#### Agriculture land per household

Agriculture land holding of the households is classified in to four categories, (i) 1-4 acres; (ii) 5-9 acres; (iii) 10-14 acres, and (iv) 15 acres or above.

Table 5 shows the percentage distribution of land per households according to their land holding. A minority of households 6.5 percent (only 11.3% landless Bijadandi, but not landless in Niwas) are landless and 93.5 percent households (51.2 percent in Bijadandi and 42.3 percent in Niwas block) are having any type of own agriculture land.

### Size of land per household

**Table 6** presents the percentage of land per households which are having a different size of agriculture land. A majority of households 71.9 percent (70.5% Bijadandi and 73.6 % Niwas) are having 1-4 acres agriculture land, 2 percent households (1.9 % Bijadandi and 2.3 % Niwas) have 10-14 acres agriculture land. Only 0.2 percent households (0.4% Bijadandi block) have 15 acres or above agriculture land.

### Housing structure of household

In the present study houses were classified in three groups; Kachcha, Pakka, and Mixed house. Percentage distribution of houses according to their type is given in table 7. It is clear that the majority of households 88.1 percent (89.7 percent in Bijadandi and 86 percent in Niwas block) have Kachcha houses, and 1.6 percent households (1.3% Bijadandi and 1.8% Niwas) have Pakka houses, and 10.3 percent households (9.0% Bijadandi and 12.2% Niwas) have mixed houses. A majority of households have kachcha houses and a minority of households has mixed houses, and a minimal percentage of households have the pakka houses in studied villages of both blocks Bijadandi.

### Household possessions

The living standard of the population, collected information on household ownership of 20 different types of consumer durables or goods and four different means of transportation. Of the items asked about, only a few are owned by a majority of households (58.1% Bijadandi and 78.3% Niwas) have a watch/clock, 15% Bijadandi and 13.1% Niwas had a fan. Minorities of households (3.0% Bijadandi and 5 % Niwas) have a radio or transistor; only 1.8 percent households have a tape recorder in Niwas block, 12 percent in Bijadandi and 14 percent in Niwas block have a DVD player, and only 0.3% household have sewing machine in Bijadandi. Various forms of media or communication are still owned by a minority of the households have in both blocks. A minimal of households has black & white televisions (3.0% Bijadandi and 1.8% Niwas), a minority of households (8.0% Bijadandi and 9.5% Niwas) has colour television, and a majority of households (40.5% and 64.7% households) have a mobile telephone in both blocks. In general, households in study areas are much less or not found the likely possess consumer items such as refrigerator and computer. A small proportion of households (1.0% and 1.8%) have possessed a water pump. A minimal 0.9% of household has an owned thresher in Niwas block, and 0.3 percent household have owned a tractor in the Bijadandi block, which is shown in the Table 8.

### Means of transport

Bicycles continue to be most commonly owned means of transport, owned by households

(43.7 percent and 56.3 percent households) of Bijadandi and Niwas block. Minority of households (3.7 percent and 3.6 percent households) has owned a motorcycle in both blocks. By contrast, 0.3 percent household of Niwas block have own an animal driven cart as per shown Table 9.

### Number of rooms per household

Numbers of rooms per house reflects the living of standard and socio-economic status of household. Percentage distribution of number of rooms of houses is given in Table 10. It is clear that the majority of households 71 percent (71.7 percent in Bijadandi and 69.6 percent in Niwas block) have two rooms houses, 22.7 percent households (18.6 percent in Bijadandi and 28.5 percent in Niwas block) has triple rooms house, five percent households (7.9 percent in Bijadandi and 0.9 percent in Niwas block) has single rooms house, and 1.3 percent households (1.6 percent in Bijadandi and 0.9 percent in Niwas block) has four room houses.

### Toilet facilities of household

There is almost have a defecation facility among the households studied. Table 11 shows the situation of toilet facility of households. A majority of household 98 percent (98.3 percent in Bijadandi and 97.7 percent in Niwas block) is using the open field defecation; but a minority of household 1.8 percent (1.7% Bijadandi and 1.8% Niwas block) are using open pit toilets and only single household 0.5% using the self flush toilet in Niwas block.

