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Knowledge, Attitude and Practices of Adolescent Mothers Towards Infant and Young Child Feeding in Shinkafi Ward of Katsina LGA Katsina State

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Abstract

To assure overall development and growth of children to their maximum potential, appropriate nutrition is necessary during early-stages of infant's life. This study is aimed at investigating knowledge, attitude and practices of adolescent mothers towards infant and young child feeding in Shinkafi ward of Katsina LGA Katsina state. The data was collected using a semi structured questionnaire. About 104(78.8.5%) of the mothers were of age between 10 – 14 years and 28 (21.2%) between 15 – 19 years of age. out of the 132 children of the adolescent's mothers, 81(61.4) were females and 51(38.6) males. Almost all of the mothers (n= 99, 75.0%) know the advantage of breast feeding and 75 (56.8%) responded to knowing the advantage of colostrum, 82 (62.1%) know that a child is to be fed and 51.5% adolescent mothers knows about exclusively breast feeding. Overall level of maternal knowledge of breast feeding was 46 (34.8%). Maternal attitude toward breast feeding was low, only a portion of 49 (37.1%) had good attitude. In all (n=34, 25.8%) had good practice of breast feeding. Majority (74.2%) of the mothers had good knowledge of complementary feeding while their attitude was low, as only 22.0% responded. For practice of complementary feeding, only 20.5% met the standard. Age, maternal education, total family size, maternal occupation and father's occupation were significantly with both breast feeding and complementary feeding at $p < 0.05$. The mothers demonstrate very low concerning the knowledge of micronutrient. The adolescents' mothers in this community should be given a thorough information about micronutrient.

Keywords: Breastfeeding, breast milk, Complementary feeding, Adolescent mothers, children (0-2years).

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Introduction

Adequate nutrition during infancy and early childhood is essential to ensure the growth, health, and development of children to their full potential [1]. The current global Infant and Young Child Feeding (IYCF) recommendation is that infants be exclusively breastfed for the first six months of life and thereafter receive safe and nutritionally adequate complementary foods while breastfeeding continues up to two years of age or beyond, [1]. Malnourishment among children can cause major implications on national development. According to the reports suggested by WHO, malnutrition estimated to be associated with 2.7 million child deaths or 45% of all child death yearly. Breastfeeding is only the key through which child survival can be improved and also it promotes healthy growth and development of an infant [1, 2]. Optimal nutrition during first two years of child's life can lower morbidity, decrease mortality rate, reduce the risk of chronic disorders, and moreover fosters better overall personality development. Despite some countries are taking care of this concern, but still undesirable IYCF practices are being widespread in many low- and middle-income countries, including Nigeria. According to a survey, number of children under the age of six months that are exclusively breastfed have been reduced from 17% in 2003 to 13% in 2008 (NPC, 2008). In 2003, it is 17% as per the Nigeria Demographic and Health Survey, 2013 [3, 4]. Sixty-nine percent of children are predominantly breastfed (breast milk and only plain water or non-milk liquids such as juice, clear broth and other liquids); 13% of children under age two are bottle fed. Contrary to recommendations, if women were malnourished as children, their reproductive capacity is affected, their infants may have lower birth weight, and they have more complicated deliveries [1].

In some countries, women marry at a relatively early age and soon afterwards become pregnant. For example, in Bangladesh, the 2011 Nigeria Demographic and Health Survey showed that 44% of women aged 15–19 were already married or cohabitating [5]. For these women, the short duration between marriage and first birth allows little time to

provide information on correct infant and young child nutrition (IYCN) practices. Infant and young child nutrition knowledge is a strong determinant of infant and young child nutrition practices [6]. Adolescent mothers face unique challenges and influences when making a choice on how to feed their infants. These mothers have been shown to deviate from the recommended infant and young child feeding practices thus leading to a large number of infant deaths. Knowledge gained by women in adolescence about infant and young child nutrition may play a significant part in their infant and young child nutrition practices of their future children. Thereby, at adolescent stage, females can be aware and trained about improving health outcomes. This can be an effective strategy to promote and improved infant feeding practices. Breastfeeding during the first six months of life has been identified as one of the key interventions for reducing childhood deaths and it is the first fundamental right of every child. The blend of adequate complementary foods with continued breastfeeding are immensely important for the growth, development, health and nutrition of infants and children worldwide [6-8]. Some of the eminent components of optimal nutrition for a child aged between 6 and 24 months includes adaption of recommended breastfeeding, complementary feeding behaviours and access to the suitable quality and quantity of foods. Factors influencing breast-feed are [9]:

- Fear of dependency
- Moral reasoning
- Advertisement of breast milk substitutes

Decisions about infant feeding are often based on the social and economic environment in which women live [10]. Demographic factors such as older maternal age, higher level of maternal education, and family income are strongly associated with choice, initiation and duration of breastfeeding [11]. Mother's attitude towards infant feeding is associated with their parent's attitudes [12]. Father's non supportive or negative behaviour towards breastfeeding discourage their female counterparts from attempting to initiate early breastfeeding [12]. Mothers may also have negative attitudes or perceptions of breastfeeding, the bulk of which arise from media representation [9], such as that

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it is inconvenient and embarrassing [13].

The factors associated with early cessation of breastfeeding and/or some obstacles to infant and young child feeding (IYCF) practices in Nigeria includes: breast feeding of an adolescent mother, low knowledge of exclusive breastfeeding (EBF) maternal age whereby very young mothers were found to have inadequate knowledge on infant and young child feeding (IYCF) [14]. In 2001, Adams and Walker reported socio-cultural factors in breastfeeding practices includes feeding infants with herbal concoctions alongside breast milk, mothers' employment and proximity to infant, less awareness, low level of education and low income, mother's perceptions of insufficient milk supply. Lack of confidence in mothers' ability to breastfeed and problems with the infant latching or suckling as well as breast pain or soreness have also been documented by Ukaegbu and Onyeonoro in 2011. Some of these problems can be overcome through adequate antenatal information and preparation of expectant mothers [13].

