Comparison of Knowledge and Practices of Infant and Young Child Feeding between Working and Non-working Mothers attending Clinic at Comprehensive Health Centre Dadin Kowa, Jos Plateau State.

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Abstract

Background: About 60% of all deaths among children less than 5 years of age are directly or indirectly attributed to malnutrition. Feeding behaviour of a working woman is a combination of her perceptions, awareness, facilities and support from family and the community. It is more challenging for employed women to balance their feeding responsibilities and work. The purpose of this study was to compare the knowledge and practice of Infant and Young Child Feeding between working and nonworking mothers in Dadin Kowa, Jos South Local Government Area.

Methods: A cross sectional study was carried out among 250 women from Dadin Kowa selected using Multistage Sampling technique; 125 were working while 125 were not gainfully employed. Data was collected using a structured interviewer administered questionnaire and SPSS software version 26 was used for data analysis. A p-value ≤ 0.05 was considered statistically significant at 95% confidence interval.

Result: Majority; 92(73.6%) of the nonworking mothers had good knowledge of Infant and Young Child Feeding compared to 59(47.2%) working mothers (P=0.0001). A higher proportion of non-working; 78(62.4%) than working; 60(48.0%) mothers had good Infant and Young Child Feeding practices. This difference between the two groups was also statistically significant (p=0.005).

Conclusion: This study found that nonworking mothers' knowledge and practice of infant and young child feeding was better than that of working mothers. Promoting breastfeeding at workplace and further research is necessary to improve Infant and Young Child Feeding.

Key words: Infant and young child feeding, working mothers, non-working mothers.

Introduction determining the nutritional status of Infant and Young Child Feeding (IYCF) children; particularly those under five practices are very important in years of age. About 60% of all deaths

among children less than 5 years of age are, directly or indirectly, attributed to malnutrition. Poor feeding practices during infancy and early childhood lead to malnutrition and contribute to impairment of cognitive and social development, poor school performance and reduced productivity in later life.¹

Childhood malnutrition remains a public health challenge, especially in low and middle-income countries, as more than one third of the disease burden is attributed to maternal and child under nutrition. Infant and young child feeding practices as stipulated by World Health Organization (WHO) recommends exclusive breastfeeding up to age of six months with timely initiation of feeding with solid and semisolid foods from six months onwards. It also recommends feeding infants in small amounts, increasing the amount of foods and frequency of feeding as the child gets older while maintaining breast feeding as demanded by the child.

Feeding behaviour of a working woman is a combination of her perceptions, awareness, facilities, and support available to her. It is more challenging for employed women who need to balance the responsibilities of feeding their infants and their work. Employment modifies breastfeeding and other child-feeding behaviour of a woman in significant ways; with full time employment having the most detrimental impact. 4, 5 A study established that in comparison with non-working mothers, probability of breastfeeding cessation among full time workers was four times as high for women taking a maternity leave of less than six weeks while it was just half as much for women with less than 12 weeks of leave.

Now, more women are working outside the home in both the formal and informal sectors. Difficulties that working women face in practicing breast-feeding are also increasing. Women work in informal settings such as farms, streets, construction sites and markets as well as in formal sectors such as offices, hospitals, educational institutes and factories.⁷

This factor, in addition to economic factors, socio-environmental determinants and changing socio-cultural belief systems are associated with inappropriate feeding practices among Nigerian mothers. Thus this study assessed and compared IYCF knowledge and practices of working and nonworking mothers in Dadin Kowa, Jos South LGA. Plateau State because it will be relevant to produce data that can be used to prepare nutrition education for mothers and caregivers, government, policy makers, employers of labour as well as other researchers as a means to improve the poor nutritional indices of Dadin Kowa, Jos, Plateau State and other metro cities both within and outside Nigeria. The lessons drawn from this study can be utilized to fine-tune the Mother and Child Health policies and programmes at a global scale.