### Lighting source of household

Table .12 present the household percentage source of lighting. A majority of households have 100 percent (57.7 percent in Bijadandi and 42.3 percent in Niwas block) electricity. The household said that using the kerosene lamp, cooking oil, earthanlamp (*Diya*) at the absence of electricity and petro-max as per need or special occasion like marriage, birth related ceremony etc.

### Fuel commonly used by household

Table .13 presents percentage of the households which are using any type fuel for cooking food. A majority of households 99.4 percent (57% Bijadandi and 42.3% Niwas) are using the wood, dung or coals in both blocks Bijadandi and Niwas, a minority of households 0.4 percent using the LPG for cooking food in Bijadandi block. Only 0.2 percent households using the Kerosene for cooking food in Bijadandi block, but not found the fuel LPG and Kerosene users in Niwas block during the survey. Niwas block have a filling station of LPG of Hindustan Petroleum Corporation Limited at Maneri village, but these are not found any households of LPG users and Kerosene within block.

**Age group of households**

The percentage of age group of households presents in Table. 14. A majority of household's has the age group 25-29 years 49.2 percent (53.1% Bijadandi and 43.9% Niwas) and respectively 25.7 percent of the household has the age group 30-34 years (26.0% Bijadandi and 25.3% Niwas) in both study block, and a single 40 years age group of household only (0.1%) found in the

Bijadandi study block. Remaining households have the age groups 20-24years 21.3 percent (17.6% Bijadandi and 26.3% Niwas) and 3.2 percent of households (2.6% Bijadandi and 4.0% Niwas) have the age group 35-39years in both study block. It is observed that majorities of households are young age groups and had the better exposure in study blocks.

<b>Table. 1 Type of Household</b>			
<b>Type of family</b>	<b>Bijadandi</b>	<b>Niwas</b>	<b>Total</b>
Nuclear family	181(60.1%)	149(67.4%)	330(63.2%)
Joint family	120(39.9%)	72(32.6%)	192(36.8%)
<b>Total</b>	<b>301(100.0%)</b>	<b>221(100.0%)</b>	<b>522(100.0%)</b>

<b>Table. 2 Number of person/size per household</b>			
<b>No. of person/size per household</b>			
2	0(0.0%)	1(0.5%)	1(0.2%)
3	46(15.3%)	33(14.9%)	79(15.1%)
4	84(27.9%)	58(26.2%)	142(27.2%)
5	76(25.2%)	67(30.3%)	143(27.4%)
6	68(22.6%)	39(17.6%)	107(20.5%)
7	21(7.0%)	19(8.6%)	40(7.7%)
8	4(1.3%)	3(1.4%)	7(1.3%)
9	2(0.7%)	1(0.5%)	3(0.6%)
<b>Total</b>	<b>301(100.0%)</b>	<b>221(100.0%)</b>	<b>522(100.0%)</b>

<b>Table. 3 Educational status of household</b>			
<b>Educational status</b>			
Illiterate	78(25.9%)	81(36.7%)	159(30.5%)
Primary	132(43.9%)	94(42.5%)	226(43.3%)
Middle	73(24.3%)	38(17.2%)	111(21.3%)
High School	11(3.7%)	1(0.5%)	12(2.3%)
Intermediate	3(1.0%)	4(1.8%)	7(1.3%)
Graduate	1(0.3%)	1(0.5%)	2(0.4%)
Read/Write	3(1.0%)	2(0.9%)	5(1.0%)
<b>Total</b>	<b>301(100.0%)</b>	<b>221(100.0%)</b>	<b>522(100.0%)</b>

<b>Table. 4 Main Occupation of households</b>			
<b>Occupations</b>			
Cultivator	25(8.3%)	3(1.4%)	28(5.4%)
Agricultural labour	136(45.2%)	112(50.7%)	248(47.5%)
Labour	44(14.6%)	7(3.2%)	51(9.8%)
Government Servant	5(1.7%)	2(0.9%)	7(1.3%)
Private Service	2(0.7%)	0(0.0%)	2(0.4%)
House Wife	89(29.6%)	97(43.9%)	185(35.6%)
<b>Total</b>	<b>301(100.0%)</b>	<b>221(100.0%)</b>	<b>522(100.0%)</b>

<b>Table. 5 Agriculture land of Household</b>			
Yes	267(88.7%)	221(100.0%)	488(93.5%)
No	34(11.3%)	0(0.0%)	34(6.5%)
<b>Total</b>	<b>301(100.0%)</b>	<b>221(100.0%)</b>	<b>522(100.0%)</b>