Malnutrition is still high and life threatening particularly affecting the poor. The most affected is babies and children under five years of age [1]. High mortality rates are still persisting among the babies who are not breastfed [8, 9, 12]. Socio cultural and religious beliefs also encourage early marriage which leads to adolescent mothers. Lack of knowledge, poor attitudes and poor practice of adolescent mothers towards infant and young child feeding might be disastrous to the infants [2].

A survey of knowledge, attitude and practices of adolescent mothers on infant and young child feeding (IYCF) is necessary to know what is obtained in Shinkafi, a community where many low incomes, lower class people and many adolescent mothers dwell. Future research findings will be get added into existing databases which will help the nurses in the community to plan strategies regarding enhancement or sustainability of infants and young child feeding among mothers. Recent studies have found that if females are educated with proper adolescents' mothers practice of infant and young child feeding then it can enhance the healthy growth of their children. Optimal infant feeding

practices, which include breastfeeding and timely complementary feeding, contribute to the level of food intake in infants and young children [10].

This study provides information on the knowledge, attitude and practices of adolescent mothers towards infant and young child feeding practices in Shinkafi ward of kaita L.G.A katsina state and also provide database that can be used for future policy and decision making.

Material and Methods

Study Area

The study area comprised of all community in Shinkafi Ward of Kaita L.G.A Katsina state. All adolescent mothers having children aged 0 months to two years old living in the ward were included in this study. A cross-sectional study was conducted to determine the level of Adolescent mothers' knowledge, attitude and practice of infant and young child feeding and their socio-economic/demographic characteristic.

Data Collection

The data was collected at the house-to-house level of all adolescent mothers having children 0 -2 years of age using a semi structured questionnaire. For efficiency of the exercise, three women who could understand and speak the Hausa language fluently were trained to collect the data. The data collection was carried out on the 16th, 17th and 18th of March 2018, three days consecutively and a total of 132 adolescent mothers were contacted.

The completed questionnaire was checked to ascertain that all questions were answered correctly and consistently. Information on age, socio-demographic characteristic, knowledge, attitude and practice of mothers feeding their children were collected. Age was recorded in birth dates by asking the mother of the child and if the exact date is not known the mother was asked the known local events calendar by the year that the child was born and that was converted to months.

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Data Analysis

The data was imputed and analysed using Microsoft Excel and SPSS version 24.0. The Data collected was exported from Microsoft excel to SPSS Version 24 for analysis. Descriptive statistics were utilized to summarize data on respondent characteristics and presented in narrative and pictorial format using graphs, charts and tables as applicable. To test for the association between two variables such as maternal or infant characteristics and infant and young child feeding practices chi-square was used, in other to determine significance of the association.

Results

Socio-Demographics and Economic Characteristic

One hundred and thirty-two (132) Adolescent mothers representing the same number of households were interviewed during the study. All of the participants were affiliated to Islam.

The result of the study as shown in Table 1, (socio – demographic and economic information) Majority 104(78.85%) of the mothers were of the age between 10 – 19 years, while 28 (21.2%) were 20 – 25 years of age. Over half 79(59.8%) of the mothers were illiterate, 26(19.7%) had primary school education, 25(18.9%) had secondary education while small portion of about 2(1.5%) had tertiary education. For father’s education, less than half 58(43.9%) were illiterate, 31(23.5%) had secondary education, 28(21.2%) had primary education while 15(11.4%) had tertiary education. Regarding the marital status, most as recorded by 108(81.8%) of the mothers were married, 15(11.4%) divorced, while 9(6.8%) were widowed. Of all the women, majority 113 (85.6%) indicated that the house hold were headed by the father while about 19(14.4%) were headed by the mother. The total family size of a household was, 105(79.5%) being 5 and below members while 27 (20.5%) were above 5 members in a house.

Occupation wise as shown in Figure 1, for maternal occupation majority (61.4%) of the mothers were house wives and the remaining portion (38.6%) were business/traders, none was a farmer, private or government employee or daily laborers. For father’s occupation 69.7% were farmers, 10.6% were business/traders, another portion of 10.6% were private employee and about 9.1% were Government employee. None was daily laborers (Figure 1).

VARIABLES		Frequency	Percentage (%)
Maternal Age	10-19 Years	104	78.8
	20-25 Years	28	21.2
Maternal Education Level	Illiterate	79	60.5
	Primary school	26	19
	Secondary	25	19
	Tertiary	2	1.5
Father's Education Level	Illiterate	58	43.9
	Primary school	28	21.2
	Secondary	31	23.5
	Tertiary	15	11.4
Marital Status	Married	108	81.8
	Divorced	15	11.4
	Widowed	9	6.8
Head of the house hold	Father	113	85.6
	Mother	19	14.4
Total family size	5 and below	105	79.5
	Above 5	27	20.5

Table 1: Socio-Demographic Information

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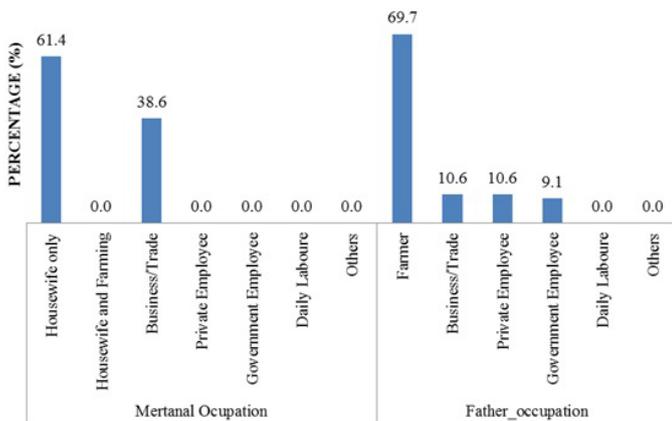