Methodology

Study area

The study was done in Dadin Kowa community of Jos South Local Government Area (LGA), Plateau State, Nigeria. The community had an estimated population of 45,824 with about 22,544 women of reproductive age and 4,344 children under the age of 5 years, in 2020.8 Dadin-Kowa is a sub-urban community with parts of it being an urban slum. The population was predominantly Muslim, with majority of the tribes being Hausa, Fulani and others including Jukun, Jarawa, Ebira, Sayawa, Alago etc who work mostly with the civil service. Others were artisans, farmers or self-employed. Social amenities like schools, power supply, potable water and roads are good within the community while housing and waterways are fairly good. The literacy

level of the community is similar to that of the State (lower than the national average) and most residents are of the lower social status. There are three hospitals in Dadin Kowa, two of which are private and the other public (Comprehensive Health Centre) where immunization services are done and which was used for this research. Study population and eligibility criteria Mothers of children under the age of five years and their children were the population studied. Biological mothers of under five children, who were permanent residents in Dadin Kowa, were included in the study while mothers with any mental impairment were excluded from the study as they would not be able to give reliable nutritional information.

Study design and sample size determination

A cross-sectional comparative study design was used for the study. It was used to compare the IYCF knowledge and practices between working and non-working class mothers in Dadin Kowa, Jos South LGA, Plateau State. The sample size was determined using the formula for comparative studies;

$$n = \underbrace{(Z_{\alpha} + Z_{\beta})^2 \times 2 \times pq}_{(P_1 - P_2)^2}$$

Where

n = minimum sample size per group

 Z_{α} = Standard normal deviate at 95% confidence level (α /type I error of 5%) = 1.96

 Z_{β} = Standard normal deviate at a power of 80% (β /type II error of 20%) = 0.84

 P_1 = prevalence of working class mothers who practiced appropriate complementary feeding from a previous study = 0.70^{10}

 P_2 = proportion of non-working class mothers who practiced appropriate complementary feeding from a previous study = 0.57^{10}

$$P = P_1 + P_2/2$$

q = 1 - p

n = 125

The minimum sample size was estimated to be 125 subjects per group.

Sampling technique

Dadin Kowa ward was selected from the 20 wards in Jos South LGA purposefully because of its sub-urban nature as well as its proximity and peaceful nature. The Comprehensive Health Centre Dadin Kowa was also purposively selected because it is the largest health facility serving the whole of Dadin Kowa community. All health care services including maternal and child health services are offered in this facility and the services are available every working day of the week. On the days of routine immunization in the Comprehensive Health Centre Dadin Kowa, the women who met the eligibility criteria were recruited consecutively into the two study groups until the sample size of 125 per group was attained.

Data collection

The questionnaire for the study was adapted from the "Guidelines for assessing nutrition-related knowledge, attitudes and practices (2014)" also called "KAP manual" developed by the Food and Agriculture Organization of the United Nations (FAO). The independent variables included the socio-demographic characteristics of the children such as age and sex of index child. The dependent variables were complementary feeding knowledge, complementary feeding practices (including meal frequency), dietary diversity, and minimum acceptable diet. The study covariates included maternal age, marital status, level of education, occupation and number of children. It was an interviewer administered questionnaire which was pretested on 15 women at Jos University Teaching Hospital (JUTH) Family Health

At Community entry, significant gate

keepers were contacted for a meeting and the aims/ objectives of the research was discussed with them to help in the mobilization of the mothers to the point of data collection before the commencement of the research proper. This is to notify the gatekeepers about the research and to increase the attendance of mothers for routine immunization before the commencement of data collection proper. Three research assistants were trained on the pertinent aspects of the study by the researcher. On the day of data collection (routine immunization) respondents were briefed about the research, verbal informed consent was gotten from them after assuring them of confidentiality, anonymity and voluntary participation. Data was collected for a duration of two months from the 3rd of May to 1st of July 2021 using ODK data collection kit.