<b>Table. 6 Size of land per Household</b>			
<b>Agriculture Land</b>			
1-4	189(70.5%)	162(73.6%)	351(71.9%)
5-9	73(27.2%)	53(24.1%)	126(25.8%)
10-14	5(1.9%)	5(2.3%)	10(2.0%)
15+	1(0.4%)	0(0.0%)	1(0.2%)
<b>Total</b>	<b>268(55.0%)</b>	<b>220(45.0%)</b>	<b>488(100.0%)</b>

<b>Table. 7 Type of Housing structure of household</b>			
<b>Type of housing structure</b>			
Kachcha house	270(89.7%)	190(86.0%)	460(88.1%)
Pakka house	4(1.3%)	4(1.8%)	8(1.6%)
Mixed house	27(9.0%)	27(12.2%)	54(10.3%)
Total	301(57.7%)	221(42.3%)	522(100.0%)
<b>Table. 8 Household Possessions</b>			
<b>Type of consumer durables</b>			
Fan/Cooler	45(15%)	29(13.1%)	
Radio/Transistor	9(3.0%)	11(5.0%)	
B/W TV	9(3.0%)	4(1.8%)	
CTV	24(8.0%)	21(9.5%)	
Tape recorder	0(0.0%)	4(1.8%)	
DVD player	36(12.0%)	31(14%)	
Swing Machine	1(0.3%)	0(0.0%)	
Mobile	122(40.5%)	143(64.7%)	
Watch	175(58.1%)	173(78.3%)	
Water Pump	4(1.0%)	4(1.8%)	
Thresher	0(0.0%)	2(0.9%)	
<b>Table. 9 Means of Transport</b>			
Bicycle	104(43.7%)	134(56.3%)	
Motor cycle	11(3.7%)	8(3.6%)	
Animal Drawn Cart	0(0%)	1(0.3%)	
Tractor	1(0.3%)	0(0%)	
<b>Table. 10 Number of rooms per houses</b>			
<b>No of Rooms per Houses</b>			
Single room	24(7.9%)	2(0.9%)	26(5.0%)
Double room	216(71.7%)	154(69.6%)	370(71.0%)
Triple room	56(18.6%)	63(28.5%)	119(22.7%)
Four room	5(1.6%)	2(0.9%)	7(1.3%)
Total	301(57.7%)	221(42.3%)	522(100.0%)
<b>Table. 11 Toilet facility of households</b>			
<b>Type of toilet facility</b>			
Self flush toilet	0(0.0%)	1(0.5%)	1(0.2%)
Open pit toilet	5(1.7%)	4(1.8%)	9(1.8%)
Open defecation	296(98.3%)	216(97.7%)	512(98.0%)
Total	301(57.7%)	221(42.3%)	522(100.0%)
<b>Table. 12 Source of lighting of household</b>			
<b>Source of Lighting of household</b>			
Electricity	301(57.7%)	221(42.3%)	522(100.0%)
Total	301(57.7%)	221(42.3%)	522(100.0%)
<b>Table. 13 Fuel commonly use by household</b>			
<b>Commonly use of Fuel</b>			
Wood/Dung/Coal	298(57.0%)	221(42.3%)	519(99.4%)
Kerosene	1(0.3%)	0(0.0%)	1(0.2%)
LPG	2(0.6%)	0(0.0%)	2(0.4%)
Total	301(57.7%)	221(42.3%)	522(100.0%)
<b>Table. 14 Age group of households</b>			
<b>Age group of Households</b>			
15-19	1(0.3%)	1(0.5%)	2(0.4%)
19-24	53(17.6%)	58(26.3%)	111(21.3%)
25-29	160(53.2%)	97(43.9%)	257(49.2%)
30-34	78(26.0%)	56(25.3%)	134(25.7%)
35-39	8(2.6%)	9(4.0%)	17(3.2%)
40+	1(0.3%)	0(0.0%)	1(0.2%)
Total	301(100.0%)	221(100.0%)	522(100.0%)

### Response of squeezing colostrums

The table 2.1 presents the percentage of households who are squeezing colostrums out or not out the colostrums to milks before giving the breastfeeding of new born babies. Minorities of households 0.8 percent (1.5% Bijadandi and 0.3% Niwas) of both block discarded or squeezing colostrums before giving the breast milk of children and a proportion of households 99.2 percent (98.5% Bijadandi and 99.7% Niwas) feeding the colostrums found in study blocks. A minimal of households said (0.8%) the colostrums is injurious to health of newborn baby and not in customs has the age group of 35-39 years and above said and found in the study blocks.