Figure 1: Occupation of Adolescent Mothers and their husbands

Child's Characteristics

Of 132 children participated in the study 51 were males and 81 were females, when they were grouped according to their age. For male children 23(45.1%) were between age 7 – 12 months, 13(25.5%) were between age 0 – 6 months, 12(23.5%) were between 13 – 18 months of age while only 3(5.9%) were between 19 -24 months. For the females 56 (69.1%) were between 7 – 12 months of age, 13 (16.0%) were between 0 -6 months, 12 (14.8%) were between the ages 13 – 18 months, none of the females falls to the age between 19 – 24 months. Altogether, majority 79(59.8%) of the children were between 7 – 12 months of age, 26 (19.7%) were between 0 – 6 months, 24 (18.2%) were between 13 – 18 months while only 3 (2.3%) were between 19 – 24 months of age (Table 2). In the Table 3, Majority 89 (67.4%) Of the children in the study responded of being immunized as per scheduled while 43 (32.6%) did not or did not complete their scheduled immunization. For vaccines received, Bacillus Calmette Guérin (BCG) was received by 28.0% of the children, measles 40.9% while 12(31.1%) their cards were not found.

Age of child	Sex		
	Male n(%)	Female n(%)	Total n(%)
0 – 6 months	13(25.5)	13(16.0)	26(19.7)
7 – 12 months	23(45.1)	56(69.1)	79(59.8)
13 – 18 months	12(23.5)	12(14.8)	24(18.2)
19 – 24 months	3(5.9)	0(0.0)	3(2.3)

Table 2: child's age and gender characteristics (n = 132)

Variables	Frequency	%	
Immunisation as per schedule	Yes	89	67.4
	No	43	32.6
	Total	132	100.0
Vaccines received	BCG	37	28.0
	Measles	54	40.9
	No card found	12	31.1
	Total	103	100

Table 3: Immunisation

Maternal Knowledge of Breast Feeding

The maternal knowledge of breast feeding is described in Table 4, out of the 132 mothers 99 (75.0%) responded to knowing the advantage of breast feeding to their children while 33 (25.0%) responded to not knowing the advantage of breast feeding. Colostrum is the first yellowish milk produced which is highly important and recommended by the WHO to be giving to infants. Of the mothers 75 (56.8%) responded to knowing the advantage of the colostrum their babies while 57 (43.2%) don't know the important or advantage of the colostrum to the children. For frequency of breastfeeding in the first month, 82 (62.1%) responded to feeding on demand, 26 (19.7%) responded to breast feeding less than 8 times a day, while 24 (18.2%) responded to not sure of the frequency of breast feeding. Concerning the duration at which a child be breast fed, 52 (39.3%) answered 20 – 24 months, 40 (30.3%) answered to having no idea, 33 (25.0%) answered 12 – 19 months, while 7 (5.3%) responded to one year. Regarding Exclusive breast feeding, 51.5% reported to not knowing the duration at which a child is to be exclusively breast fed, 20.5% responded to six months, 19.7% responded to below five months while 8.3% responded to above six months.

When the respondent woman identified correctly at least five correct or true statements out of seven statements prepared about child feeding knowledge is scored as sufficient knowledge else is scored as poor knowledge (Eckstein, 2009). Overall maternal knowledge of breast feeding was low, only a portion of 46 (34.8%) had sufficient knowledge of breast feeding while as many as 86 (65.2%) had poor knowledge of

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breast feeding (Table 4).

Variables	n=132	Frequency	%
Know advantage of breast feeding for the children and mothers?	Yes	99	75
	No	33	25
Advantage of Colostrum (Yellowish Milk).	Yes	75	56.8
	Don't Know	57	43.2
Period for exclusive breastfeeding	6 months	27	20.5
	Below six months	26	19.7
	Above six months	11	8.3
	I don't know	68	51.5
Duration of Breast feeding	No idea	40	30.3
	20 - 24 months	52	39.4
	One year	7	5.3
	12 - 19 months	33	25
Overall score of maternal Knowledge of Breast Feeding	Sufficient	46	34.8
	Poor	86	65.2

Table 4: Maternal knowledge of breast feeding.

Maternal Attitude of Breast Feeding

Maternal attitude towards breast feeding is show in Table 5, almost all 126 (95.5%) of the mothers responded to breast feeding in the public do not affect the child while 6(4.5%) responded to affecting the child. Concerning whether breast feeding affect appearance, almost a third 94(71.1%) responded to breast feeding affects their appearance, 31 (15.9%) responded to not

affecting appearance while 7 (5.0%) responded to not always. For attitude toward when to breast feed a child, 57 (43.2%) of the mother's breast fed their children when they were hungry, 45 (34.1%) when they cry, 30 (22.7%) at a time they eat, no responds for "at any time we want". All the mothers (132) adopt breast feeding because of the child health. For intention of breast-feeding new child, all (132) the mothers responded to having intention of breastfeeding new child.

Overall level of maternal attitude toward breast feeding was low, only a portion of 49 (37.1%) had good attitude toward breast feeding while as many as 83 (62.9%) had poor attitude toward breast feeding (Table 5).

Variables	n=132	Frequency	%
Breast feeding the child in public service area affect the child?	Yes	6	4.5
	No	126	95.5
Breast feeding affect appearance	Yes	94	71.1
	No	31	15.9
	Not always	7	5
When do you breastfeed?	When child cries	45	34.1
	At a time, we eat	30	22.7
	When child get hungry	57	43.2
Intention to breastfed child.	Child health	132	100
Overall score of maternal attitudes toward Breastfeeding	Good Attitude	49	37.1
	Poor Attitude	83	62.9

Table 5: Maternal attitude of breast feeding.