Data management

Scoring and grading of variables

Every correct answer was awarded one point while a wrong answer or "don't know" was awarded zero point. . Complementary feeding knowledge and practices were scored on a 10 and 9 point scale respectively with a total of ten questions on knowledge and nine for practice. The minimum possible score was four for both knowledge and practice, and a maximum of ten score for knowledge and nine score for practice. The knowledge scores were categorized into good (8-10), fair (5-7) and poor (0-4) while the practice scores were also categorized into good (7 - 9), fair (4 - 6) and poor (0 - 3). Those who practiced 7 or more of IYCF practices as recommended by WHO (minimum acceptable diet, minimum dietary diversity, minimum meal frequency, bottle feeding, continued breastfeeding at one year, continued appropriate feeding at 6-11 months and duration of breastfeeding) were categorized as practicing good IYCF and between 4-6 groups were categorized as fair while 3 and below were classified as poor.

Definition of variables was based on the definitions of the variables according to the WHO guidelines.¹⁰

- Minimum feeding frequency was defined as proportion of breastfed and non-breastfed children, 6-23.9 months of age who receive solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more in a day as follows: 2 times for breastfed infants 6-8.9 months; 3 times for breastfed children 9-23.9 months; and 4 times for non-breastfed children 6-23.9 months.
- Minimum dietary diversity was defined as the proportion of children 6-23.9 months of age who receive foods from four (4) or more food groups out of the seven (7) food groups. Each food group is given a score of one if food consumed. The food group include; grains, roots, tubers; legumes and nuts; dairy products; flesh foods (meat, fish, poultry, organs) eggs; vitamin A-rich fruits and vegetables, and other fruits and vegetables.
- Minimum acceptable diet was defined as the proportion of children 6-23.9 months of age who receive a minimum acceptable diet (apart from breast-milk). This composite indicator is usually calculated from the following two fractions: Breastfed children 6-23.9 months of age who had at least the minimum dietary diversity and the minimum meal frequency during the previous day.

Data analysis

Data was entered and analyzed using the statistical product and service solutions

(SPSS) software version 26 and for the tests of significance a p-value of ≤ 0.05 was considered statistically significant. All values of ≤ 5 were analyzed using Fisher's exact test at significance p-value of ≤ 0.05 . Chi square test was used to compare the levels of knowledge between the working and non-working mothers.

Ethical consideration

Ethical approval was obtained from the Plateau State Hospitals Management Board Ethics Committee (with ref no. HMB/ADM/772/1/108). Verbal informed consent was obtained from all the respondents after explaining the aims and objectives of the research to them. Participation was voluntary, confidentiality and anonymity were assured. The respondents were free to optout of the study at any point in time without any consequences.

Results

Respondents' knowledge of Infant and Young Child Feeding

More, 46(36.8%) of the working mothers knew the correct definition of complementary feeding compared to the nonworking mothers, 23 (18.4%). This difference was statistically significant (p = 0.010). The working mothers got information of Infant and Young Child Feeding from health workers, 54(43.2%) while the nonworking mothers got their information from family members and friends, 32(25.6%). This difference in source of information was statistically significant (p = 0.022). The working mothers, knew complementary feeding should be introduced at 6 months compared to nonworking mothers, majority of whom, 68 (54.4%) thought it should be introduced at less than 2 months of age. An equal number of the mothers in both groups, 92 (73.6%) knew the child was to be breastfed on demand after starting on other feeds. The non-working mothers had better knowledge on when breastfeeding should stop, 45 (36.0%) compared to the working mothers, 43 (34.4%). There was however no statistically significant difference in the knowledge of both groups regarding when breastfeeding should be stopped (p = 0.164). Table 1

Most of the women in both groups did not know the appropriate number of complementary feeds to give their children. There was a statistically significant difference in their knowledge about feeding of children aged 9-11months of age only (Table 2). Majority of mothers from both groups knew the appropriate diet for a healthy infant was fortified local foods. However, most of them did not know that starting complementary feeding late had health implications for the children (Table 3). Overall, 92(73.6%) of the nonworking mothers had good knowledge of IYCF compared to 59(47.2%) of working mothers. There was a statistically significant difference in knowledge among the two groups of women studied (p = 0.0001). Table 4