### Introducing of pre-lacteal feeding

The table 2.2 presents percentage of households who gives anything to baby before initiating breastfeeding of babies. A majority of households 98.1 percent (97.3% Bijadandi and 99.1% Niwas) are not introducing anything to baby before breastfeeding of children in study areas, only 1.9 percent households (1.3% and Bijadandi 0.6% Niwas) respondent introducing the plain water and cow/goat milks founds in study blocks. A minority of household's introducing the pre lacteal feeding of children found in study villages, these practices are common practice in any similar cultural society and given the cow or got milks on the situation of children not secretion of breast milk or breast milk or not squeezing, insufficient breast milk during the breastfeeding. These situations feeding the goat and cow milk for surviving the children. This table 2.2 shows the importance of good nutrition during lactation. The households of studied blocks explained that they fed the water (1.7% Bijadandi and 0.9% Niwas) to preventing dried of lips in summers and then introducing the pre lacteal feeding of children in study blocks. A few households introducing the cows or goats milk (1.0%) to promoting and explains regarding pre

lacteal feeding practices are cultural and influenced by family head of the households.

### Initiation of breastfeeding

Table 2.3 presents the percentage of household's positions of first time initiating breast feeding of the baby after births. As for as the time of breastfed is concerned, it has been observed that 4.4 percent households (5.3% Bijadandi and 3.2% Niwas) immediate or within three hours breastfed, 92.7 percent households (89.7% Bijadandi and 96.8% Niwas) after birth 3 to 6 hours breastfed the children found in the study blocks. Only 2.9 percent households (Only 5.0% Bijadandi) one to three days after the birth breastfed the children, main reason was the late initiation of breast feeding mother illness or not squeezing the sufficient milk, baby not sucking the breast milk said in the study block.

### Child still Breast feeding

Table 2.4 present the percentages of households there natal, neonatal and children are still breastfeeding in study blocks. A minimum natal, neonatal; infants of households 39.7 percent (44.5% Bijadandi and 33.0% Niwas) are still breast feeding and remaining 60.3 percent of households (55.5% Bijadandi and 67.0% Niwas) children not breastfeeding and reaching the weaning age found in the study blocks.

### Weaning age of children

The table 2.5 shows the percentage of breastfeeding and weaning age children condition. Minorities of household's 39.7 percent (44.5% Bijadandi and 33.0% Niwas) children were still breast feeding and a majority of households children 60.3 percents (55.5 Bijadandi and 67% Niwas) completed the breastfeeding age and surviving the weaning ages found in the study blocks.

<b>Table 2.1 Response of squeezing colostrums</b>			
	Bijadandi	Niwas	
<b>Block wise response of squeezing Colostrums</b>			
Yes	4(1.5%)	1(0.3%)	5(0.8%)
No	297(98.5%)	220 (99.7%)	517(99.2%)
<b>Total</b>	301 (100.0%)	221(100.0%)	522(100.0%)
<b>Table 2.1.1 Feeding of colostrums</b>			
<b>Block wise colostrums fed</b>			
Fed the colostrums	297(98.5%)	220(99.5%)	517(99.0%)
Don't fed colostrums	4(1.5%)	1(0.5%)	5(1.0%)
Total	301(100.0%)	221(100.0%)	522(100.0%)
<b>Table 2.2 Introduction(first time) prelacteal feeding</b>			
<b>First time give anything to E/D before BF</b>			
Nothing	293(97.3%)	219(99.1%)	512(98.1%)
Plain Water	5(1.7%)	2(0.9%)	7(1.3%)
Cows/Goat Milk	3(1.0%)	0(0.0%)	3(0.6%)
total	301(100.0%)	221(100.0%)	522(100.0%)