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Maternal Practice on Breast Feeding

Maternal practice on breast feeding is show in Table 6, majority (40.2%) of the mothers-initiated breast feeding within 6 hours after delivery, 31.1% initiated within one hour of delivery, 20.5% initiated after 6 hours of delivery while 8.3% initiated after 24 hours of delivery. Of the 132 participating mothers, 99(75%) reported to introduced pre-lacteal food before breast feeding while only 33 (25%) did not introduce any form of pre-lacteal food to their children. All the 132 mothers in the study responded to not squeezing out and throw the first milk (colostrum). Of the 132 mothers only 42 (31.8%) responded to practicing Exclusive breast feeding while higher portion 90 (68.2%). For duration of Exclusive breast feeding 75(56.8%) stopped at less than 6 months, 34 (25.8%) stopped at six months while 9 (6.8%) stopped at between 0 – 3 months of age. Overall maternal practice of breast feeding was low, a portion of 34 (25.8%) had good practice of breast feeding while as many as 98 (74.2%) had poor practice of breast feeding.

Variables	n=132	Frequency	%
Initiation of breast feeding	Within 1 hour after delivery	41	31.1
	Within 6 hours	53	40.2
	Between 6 - 24 hours	27	20.5
	After 24 hours	11	8.2
Introduction of prelacteal food	Yes	99	75
	No	33	25
Squeeze out and throw the first milk (colostrum's)	No	132	100
Exclusive Breast feeding	Yes	42	31.8
	No	90	68.2
Duration for the Exclusive Breast feeding	Less than 6 months	75	56.8
	6 months'	34	25.8
	More than 6 months	14	10.6
	0 – 3 months	9	6.8
Overall score of maternal practice of Breastfeeding	Good Practice	34	25.8
	Poor Practice	98	74.2

Table 6: Maternal practice of breast feeding

Maternal Knowledge on Complementary Feeding

In order to determine maternal knowledge on complementary feeding practices, mothers/caregivers were asked questions with regards to: introduction of semi-solid, solid or soft foods; dietary diversity and frequency of complementary foods; knowledge of balance diet. Most 102 (77.3%) of the mothers responded to introducing semi or solid to children at age before months, while 21 (15.9%) answered at 6 months of age and lastly 9 (6.8%) responded to not knowing none of the responders answered to above six months. Majority of the mothers 104 (78.8%) did not know the advantages of preparing foods from different crops (dietary diversity) only a portion of 28(21.2%) know (Table 7). Regarding the knowledge of the feeding frequency, slightly above half 73(55.3%) know that a child should fed 2 times a day on average, 32 (24.2%) responded to 3 times, 20 (15.2%) responded to more than 3 times a day while 7 (5.3%) responded to feeding only 1 time a day on average. For Knowledge of balance diet all the mothers (132) know what a balance diet is (Table 7). Overall knowledge of mothers on complementary feeding as shown in Table 7, majority (74.2%) of the mothers had poor knowledge of complementary feeding, only about 25.8% possess sufficient knowledge of complementary feeding.

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Variables	n=132	Frequency	%
Knowledge of the age to introduce semi or solid food for your child.	Before 6 months of age	102	77.3
	At 6 months of age	21	15.9
	After six months of age	0	0
	I don't know	9	6.8
Preparing food from different crops has advantage.	Yes	28	21.2
	No	104	78.8
Knowledge average no. of times to feed your child.	1 time per day	7	5.3
	2 time per day	73	55.3
	3 times per day	32	24.2
	more than 3 times	20	15.2
What is balanced diet?	Known	132	100
Overall score of maternal knowledge on complementary practices	Sufficient	34	25.8
	Poor	98	74.2

Table 7: Maternal knowledge on complementary practices

Maternal Attitude toward Complementary Feeding

Mothers/caregivers were asked questions on priority for child, time to give priority, giving children special concern to ascertain the attitude of mothers/caregivers toward their children. As shown in Table 8, all the mothers responded to giving priority to the children. Majority 64(48.5%) of the mothers responded they gave priority to their children just sometimes, 53(40.0%) responded to when there is scarcity of food at home while 15 (1.4%) gives priority to their children always. All the mothers complained shortage of crops in the home do not allow them to diversify the child's diet. Of the 132 mothers interviewed only 29 (29.0%) gave special concern when feeding their children, 100 (75.8%) do not while 3 (2.3%) gave sometimes. Only 32.5% of the participants agreed that complementary foods in addition of breast milk after six months are best way of feeding, while 59.5% agreed to preferable. The entire maternal attitude toward complementary feeding as shown in Table 8, was low, as only 22.0% shows sufficient attitude toward complementary feeding, while large portion of about 79.5% of the mothers had poor attitude toward complementary.

Variables	n=132	Frequency	%
Priority for child to eat before the rest of the family.	Yes	132	100
Time to give priority to a child	There is scarcity in home	53	40.1
	Sometimes	64	48.5
	Always	15	11.4
What prevents to give different mixed food child?	Shortage of crops availability in home	132	100
Special concern on Feeding the children.	Yes	29	22
	No	100	75.8
	Sometimes	3	2.2

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Complementary food in addition to breast milk after six months	Best feeding	56	40.5
	Preferable	76	59.5
Overall score of maternal Attitude toward complementary practices	Good	29	22
	Poor	103	78

Table 8: Maternal attitude toward complementary feeding

Maternal Practice of Complementary Feeding

As presented in Table 9, most of the children 75 (56.8%) had received solid, semi-solid or soft foods the less than 6 months of age, 45(34.1%) of mothers introduced food to their children at 6 months while 12(9.1%) introduced above six months of age. For first food giving 74(56.1%) reported to giving tuwo, 58(43.9%) reported given porridges while none reported on the other categories. Of the mothers 57(43.9%) reported to preparing food from different crops while 75 (56.1%) do not diversify their diet.