Respondents' practice of Infant and Young Child Feeding

Majority of both groups of mothers {nonworking mothers, 60 (48.0%); working mothers, 50 (40.0%)} stopped breastfeeding their last child earlier than the required age of 18-24 months. There was a statistically significant difference in the timing of weaning in both groups (p =0.0001). There was a statistically significant difference between the two groups' practices regarding frequency of feeding of their children at different age groups (p = 0.002). Most mothers in both groups however fed the children below the required number of times. Appropriate feeding utensil was used by working mothers, 75(60.0%) compared to nonworking mothers, 53 (42.4%) which

was statistically significant (p = 0.0001). Table 5. Breastfeeding on demand was practiced by 115 (92.0%) of nonworking mothers and 123 (98.45%) of working mothers but only a few from both groups added salt to their children's meals and knew the correct consistency of a child's meal. Majority of both groups of mothers knew hand washing should be done before and after feeding but more of the non-

working women than the working class fed their children appropriately when ill, 80(64.0%) vs. 45 (36.0% and there was a statistically significant difference between both groups (p = 0.000). Table 6. Overall, the non-working mothers demonstrated better practice of infant and young child feeding than the working mothers (p = 0.005). Table 7.

Table 1: Mother's knowledge of Infant and Young Child Feeding

NWM (%)	WM (%)	χ^2	p- value
(N=125)	(N=125)		
		11.404	0.010**
1 (0.8)			
	0(0.0)		
23 (18.4)			
40 (32.0)	46 (36.8)		
61 (48.8)	30 (24.0)		
20 (24.0)	49 (39.2)	44.440	0.000444
\ /		11.449	0.022**
` ′	,		
` ′	,		
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61 (48.8)			
	49 (39.2)		
		9.703	0.021*
` ′			
` /			
` /	` /		
2 (1.6)	68 (54.4)		
	8 (6.4)		
2 (1.6)		10.519	0.015**
` /	1 (0.8)		
` ′	, ,		
` ′	, ,		
0 (0.0)	, ,		
0 (0.00)	<i>y</i> (,)	5.103	0.164**
, , , ,		0.100	0,10.
` /	3 (2.4)		
` /	` '		
3 (3.30)	, ,		
	2 (1.6)		
	(N=125) 1 (0.8) 23 (18.4) 40 (32.0) 61 (48.8) 30 (24.0) 32 (25.6) 1 (0.8) 1 (0.8) 61 (48.8) 4 (3.2) 58 (46.4) 2 (1.6) 2 (1.6) 31 (24.8) 92 (73.6)	(N=125) (N=125) 1 (0.8) 0 (0.0) 23 (18.4) 40 (32.0) 46 (36.8) 61 (48.8) 30 (24.0) 49 (39.2) 30 (24.0) 32 (25.6) 54 (43.2) 1 (0.8) 21 (16.8) 1 (0.8) 1 (0.8) 61 (48.8) 0 (0.0) 49 (39.2) (1.6) 68 (54.4) 2 (1.6) 31 (24.8) 1 (0.8) 92 (73.6) 23 (18.4) 0 (0.0) 92 (73.6) 9 (7.2) (3) 0 (0.00) 80 (64.0) 45 (36.0) 3 (2.4) 0 (0.00) 77 (61.6) 43 (34.4)	(N=125) (N=125) 11.404 1 (0.8) 0 (0.0) 23 (18.4) 40 (32.0) 46 (36.8) 61 (48.8) 30 (24.0) 49 (39.2) 30 (24.0) 32 (25.6) 54 (43.2) 1 (0.8) 21 (16.8) 1 (0.8) 1 (0.8) 61 (48.8) 0 (0.0) 49 (39.2) 9.703 61 (48.8) 4 (3.2) 49 (39.2) 58 (46.4) 0 (0.0) 2 (1.6) 68 (54.4) 8 (6.4) 2 (1.6) 31 (24.8) 1 (0.8) 92 (73.6) 23 (18.4) 0 (0.0) 92 (73.6) 9 (7.2) 6) 0 (0.00) 80 (64.0) 45 (36.0) 3 (2.4) 0 (0.00) 77 (61.6) 43 (34.4)