<b>Table 2.3 Initiation of Breast feeding (After birth)</b>			
<b>Block wise initiation of breast feeding</b>			
Below 3 hours	16(5.3%)	7(3.2%)	23(4.4%)
3-6 hours	270(89.7%)	214(96.8%)	484(92.7%)
1-3 Days	15(5.0%)	0(0.0%)	15(2.9%)
Total	301(100.0%)	221(100.0%)	522(100.0%)
<b>Table 2.4 During survey find the breastfeeding children</b>			
<b>Block-wise found the breastfeeding children</b>			
Yes	134(44.5%)	73(33.0%)	207(39.7%)
No	167(55.5%)	148(67.0%)	315(60.3%)
Total	301(100.0%)	221(100.0%)	522(100.0%)
<b>Table 2.5 Weaning age</b>			
<b>Block wise weaning age of children</b>			
Breastfeeding age	134(44.5%)	73(33.0%)	207(39.7%)
Weaning Age	167(55.5%)	148(67.0%)	315(60.3%)
Total	301(100.0%)	221(100.0%)	522(100.0%)

#### Duration of still breastfeeding children

Table 2.6 presents the percentage of households which are still breastfeeding to children found during the survey in study blocks. Minimal household children 0.4 percent (0.3% Bijadandi and 0.5% Niwas) of both block started the breastfeeding within 15 days from the births found in study blocks and continually of households children 0.8 percent within one month, 1.3 percent two months, 0.8 percent three months, 1.5 percent four months, 3.6 percent five months are still breastfeeding without the supplementary foods found in study blocks. But a majority of households children 84.1 percent (82.4% Bijadandi and 84.1%) completed the breastfeeding periods and were on weaning ages found during the survey in study blocks, and remain households children 6.9 percent (7.6% Bijadandi and 5.9% Niwas) seven months, 0.6 percent (1.0% Bijadandi and 0.0% Niwas) onwards households children was taking the exclusive breastfeeding foods found in the study area of both block.

#### Substitute of eat or drinks

Table 2.7 presents percentages of households which are giving anything to eat or drinks to children within one month of periods. A minority of households 33.3 percent (42.5% Bijadandi and 20.8% Niwas) of both blocks given the anything else to eats or drinks to children during first month of the birth periods, But a majority of households 66.7 percent (57.5% Bijadandi and 79.2% Niwas) of both not eats or drinks first month of live found within in blocks of study villages. Many respondents reported that pre-lacteal feeds were given as cleansing agents. These pre lacteal feeds are interfere with the suckling stimulation and prolactin production, but also often these feeds are the source of infection to the newborns.

#### Type of drinks given by household

Table 2.8 presents the percentage of households throughout giving the children to eats or drinks within first month of births. A minority of

households 27.8 percent (36.9% Bijadandi and 15.4% Niwas) of both blocks given the plain water and a minimal of households 5.0 percent (4.7% Bijadandi and 5.4% Niwas) of households given the cow or goat milks in both blocks of study blocks. Only 3 households (1.0%) of Bijadandi block given the other kinds of drinks, but absence in the Niwas study block. There was a main reason the households given to eat or drinks to children as insufficient of breast milk to intake and then given the cow or goat milks for same practices and water for dried the lips of children are applied in the study areas of both blocks.

#### Complementary food habits

The percentage of complementary food habits of the households given month by month presents in table 2.9. A little bit households 0.2 percent (0.3% Bijadandi and 0.0% Niwas) were giving the complementary foods before the four months and continually 0.5 percent five months, 0.2 percent twelve months, 0.2 percent eighteen months, 2.9 percent twenty months, 4.2 percent twenty months, 17.8 percent twenty four months, 0.2 percent twenty five months, 15.7 percent twenty six months, 7.3 percent twenty eight months, 8.2 percent thirty months, and 0.2 percent households children were taking the complementary foods from thirty six months. It is a longer periods of breastfeeding in the study block found in the study villages.

#### Exclusive breastfeeding

Table 2.10 presents the percentage of multiple responses of households which are giving the exclusive breastfeeding in study blocks. A majority of households 77.0 percent (83.1% Bijadandi and 68.8% Niwas) of both blocks given the cow/goat milks after completion of six month of the births and 29.1 percent of households (26.6% Bijadandi and 32.6% Niwas) of both blocks given the baby infant formula and cereals as a supplementary food of the children. A majority of households 93.0 percent (93.4% Bijadandi and 92.3% Niwas) of both blocks are given the rice or porridge to children as supplements found in study



blocks. A minimum of households of both blocks given pulse's water 92.5 percent (92.7% Bijadandi and 92.3% Niwas) given as a supplements food

found in study area. Minimal households also given the fruits as supplements during the care of children found in study villages.