Concerning what is use to feed the children, a third 104 (78.8%) of the mothers responded to bottle feeding while 28 (21.2%) responded to feeding their children with other means of feeding, no response on feeding with cup or spoon. For washing of the feeding utensils 102 (77.3%) say they wash the utensil twice a day while the remaining 30 (22.7%) wash the utensil immediately after use. More than half (63.6%) of the mothers responded to washing of hands before feeding the child while 40(36.4%) do not wash their hands before feeding (Table 9).

Regarding the average number of times a child is being fed (feeding frequency), most 59(44.7%) of the respondents feeds their children twice a day, 57 (43.2%) responded to feeding once in a day on average, while 16 (12.1%) responded to three times a day. No respond on 4, 5, and above 5 times. The overall score of complementary feeding practice as shown in Figure 2 was low, as only 20.5% met to good practices while large portion of 79.5% did not met the good complementary practices (poor practices).

Variables	n=132	Frequency	%
Age of Introduction of food to Child	Less than 6 months	75	56.8
	6 months	45	34.1
	above 6 months	12	9.1
First food given to child.	Tuwo	74	56.1
	Porridges	58	43.9
Preparation of food from different crops	Yes	57	43.9
	No	75	56.1
What do you use to feed child	Bottle	104	78.8
	Other	28	21.2
How frequent you wash the dishes?	Twice daily	102	77.3
	Immediately after use	30	22.7
Washing of hands when feeding child?	Yes	84	63.6
	No	48	36.4

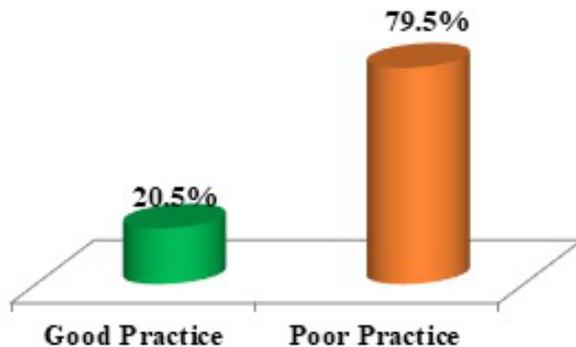
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Frequency of feeding child per day	1 time	57	43.2
	2 times	59	44.7
	3 times	16	12.1

Table 9: Maternal practice of complementary feeding

Practice of Breast Feeding and Associated Factors



Maternal Age and Head of the house hold, $p = 0.040$ and $p=0.006$ respectively were the only factors showing association with level of maternal practice of breast feeding. Mothers of age between 10 – 19 years (29.8%) were likely to have good breast-feeding practice than the others while mothers whose head of house hold (30.1%) where father were likely to have good breast-feeding practice than mothers who are the head of house hold (Table 10).

Figure: 2: Overall score of complementary feeding practice

Variables		Level of maternal practice of Breastfeeding		
		Good Practice	Poor Practice	p-value
		%	%	
Maternal Age	10-19 Years	29.8	70.2	.040*
	20-25	10.7	89.3	
Maternal Education Level	Illiterate	29.1	70.9	0.639
	Primary school	23.1	76.9	
	Secondary	20	80	
	Tertiary	0	100	
Father's Education Level	Illiterate	27.6	72.4	0.654
	Primary school	32.1	67.9	
	Secondary	19.4	80.6	
	Tertiary	20	80	
Head of the house hold	Father	30.1	69.9	.006*
	Mother	0	100	
Total family size	5 and below	29.5	70.5	0.051
	Above 5	11.1	88.9	
Maternal Occupation	Housewife only	28.4	71.6	0.383
	Business/Trade	21.6	78.4	
Father occupation	Farmer	27.2	72.8	0.069
	Business/Trade	0	100	
	Private Employee	42.9	57.1	
	Government Employee	25	75	

*. The Chi-square statistic is significant at the .05 level.

Table 10: socio-demographic and economic information and practice of breast feeding

Practice of Complementary Feeding and Associated Factors

In the Table 11 below, Maternal education, father's education, and father's occupation were significantly associated to level of maternal practice of complementary feeding. Mothers (100.0%) who had tertiary education were more likely ($p=0.0020$) to have good practice of complementary feeding compare to other mothers. Mothers (39.3%) belonging to fathers who had primary education were more likely ($p=0.015$) to have good practice of complementary feeding compare to others. Mothers (42.9%) belonging to private employees were more likely ($p=0.044$) to have good practice of complementary feeding compare to others.

Variables		Level of Complementary Feeding Practices		
		Good Practice	Poor Practice	p-value
		%	%	
Maternal Age	10-20 Years	23.1	76.9	0.15
	21-30	10.7	89.3	
Maternal Education Level	Illiterate	24.1	75.9	.002*
	Primary school	0	100	
	Secondary	24	76	
	Tertiary	100	0	
Father's Education Level	Illiterate	19	81	.015*
	Primary school	39.3	60.7	
	Secondary	16.1	83.9	
	Tertiary	0	100	
Head of the house hold	Father	19.5	80.5	0.494
	Mother	26.3	73.7	
Total family size	5 and below	19	81	0.429
	Above 5	25.9	74.1	
Maternal Occupation	Housewife only	21	79	0.848
	Business/Trade	19.6	80.4	
Father occupation	Farmer	19.6	80.4	.044*
	Business/Trade	0	100	
	Private Employee	42.9	57.1	
	Government Employee	25	75	

*. The Chi-square statistic is significant at the .05 level.