^{*}Statistically significant

^{**}Fishers exact test; p<0.05 is significant

NWM = Non-working Mothers; WM = Working Mothers

Table 2: Mother's knowledge on frequency of complementary feeding

Knowledge	NWM (%)	WM (%)	χ^2	p- value
	(N=125)	(N=125)		
Frequency of Complementary feeding	5		4.269	0.234**
at 6-8months				
2 times	19 (15.2)	11 (8.8)		
2-3 times	97 (77.6)	98 (78.4)		
3-5 times	8 (6.4)	15 (12.0)		
I don't know	1 (0.8)	1 (0.8)		
Frequency of Complementary feeding	5			
at 9-11months			11.423	0.003**
2 times	2 (1.6)	10 (8.0)		
2-3 times	87 (69.6)	64 (51.2)		
3-5 times	36 (28.8)	51 (40.8)		
Frequency of Complementary feeding	5		4.170	0.244**
at >12months				
2 times	2 (1.6)	0(0.0)		
2-3 times	, ,	71 (56.8)		
3-5 times	61 (48.8)	53 (42.4)		
I don't know	0(0.0)	1 (0.8)		

^{*}Statistically significant

NWM = Non-working Mothers; WM = Working Mothers

Table 3: Mother's knowledge on timing of complementary feeding

0	0 1		0	
Knowledge	NWM (%)	WM (%)	χ^2	p- value
	(N=125)	(N=125)		
Most appropriate diet for			1.248	0.264
normal healthy infant	85 (68.0)			
Locally available food	40 (32.0)	93 (74.4)		
Processed/ packaged cereals		32 (25.6)		
Implication of starting			0.032	0.859
complementary feeding late	106(84.8)			
No risk	19 (15.2)	107 (85.6)		
Others**		18 (14.4)		
**illness, fever, malnutrition,		, ,		
kwashiorkor, child will not be				
healthy				

^{*}Statistically significant

NWM = Non-working Mothers; WM = Working Mothers

^{**}Fishers exact test; p<0.05 is significant

^{**}Fishers exact test; p<0.05 is significant

Table 4: Comparison of overall knowledge scores between working and non-working mothers

Overall knowledge scores	NWM (%) (N=125)	WM (%) (N=125)	χ^2	p- value
			18.670	0.0001
Good	92 (73.6)	59 (47.2)		
Fair	20 (16.0)	35 (28.0)		
Poor	13 (10.4)	31 (24.8)		

^{*}Statistically significant

NWM = Non-working Mothers; WM = Working Mothers

Table 5: Mother's practice of Infant and Young Child Feeding

	- 0	- 0		
Practice	NWM (%)	WM (%)	χ^2 1	o-value
	(N = 125)	(N = 125)		
Age of stopping breastfeeding (months)				
8-12	0(0.0)	19 (15.2)		
14-17	60 (48.0)	50 (40.0)	48 663	0.0001
18-24	43 (34.4)	36 (28.8)	.0.000	0.0001
>24	22 (17.6)	20 (16.0)		
Minimum meal frequency at 6-8 months				
<2 times	23 (18.4)	8 (6.4)		
2-4 times	80 (64.0)	73 (58.4)		
4-6 times	2 (1.6)	2 (1.6)	15 205	0.002**
I've not started	20 (16.0)	42 (33.6)	15.385	0.002**
Minimum meal frequency at 9-11 months				
<2 times	6 (4.8)	2 (1.6)		
2-4 times	79 (63.2)	77 (61.6)		
4-6 times	19 (15.2)	4 (3.2)	20.615	0.000**
>6	1 (0.8)	0(0.00)		
I've not started	20 (16.0)	42 (33.6)		
Minimum meal frequency at >12 months				
2-4 times	86 (68.8)	77 (61.6)		
4-6 times	19 (15.2)	5 (4.0)	17.470	0.001**
>6 times	0(0.0)	1 (0.8)	17	0.001
I've not started	20 (16.0)	42 (33.6)		
Appropriate utensils for feeding				
Feeding bottle	38 (30.4)	7 (5.6)		
Bowl and spoon	53 (42.4)	75 (60.0)		
Hand feeding	6 (4.8)	1 (0.8)	34.473	0.000**
Feeding cup	2 (1.6)	0(0.0)		
I've not started	20 (16.0)	42 (33.6)		