<b>Table 2.6 Still breastfeeding children</b>			
Block wise still breastfeeding children (in days and months)			
Days & Months	Bijadandi	Niwas	Total
15 days	1(0.3%)	1(0.5%)	2(0.4%)
1	3(1.0%)	1(0.5%)	4(0.8%)
2	3(1.0%)	4(1.8%)	7(1.3%)
3	1(0.3%)	3(1.4%)	4(0.8%)
4	3(1.0%)	5(2.3%)	8(1.5%)
5	16(5.3%)	3(1.4%)	19(3.6%)
6	248(82.4%)	191(86.4%)	439(84.1%)
7	23(7.6%)	13(5.9%)	36(6.9%)
8	3(1.0%)	0(0.0%)	3(0.6%)
Total	301(100.0%)	221(100.0%)	522(100.0%)
<b>Table 2.7 Given anything eat or drink first month other than breast milk of children</b>			
Response of households			
Yes	128(42.5%)	46(20.8%)	174(33.3%)
No	173(57.5%)	175(79.2%)	348(66.7%)
<b>Total</b>	<b>301(100.0%)</b>	<b>221(100.0%)</b>	<b>522(100.0%)</b>
<b>Table 2.8 Type of drink given by households</b>			
Block wise drinks given by the households			
Nothing	173 (57.5)	175(79.2)	348(66.7)
Plain Water	111(36.9)	34(15.4)	145(27.8)
Cows/Goat milk	14(4.7)	12(5.4)	26(5.0)
Other	3(1.0)	0(0)	3(0.6)
<b>Total</b>	<b>301(100.0)</b>	<b>221(100.0)</b>	<b>522(100.0)</b>
<b>Table 2.9 Complementary food/exclusive breastfeeding (after six month of birth)</b>			
Block wise exclusive breast feeding (after six months)			
4	1((0.3%)	0(0.0%)	1(0.2%)
5	1(0.3%)	0(0.0%)	1(0.2%)
12	3(1.0%)	0(0.0%)	1(0.2%)
18	1(0.3%)	0(0.0%)	1(0.2%)
20	2(0.7%)	13(5.9%)	15(2.9%)
23	5(1.7%)	17(7.7)	22(4.2%)
24	47(15.6%)	46(20.8%)	93(17.8%)
25	1(0.3%)	0(0.0%)	1(0.2%)
26	43(14.3%)	39(17.6%)	82(15.7%)
28	25(8.3%)	13(5.9%)	38(7.3%)
30	37(12.3%)	6(2.7%)	43(8.2%)
36	1(0.3%)	0(0.0%)	1(0.2%)
98	122(40.5%)	73(33.0%)	195(37.4%)
<b>Total</b>	<b>301(100.0%)</b>	<b>221(100.0%)</b>	<b>522(100.0%)</b>
<b>Table 2.10 Exclusive Breastfeeding</b>			
	Bijadandi	Niwas	Total
Multiple response of exclusive breastfeeding			
Cow/goat milk	250 (83.1%)	152 (68.8%)	405(77.0%)
Baby infant formula/ Cereals	80 (26.6%)	72 (32.6%)	152(29.1)
Rice/Porridge	281 (93.4%)	204 (92.3%)	485(93.0%)
pulse	279 (92.7%)	204 (92.3%)	483(92.5%)

#### 4. Discussion

##### 4.1 Squeezing Colostrums

Details of initiation of breast feeding are shown in Table 2.1. It was found that majority of household's 99.0% (98.5% Bijadandi & 99.5% Niwas) fed colostrum. The reason for not feeding colostrum in rest of the mothers (7 percent) was

traditional belief, as they considered it thick, cheesy, indigestible, unhygienic and not good for the baby. This shows that doctors are creating awareness among mothers regarding infant feeding practices. Early initiation of breastfeeding is encouraged for a number of reasons. Mothers benefits from early suckling because it stimulates breast milk production and facilitates the release of

oxytocin, which helps the contraction of the uterus and reduces postpartum blood loss. The first milk (colostrum) is highly nutritious and has antibodies that protect the newborn from diseases (NFHS-3, 2005-06).