Table 11: socio-demographic and economic information and practice of complementary feeding

Discussion

Infant and young child feeding (IYCF) Knowledge, attitude practices in children is critical to improved nutrition, health and development [2]. This study was to assess knowledge attitude and practices of adolescent mothers towards infant and young child feeding in Shinkafi ward of kaita L.G.A katsina state. As a whole, the participants were young mostly age 10 – 19 years,

married and majority were illiterate. The findings on marital status and maternal education level are in agreement with those conducted in Ethiopia by (Gebru, 2007). On the whole, most (43.9%) of the husbands were illiterate and majority (69.7%) were farmers while most (61.45%) of the mothers were house wives and depended on their spouses for provision of food and other necessities. Other studies conducted in informal settlements in Nairobi have found similar findings

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[15, 16]. The majority (85.6%) of the households were headed by the fathers and over a third (79.5%) of the family were having 5 and below as total family size. Income to food expenditure indicating high levels of poverty in the study area.

With reference to knowledge of breast-feeding different aspects of breast-feeding results was discussed as follows. Mothers were asked about the advantage of breastfeeding to their children. The majority of the mothers (75%) reported that breastfeeding is advantageous for the children. This is in line with the study conducted by [15], showed that mothers who have the knowledge of breast feeding tend to be more responsive to their infants also, breast feeding in terms of its health advantage, several studies have found the risk of breast cancer, ovarian cancer, osteoporosis to be higher for women who have never breastfed than mothers who breastfed [17]. On the awareness of the advantage of colostrum's feeding to their infants, most mothers (56.8%) have good knowledge about it. This is in contrast to a study conducted by Bernier [18], in many cultures' mothers, due to lack of awareness about the importance of colostrum were not interested to feed it for their infants. Because of its color and thickness many mothers considers it as dirty until it is replaced by milk from 3 to 4 days after child birth. Regarding the knowledge of frequency of breastfeeding in the first months, majority (62.1%) of the mothers were aware that a child is to be fed on demand. In relation to the knowledge of duration of breastfeeding a child, most (39.4%) mothers responded to 20 – 24 years. This finding was also supported by research conducted by Huggerty and putstein, 1999 in Near East/North Africa [19]. Exclusive breast feeding is one of the major breast-feeding practices being recommended by WHO as it is good for infants' growth and development. More than half (51.5%) reported they don't know the right period of exclusive breast feeding. Overall knowledge of breast feeding, when the respondent woman identified correctly at least five correct or true statements out of seven statements prepared about child feeding knowledge [20]. Overall knowledge of the adolescent mothers about breastfeeding was low (34.8%). This is in contrast to the study by Parks & Smeriglio, indicates that by measuring the parenting

and breastfeeding knowledge on the first-time infant mothers stated that the knowledge level was high and no difference from that of older mothers [21].

Regarding the attitudes of breastfeeding in public, almost all (95.5%) of the disagree with breastfeeding in public. Attitude of mother on physical appearance about two-third (71.1%) of the participants were in the opinion that breastfeeding affects their appearance. Research finding by Spitzack, cited in Jones, 2004, demonstrates that in western culture, mothers are socialized to perceive their personal value is reflected in their physical appearance. So, they are socialized that their breast is not entirely their own but it should exist for evaluation and pleasure of others [22]. Therefore, as a result of cultural influence on mothers tend to be more concern about their breast shape and size in order to have the ideal breast which indicate round, small and firm that denotes youth and fertility but which overshadow meaning to mothers that is breast feeding. However, attitude about when they breastfeed their children more than half of the participants (57.7%) breast fed their children when they get hungry. Regarding breastfeeding and interest to breastfeed, all the respondents (100%) seem to be in general agreement that they have positive attitude about breastfeeding by their own interest without the external lobbying. This finding is also supported by Allen, 1985 who said that mothers breast feed longer if they have positive attitude or interest to breast feed, if they intended to do it for a longer period of time, and also if they are not anxious about the process [23]. The study also reveals that most (39.4%) mother's attitude when child is sick shows that, they treat them at home. Overall attitude toward breast feeding, this is obtained when the respondent reported accepting attitude to at least five of the prepared statements of favorable attitude towards child feeding (Eckstein, 2009). In general, the mother's attitude toward breast feeding was low (37.1%). This is in contrast to the finding of Jones (2004), which reported higher.

The research participants were asked if they introduced any kind of prelacteal food to new born soon after birth. A third (75%) of the respondents practice indicates that at time of birth they gave their new born infant with prelacteal food. As with the finding of Rada (1996),

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which discovered this is the common practice that Ethiopian mothers appears to share providing their new born unrefined fresh butter believing that it is good for infants though the practice is frequently cited as harmful traditional practices (HTPs) [24]. In relation to the practice of colostrum feeding all mothers (100%) fed their new born infants with first breast milk. This is Similar to the research finding by Greiner, 1996, indicates that mothers gave colostrum to their infants nowadays because of the result of attempts made for several years to encourage its feeding as a norm [25]. Most mothers '(75%) practiced exclusive breast feeding before six months of age. The innocent declaration on the protection, promotion and support of breastfeeding stated in WHO/UNICEF (1990), also indicates that: For optimal breastfeeding, women should practice exclusive breastfeeding and all infant should be fed exclusively on breast milk from birth to four to six months of age [26]. It is indicated that, majority of the respondents (40.2%) replied that they practiced late, initiation of breast feeding after six hours of delivery. Research by Perez-Escamilla, states that delayed initiation of breastfeeding may result in the newborn being provided with other sources of nourishment that can introduce infection and delay lacto- genesis (milk arrival) [19]. Such kind of practice is in opposite to the immediately after birth 'comment of physicians [19]. Overall practice is obtained when the respondent identified correctly at least 2/3 of the statements prepared about child feeding practice [20]. In general, good practice of breast feeding by the mothers was low only 25.8% were able to meet the good practices of breast feeding.