^{*}Statistically significant

^{**}Fishers exact test; p<0.05 is significant

^{**}Fishers exact test; p<0.05 is significant

NWM = Non-working Mothers; WM = Working Mothers

Table 6: Mother's practice of child's diet and hygiene

Practice	NWM (%)	WM (%)	χ^{2}	p-value
	(N = 125)	(N = 125)		-
Timing of breastfeeding				
3 times	6 (4.8)	2 (1.6)		
On demand	115(92.0)	123 (98.4)	6.269	0.044**
>3 times	4 (3.2)	0(0.0)		
Adding salt to diet				
Yes	18 (14.4)	5 (4.0)		
No	81 (64.8)	78 (62.4)	11.169	0.004
I've not started	20 (16.0)	42 (33.6)		
Thickness of child's food				
Same as family	44 (35.2)	34 (27.2)		
Thick to stay on spoon	23 (18.4)	44 (35.2)	40.996	0.000
Watery like breast milk	38 (30.4)	5 (4.0)		
I've not started	20 (16.0)	42 (33.6)		
Hand washing before feeding				
Always				
Sometimes	77 (61.6)	72 (57.6)		
I've not started	28 (22.4)	11 (8.8)	15.384	0.000
	20 (16.0)	42 (33.6)		
Washing utensils after feeding Always				
Sometimes	104 (83.2)	81 (64.8)		
I've not started	1 (0.8)	2 (1.6)	10.999	0.004**
	20 (16.0)	42 (33.6)		
Feeding when child is ill	•	,		
Slowly and patiently	80 (64.0)	45 (36.0)		
Give favorite foods	18 (14.4)	30 (24.0)	20 672	0.000
Feed forcefully	7 (5.6)	8 (6.4)	20.673	0.000
I've not started	20 (16.0)	42 (33.6)		

^{*}Statistically significant

NWM = Non-working Mothers; WM = Working Mothers

Table 7: Comparison of overall practice scores between working mothers and non-working mothers

Overall practice scores	NWM (%) (N =125)	WM (%) (N =125)	χ^2	p-value
			10.80	0.005
Good	78 (62.4)	60 (48.0)		
Fair	27 (21.6)	31 (24.8)		
Poor	20 (16.0)	34 (27.2)		

^{**}Fishers exact test; p<0.05 is significant

Discussion

Almost all the mothers breastfed their children. This is higher than the findings of a study conducted in Plateau State in which four out of every five respondents breast fed their babies. This probably means that most of the mothers in this community have embraced baby friendly initiative as the culture of the predominant ethnic groups in the study area encourages breastfeeding. The Public Health implication of this is that many of the children would be healthy and the mothers and the whole family would enjoy the benefits of the initiative as well.

Knowledge of timing of complementary feeding was high for working mothers, which was similar to findings in Karachi, India¹¹ and Ghana¹² but lower for the nonworking mothers who mostly introduced complementary foods before six months of age which is similar to findings from South West Nigeria. 13 Furthermore, they also introduced complementary feeds earlier than those not working because of the need to report back to work after 3-4 months (or shorter) of maternity leave; making exclusive breastfeeding difficult to continue, where their children could not be accommodated in their offices.

Though the risk of late initiation of complementary feeding has been identified as a cause of malnutrition, only few among both groups of mothers in this study knew malnutrition as an outcome of late commencement of complementary feeds. Reports from other countries in Africa have also corroborated this low level of knowledge with even lower figures compared to our study. 13,14 This may be a result of the misconceptions that breast milk alone is sufficient even after 6 months of age for growth and development. Late introduction of complementary feeds leads to growth faltering which can predispose to overt malnutrition especially when

associated with recurrent infections which are common about this stage. This may explain the low levels of malnutrition seen in this study.

Only few of the mothers knew the age when breastfeeding should be discontinued to be 18-24 months, which was similar to what a study done in Lagos found where majority of the mothers discontinued breastfeeding at 12 months. ¹³ This early cessation of breastfeeding would mean that the children would not get the full benefits of Exclusive Breast Feeding (EBF). It could be explained by

Feeding (EBF). It could be explained by the low educational status of the mothers studied. It is recommended that breast feeding should continue after introducing complementary feeds until child is two years old. This will give the necessary nutritional support while the child gradually gets accustomed to eating solid food.