Bhan et al. (2004) conducted a comparative study of Breast-feeding practices among Kashmiri pandits and Dogras and found that although breast feeding was started on the first day, 90 percent mothers of both the communities discarded the initial milk (colostrum) as harmful and impure. So only a part of it was fed to the infants.

Dash and Choudhury (2005) reported about breast feeding practices among Santals and non Santals of Orissa. The results show that almost 37.78 percent of santal babies and 48 percent of non santal babies were first put to breast within 6 hours after birth. Majority of the santal mothers (53.13%) did not give colostrum where as 66 percent of non santal mothers fed with colostrums.

Raval D., et al., (2011) studied the 35.8% of infants were not given colostrum due to relatives' advice. 26.4% of infants were deprived of colostrum due to their parent's wrong belief that colostrum is infectious. 79.3% of reasons for not giving colostrum can be reduced by proper health education during ANC period.

#### 4.2 Initiation of breast milk

Table 2.3 shown the percentage of mothers which are initiating early breastfeeding their children, nearly a majority of households said they breastfed their child immediately after birth. While a minimal of households reported that they initiate breast feeding on the 2nd day, and a quintile of on 3rd day of the birth of the child. It is found that breast feeding form of food for the infants are good among the Gonds of Mandla. Late initiation of breastfeeding not only deprives the child of valuable colostrums, but becomes a reason for introduction of prelacteal feeds (that is, something other than breast milk) like glucose water, honey, ghutti, animal milk, or powder milk that are potentially harmful and contribute to diarrhea in the newborn (NFHS-3, 2005-06).

#### 4.3 Prelacteal feeding

Details of pre-lacteal feeding are shown in Table 2.2. It was found that majority of household's 98.1 percent (97.3% Bijadandi and 99.1% Niwas) not initiating pre-lacteal the children. The practice of giving the infants some special type of feeds before initiating breast milk is widespread in tribal areas. Practically colostrum alone is sufficient to maintain the nutritional demand of the newborns during prelacteal stage of the mothers without any type of prelacteal feeds (Talukder et al., 1992). On the other hand introduction of prelacteal feed often resulted in "insufficient milk syndrome" and leads the newborn to the risk of infection especially diarrheal

diseases (Akhter H., 1992). It was the reflection of their ignorance about the nutritional value of colostrum at the one hand and ill effect of pre-lacteal foods on the other. Table 3 shows the introduction of prelacteal feed. Plain water (1.7%) was on the top of the list of the pre-lacteal foods followed by cow/goat milk (0.3%), while 98.1% of the household's did not use pre-lacteal foods. Many women reported that, these pre-lacteal feeds were given as cleansing agents. These pre-lacteal feeds interfere with the suckling stimulation and prolactin production, but also often these feeds are the source of infection to the newborns. Swain (1985) studied the infant feeding practices among santal tribe in northern Orissa and found that immediately after the child's birth, honey or jaggery was given to the child. Which they believe, could help the child resist hunger. The child was usually put to breast after 12 hours.

Most mothers gave their last born child something to drink other than breast milk in the three days after delivery. Prelacteal feeds were more common in rural areas than in urban areas, and among women with no educations Muslims, Sikhs, OB Cs, women in the lowest two wealth quintiles, and women whose child was born at home or whose birth was assisted by someone other than health personnel. Mothers who gave their child anything to drink other than breast milk in the three days after delivery were asked what was given to the child. By far the most common prelacteal liquid is milk other than breast milk. Other common prelacteal liquids are honey (after given as part of a blessing ceremony), sugar or glucose water and plain water. Prelacteal feeding is most common in Bihar (91%) and Uttar Pradesh (86%) and least common in Kerala and Sikkim (11-12%) (NFHS-3, 2005-06)

#### 4.4 Breastfeeding status by age

Table 2.6 presents the percentage of households which are still breastfeeding to children found during the survey in study blocks. The government of India recommends that children should be exclusively breastfeeding for the six month of life (that is, the child should be given only breast milk and nothing else, not even water) and that children should be given appropriate and adequate complementary feeding in addition to continued to breastfeeding from six months of age (Ministry of Women and Child Development, 2006) (NFHS-3, 2005-06).