The awareness about the initiation of complementary infant feeding is a concerned; more than a third of the respondents (77.3%) indicated that they started giving complementary foods to their infants before six months of age. WHO global infant feeding recommendations WHO, 2002 stated that complementary feeding (semi or solid food) should be started after six months [27]. On the other hand, various research evidences cited in. Kanoa, (2011) revealed that both too early initiation and too late initiation are disadvantageous [28]. The findings on the awareness of the importance of preparing food from different crops and knowledge of

the frequency of feeding concur with those of studies on infant and young child feeding conducted in Zambia [20]. In present study is higher as majority 78.8% of the mothers did not know the advantage of preparing food from different crops and most (55.3%) of the mothers reported to knowing that a child is to be fed twice a day on average which is in contrast to that of Zambia [20]. Overall, mothers' and caregivers demonstrated a low (25.8%) knowledge on complementary feeding practices. This finding is in line with the findings of Muchina in Nairobi [29].

Concerning the attitudes of mothers towards complementary infant feeding on the priority of feeding the children, all respondents (100%) were agreed to given priority to their children with majority (48.5%) responded to given the priority only sometimes. But in contrast to this, the research finding by Ekelund found that there is highly significant positive associations between given optimal priority to children good development [6]. All the respondents (100%) reported that shortage of crops is the reason they don't mixed child's food, even though majority of them are predominantly farmers. Concerning the issue of given special concern on feeding the children with complementary foods more than a third participants (75.8%) revealed that they don't give special concern on child's feeding of complementary foods. Only 40.5% of the participants agreed that complementary foods in addition of breast milk after six months are best infant feeding. This finding is consistent with the study conducted by WHO those states about six months onward, breast milk alone is not sufficient to meet all the nutritional requirements, so infants should be made vulnerable to complementary feeding WHO, 2001 [30]. Overall, mothers'/caregivers demonstrated a low (22.0%) attitude on complementary feeding practices.

In relation to the practices of initiation of providing infants with complementary foods, more than half of the participants (56.8%) initiated complementary foods to their infants less than six months of birth. This is in contrast with the World health assembly recommendation that mothers should start to feed their infants with appropriate complementary foods from the age of 6 month onward [2]. About (56.1%) of mothers gave tuwo as the first complementary food to their

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infants. But, according to Okolo, 1999, in other parts of the world gruel is given regularly as the first complementary foods to infants [31]. Less than half (43.9%) of the mothers only diversify their diet while majority do not, this may be as a result of lack of knowledge of preparing food from different crops. Scientific studies have established that appropriate dietary diversity is associated with improved child nutritional status [32].

Regarding feeding utensil, (78.8%) responded to bottle feeding and majority (77.3%) practiced washing of the feeding utensil twice daily. Also 63.6% responded to washing of hands before feeding their children. Regarding the occasion or frequency of providing infants with complementary foods, majority (44.7%) of the respondents practiced it two times a day. In contrast to this few research studies revealed that feeding infants two-three times is not sufficient. It must be practiced five to six times a day in addition to breast feeding otherwise malnutrition will be caused in infants [33].

Over all practice of complementary feeding was low, only 20.5% had good practice of complementary feeding. Maternal age and head of the house hold, $p = 0.040$ and $p=0.006$ respectively were significantly associated with level of maternal practice of breast feeding. The study showed that mothers of age between 10 – 19 years (29.8%) were likely to have good breast-feeding practice and mothers whose head of house hold (30.1%) had good breast-feeding practice. Singh, 2004 said that as the infant start taking complementary foods well, the infant should be given breast milk first and then complementary foods, this will ensure adequate lactation. Also, Inadequate dietary intake results into growth faltering [8]. Several studies have demonstrated the relationship between complementary feeding practices and wasting, stunting or underweight (Ma et al., 2012). Therefore, appropriate complementary feeding is optimal for child wellbeing and development. In this study maternal education ($p=0.0020$), father's education ($p=0.015$), and father's occupation ($p=0.044$) were significantly associated to maternal practice of complementary feeding. Mothers (39.3%) belonging to fathers who had primary education were more likely to have good practice of complementary feeding compare to others and mothers

(42.9%) belonging to private employees were more likely to have good practice of complementary feeding compare to others.

Conclusion

The results of the study can be concluded that, most mothers in Shinkafi ward kaita LGA were illiterate or primary school educated and housewives. The fathers were farmers mostly illiterate too, and more than half of the mothers were a member of nuclear family. The adolescent Mothers had poor knowledge, attitude and practices of both breast and complementary feeding. Maternal age, maternal education, total family size, maternal occupation and father's occupation are the significant factors that influence breast feeding and complementary feeding practices of the adolescents' mothers.

Recommendation

Based on the major finding obtained and conclusions drawn, the following recommendations are forwarded:

- Revitalizing and expanding the Baby friendly Hospital Initiative and Establishing of breastfeeding intervention programs for protection, promotion, and support of breastfeeding.
- The adolescents' mothers in this community should be given a thorough information about micro nutrient, their advantages, their deficient and possibly uses of each of the micro nutrient in the way they will understand in their local dialect
- Sufficient information should be given to mothers and the community in general about breast feeding before child birth by the health extension workers.
- Mothers should be given information on how, when and why to breastfed infants after birth not only by elder mothers but also by health professionals, husbands and media.
- There should be a regular program to teach mothers about the advantages of breast feeding to them and their infants through health care professionals of the

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community so that lack of awareness about importance breastfeeding feeding will be bridged.