Most of the mothers fed their children responsively (on demand) while others fed their children at scheduled times or during family meal times. Responsive feeding is advocated by WHO¹⁶ and UNICEF¹⁷ as the best approach to ensure that infants are appropriately fed and has been shown to be associated with better mental development compared to traditional complementary feeding. The WHO also recommends that children be fed at least 2 times daily between 6-8 months and at least 3 times for children between 9-12 months and >12months of age. Majority of the mothers in this study knew the correct feeding frequencies which was similar to what was documented in Cross River, Nigeria. 18 This could be because of their access to nutritional information from health workers and their past experiences too. It has good implications too as they would use the knowledge to feed their children appropriately. Overall knowledge of the mothers on infant and young child feeding was high unlike to the report from Lagos,

Nigeria.15

The prevalence of timely initiation of complementary feeding was high for both nonworking mother and working mothers just as was also recorded in Ghana, and introduction of complementary foods at 6 months was also at a high rate. 19 This good nutritional practice has a positive effect on the nutritional status of the children as it gave them sufficient time to enjoy the benefits of EBF. Also, adequate minimum acceptable diet was high for both groups of mothers unlike what was found in a study done in India which was very low.20 Possible reasons for this difference could be the timing of this studies; this study was collected when food crops had been harvested and were relatively affordable for low or middle class parents. Also, being cheaper, natural, home-made complementary feeds are more likely to be used in Dadin Kowa than canned complementary feeds which may not have a high dietary diversity.

A higher proportion of the working mothers made the complementary food in the right consistency in contrast to the nonworking mothers. This was unlike a study done in Ghana where one-third of the caregivers reportedly gave thick, nutrient dense foods to children after 6 months of age and another third of them increased the thickness as the children grew older. 13 It is recommended that at the beginning of complementary feeding, foods should be semi-solid and soft (in the form of a puree) and should be crushed or mashed, never sifted or blended.²¹ The consistency should then be gradually improved, considering the infant's eating skills and age. It should be noted that improper food consistency compromises the appropriate intake of nutrients by the infant.²²The working mothers are more likely to be more educated and so will realize the importance of the food being of the right consistency compared to the non-working mothers.

Almost all the mothers washed their hands before feeding their children and always sterilized their feeding utensils. This contrasts with the report of a study conducted in North Western Nigeria²³ in which only a few of the respondents always washed their hands before feeding their children and even fewer always sterilized the feeding utensils. The respondents in this study were more hygienic compared with their northwestern counterparts. The fact that most of the mothers had better education and better access to amenities such as water and electricity compared to their counterparts in the north can explain the difference. 23, 24 It is expected that clean utensils be used to feed children in order to avoid introducing dirt and germs that might cause diarrhoea and other infections Most of the mothers used bowls and spoons as the appropriate feeding utensil; similar to other studies in Edo and Karachi, Pakistan^{25, 26} while bottle feeding and hand feeding were practiced by few mothers. This is in contrast to what was observed in Sudan where three out every five mothers fed their children with hands. 12 The lower figure obtained from this study could be because most of the respondents are educated and no longer practice traditional method of feeding. The study has limitations due to recall period which might have introduced recall biases in relation to questionnaires relating to breast feeding and initiation of complementary feeding as the ages of the children ranged up to 24 months.

Conclusion

This study found that non-working mother's knowledge of infant and young child feeding was better than that of the working mothers. The majority of the nonworking mothers practiced better infant and young child feeding compared to working mothers and meal diversity was lower among working mothers compared to nonworking mothers; although both were at a suboptimal level when compared with the recommendations of WHO. It is therefore recommended that mothers should diversify food contents of their children's meals and ensure that they dedicate time to preparing infants' and young children's meals in order to improve their nutritional health. The government should also focus on poverty alleviation among women and implement workplace policies where daycare centres and breastfeeding areas can be allocated to nursing mothers.

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