#### 4.5 duration and frequency of breastfeeding

The percentage of complementary food habits of the households given month by month presents in table 2.9. Both duration and frequency of breastfeeding can affect the length of postpartum amenorrhea. It is important that breastfeeding is continued for two years or more because breast milk provides useful amounts of energy, good quality protein, and other nutrients. The median duration of breastfeeding is 24 months.

Supplementation begins relatively early, however. The median length of exclusive breastfeeding is only 2 months and the median length of predominant breastfeeding (that is, breastfeeding plus receiving plain water and/ or non-milk liquids only) is 5 months. The median duration of breastfeeding is two months shorter for girls than for boys. The duration of breast feeding is also shorter in urban areas, and it decreases steadily with the mother's education and wealth index. The duration of breastfeeding is relatively high for children from scheduled castes and scheduled tribes (NFHS-3, 2005-06).

#### 4.6 Exclusive Breastfeeding

The percentage of complementary food habits of the households given month by month presents in table 2.9. A little bit households 0.2 percent (0.3% Bijadandi and 0.0% Niwas) were giving the complementary foods before the four months and continually 0.5 percent five months, 0.2 percent twelve months, 0.2 percent eighteen months, 2.9 percent twenty months, 4.2 percent twenty months, 17.8 percent twenty four months, 0.2 percent twenty five months, 15.7 percent twenty six months, 7.3 percent twenty eight months, 8.2 percent thirty months, and 0.2 percent households children were taking the complementary foods from thirty six months.

Exclusive breastfeeding is recommended because breast milk is uncontaminated and contains all the nutrients necessary for children in the first few months of life. In addition, the mother's antibodies in breast milk give the child considerable immunity to diseases. Early supplementation is discouraged for several reasons. First, it exposes infants to pathogens and increase their risk of infection, especially disease. Second, it decreases infants intake of breast milk and therefore suckling, which reduces breast milk production. Third, in a harsh socio-economic environment supplementary food is often nutritionally inferior (NFHS-3, 2005-06).

#### 4.7 Type of supplemental food

Table 2.10 presents the percentage of multiple responses of households which are giving the exclusive breastfeeding in study blocks. The supplementary feeding to the baby started when the child reached the age of seven months. The right time of introducing semi-solid or solid food to the baby's diet, supplementing right type of food in right amount and the frequency of feeding, that is, number of times children are fed in a day are most crucial factors to be considered for appropriate infant and child feeding practices.

WHO recommends the introduction of solid or semi-solid food to infants around the age of six months because by that age breast milk by itself is no longer sufficient to maintain a child's optimal growth. The percentage of breastfeeding children receiving solid or semi-solid food increases with

the age of child. The largest increase is from 19 percent at age 4-5 months to 55 percent at 6-8 months. This rapid increase is consistent with the recommendation that solid or semi-solid food should be introduced around six months of age. Nevertheless it is disconcerting to note that even 6-8 months of age, almost half of breastfed children are not given any solid or semi-solid food. The most common types of solid or semi-solid foods fed to both breastfeeding and non-breastfeeding children under three years of age foods made from grains (including bread, roti, chapatti, rice, noodles, biscuits and idli), fruits and vegetables rich in vitamin A, and food made from roots (NFHS-3, 2005-06)

#### Awareness about Complementary Feeding

It appears from the above findings that Bijadandi and Niwas household's got the knowledge about weaning food from the doctors/nurses/ANMs/anganwari workers etc. The second idea of weaning food provider was mother-in-laws and media such as neighbours and Radio TV and print media. Our findings show that AWWs, ANMs and Nurses mainly encouraged the mothers for practicing weaning food for their babies. It was found that Bijadandi and Niwas respondents were encouraged by the grassroots level workers to practice weaning food for children, while in-law encouraged their daughters-in-law and also too husbands.

#### 5. Conclusion

It can be concluded from the study that the households of Bijadandi and Niwas block of Mandla district are following a very good practice of feeding their baby with breast milk. This comparative study of infant breastfeeding practices among Gond tribe reveals that there are improvements in certain areas like giving colostrums and exclusive breastfeeding still close from ideal. These factors ought to be regarded when formulating national health policies and guidelines of Ministry of health & Family Welfare, Govt. of India drive JSY under the NRHM programme. Proper awareness regarding infant feeding practices should be given to health care provider and health workers; further research is needed outreach areas in this field.

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