- Mothers should be educated that both sexes are equal and need equal feeding duration for the healthy development.

References

1. https://www.who.int/health-topics/adolescent-health#tab=tab_1
2. <https://www.who.int/en/news-room/fact-sheets/detail/infant-and-young-child-feeding>
3. NPC I. International. Nigeria Demographic and Health Survey 2013.
4. National Population Commission. Nigeria demographic and health survey 2013. National Population Commission, ICF International; 2013.
5. <https://evaw-global-database.unwomen.org/en/countries/asia/nepal/2011/demographic-and-health-survey-2011>
6. Ekelund U, Ong K, Linné Y, Neovius M, Brage S, Dunger DB, Wareham NJ, Rössner S. Upward weight percentile crossing in infancy and early childhood independently predicts fat mass in young adults: the Stockholm Weight Development Study (SWEDES). *The American journal of clinical nutrition*. 2006 Feb 1;83(2):324-30.
7. Kanoa BJ, Al-Hindi A, Lubbad AM. Breast Feeding, Complementary Feeding, and Weaning Practices, among Children up to 2 Years Old in Gaza Strip.
8. <https://www.unicef.org/>
9. Ene-Obong HN. Eating right. A nutrition guides. University of Calabar press, Calabar. 2001.
10. Michaelsen KF. Complementary Feeding of Young Children in Developing Countries: a Review of Current Scientific Knowledge: edited by Kenneth Brown, Kathryn Dewey, and Lindsay Allen, 1998, 178 pages, softcover. World Health Organization, Geneva.
11. Maman S, Cathcart R, Burkhardt G, Omba S, Thompson D, Behets F. The infant feeding choices and experiences of women living with HIV in Kinshasa, Democratic Republic of Congo. *AIDS care*. 2012 Feb 1;24(2):259-65.
12. Marshall JE, Raynor MD. Myles' Textbook for Midwives E-Book. Elsevier Health Sciences; 2014 Sep 5.
13. Agunbiade OM, Ogunleye OV. Constraints to exclusive breastfeeding practice among breastfeeding mothers in Southwest Nigeria: implications for scaling up. *International breastfeeding journal*. 2012 Apr;7(1):1-0.
14. Ojofeitimi EO, Owolabi OO, Eni-Olorunda JT, Adesina OF, Esimai OA. Promotion of exclusive breastfeeding (EBF): the need to focus on the adolescents. *Nutrition and health*. 2001 Jan;15(1):55-62.
15. Adere JW. *Feeding practices and nutritional status of Children 6-36 months in muslim and christian Households: a human rights perspective (a case study of Kibera in Nairobi, Kenya)* (Doctoral dissertation, University of Nairobi).
16. Ochola SA. Evaluation of two counseling strategies improving exclusive breastfeeding among HIV-negative mothers in Kibera slum, Nairobi, Kenya: a randomized controlled trial (Doctoral dissertation, Stellenbosch: Stellenbosch University).
17. Bernier MO, Plu-Bureau G, Bossard N, Ayzac L, Thalabard JC. Breastfeeding and risk of breast cancer: a meta-analysis of published studies. *Human reproduction update*. 2000 Jul 1;6(4):374-86.

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18. Feldman RS. Child development: A topical approach. Pearson Higher Ed; 2013 Jul 17.
19. Haggerty PA, Rutstein SO. Breast and Complementary Infant Feeding and the Postpartum Effects of Breastfeeding: Demographic and Health Surveys, Comparative Studies No 30. Macro International Inc. Calverton, Maryland, USA. 1999.
20. Hussein AK. Breastfeeding and complementary feeding practices in Tanzania. East African Journal of Public Health. 2005 Apr;2(1):27-31.
21. Park JE. Textbook of preventive and social medicine. (A treatise on community health.). Revista de Saude Publica. 1970;4(2).
22. Jones DP. Cultural views of the female breast. ABNF Journal. 2004 Jan 1;15(1).
23. Allen LH, Pelto GH. Research on determinants of breastfeeding duration: suggestions for biocultural studies. Medical anthropology. 1985 Mar 1;9(2):97-105.
24. <https://www.unicef.org/ethiopia/child-protection>
25. Greiner T. History of breastfeeding. Nursing Mothers Newsletter. 1998;34.
26. World Health Organization. Strengthening action to improve feeding of infants and young children 6-23 months of age in nutrition and child health programmes: report of proceedings, Geneva, 6-9 October 2008.
27. World Health Organization. Global strategy for infant and young child feeding. World Health Organization; 2003.
28. Kanoa BJ, Al-Hindi A, Lubbad AM. Breast Feeding, Complementary Feeding, and Weaning Practices, among Children up to 2 Years Old in Gaza Strip.
29. Muchina EN, Waithaka PM. Relationship between breastfeeding practices and nutritional status of children aged 0-24 months in Nairobi, Kenya. African Journal of Food, Agriculture, Nutrition and Development. 2010;10(4).
30. Schwartz HL. Infant feeding practices and beliefs among women in Podor, West Africa. San Jose State University; 2008.
31. Okolo SN, Adewunmi YB, Okonji MC. Current breastfeeding knowledge, attitude, and practices of mothers in five rural communities in the Savannah region of Nigeria. Journal of tropical pediatrics. 1999 Dec 1;45(6):323-6.
32. Arimond M, Ruel MT. Dietary diversity is associated with child nutritional status: evidence from 11 demographic and health surveys. The Journal of nutrition. 2004 Oct 1;134(10):2579-85.
33. Tiwari S, Bharadva K, Yadav B, Malik S, Gangal P, Banapurmath CR, Zaka-Ur-Rab Z, Deshmukh U, Agrawal RK. Infant and young child feeding guidelines, 2016. Indian pediatrics. 2016 Aug;53(8):703-13.