


# Minimum Dietary Diversity Practice and Associated Factors among Children Aged 6 to 23 Months in Dire Dawa City, Eastern Ethiopia: A Community-Based Cross-Sectional Study

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## Abstract

**Objective:** Malnutrition because of poor dietary diversity contributing to child morbidity and mortality. Two-thirds of child mortality occurs within the first 2 years. However, there is limited data related to dietary diversity among children aged 6 to 23 months in Ethiopia. Thus, this study aimed to assess dietary diversity and factors among children aged 6 to 23 months in the study setting. **Methods:** A community-based cross-sectional study conducted on 438 children aged 6 to 23 months in Dire Dawa, 1-30/02/2019. Simple random sampling was used to select study subjects. Data collected using a structured and pretested interview administered questionnaire. Data entered using EpiData 4.2 and analyzed with SPSS Version 22. Multivariable logistic regression was used to examine associated factors. Adjusted odd-ratio with 95% confidence interval (CI) used, and *P*-value <.05 considered statistically significant. **Results:** The overall minimum dietary diversity practice was 24.4% (95% CI: 20.3, 28.5). Maternal education [AOR 2.20; 95% CI: 1.08, 4.52], decision-making [AOR = 2.5; 95% CI: 1.19, 5.29], antenatal care [AOR = 2.19; 95% CI: 1.20, 3.99], postnatal care [AOR = 6.4; 95% CI: 2.78, 14.94] and facility delivery [AOR = 2.66; 95% CI: 1.35, 5.25] were maternal factors. Moreover, child's age [AOR = 2.84; 95% CI: 1.39, 5.83], and child's sex [AOR = 2.85; 95% CI: 1.64, 4.94] were infant factors. **Conclusion:** One-fourth of children practiced minimum dietary diversity. Child's age, birth interval, postnatal care, antenatal care, child's sex, mothers' decision-making, mothers' education, and place of delivery were significant predictors. Therefore, maternal education, empowering women, and improve maternal service utilization are crucial to improving dietary diversity.

## Keywords

dietary diversity, child-feeding, Dire Dawa, Ethiopia

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## Introduction

Dietary diversity is many food groups that are used widely as a means for ascertaining the variety and nutrient adequacy of diets. Food groups from a variety of diets are essential components of child feeding practices that fulfill dietary needs and proper growth at the time of their early age.<sup>1-5</sup> Appropriate infant and young child feeding practices are vital for the optimal growth and development of the child.<sup>6</sup> Malnutrition accounts for infant and young child morbidity and mortality from avoidable nutritional

problems. The most problem has occurred in the low and middle-income countries (LMICs) accompanied by a remarkable rise in morbidity and mortality of the child.<sup>7-10</sup> Worldwide about 10.9 million children the age of below

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5 years were died, of which 60% of deaths resulted from malnutrition.<sup>11</sup> From these deaths, about 66% resulted from poor child feeding practices during the first 2 years of life.<sup>9</sup>

Furthermore, children who did not get diversified foods are at a high risk of falling a class and discontinuing from schools, which has a strong impact on the communities, families, and the systems of the countries education.<sup>12</sup> Reports revealed that malnutrition is a major public health problem in Ethiopia among infants and young children. According to the 2016 Ethiopian demographic and health survey (EDHS) report, 38%, 24%, and 10% of under-5 children were stunted, underweight, and wasted, respectively. In Dire Dawa, 40% of under-5 children are stunted.<sup>13</sup> Furthermore, only less than 24% of under-5 children had minimum dietary diversification practices in which they had been given foods from the appropriate number of food groups.<sup>14</sup>

Infant and young child feeding (IYCF) practices are important to enhance the child's health conditions, growth, and development. Optimal nutrition particularly in the first 2 years of life reduces the child's morbidity and mortality, risk of chronic disease, and enhances proper growth and development.<sup>14</sup> Evidence had shown that an intervention employed after the first 2 years of a child's age has little significance on the growth and development of a child.<sup>15</sup> Enhancing the quantity and quality of a child's food in this critical period is the main cost-effective mechanism to accelerate the overall health conditions and secure nutritional well-being. The importance of evidence-based nutritional information is a significant predictor to improve IYCF feeding practices, and reducing childhood malnutrition.<sup>16</sup>

A strategy to foster the reduction of undernutrition, the Ethiopian Government has developed the National Nutrition Strategy and the National Nutrition Programs (NNP).<sup>17,18</sup> Several, additional initiatives were also taken by the Ethiopian government to improve the nutritional status of under 2 years of children. Even though extensive initiatives have been taken by the Ethiopian government to improve the nutritional status of under-2 years of age children to increase dietary diversity practice, the problem is still very high. Besides, there are limited data related to dietary diversity practice among children aged 6 to 23 months in the study setting. Therefore this study aimed to assess the dietary diversity feeding practice and its associated factors among children aged 6 to 23 months in Dire Dawa, Eastern Ethiopia.

## Methods and Materials

### *Study Setting and Period*

We conducted this in Dire Dawa city Administration from February 1 to 30, 2019. The city is located 515 km

away from Addis Ababa, the capital city of Ethiopia. According to the 2019 population projection, Dire Dawa Administration has 493 000 total populations with 49% males and 51% females.<sup>19</sup> The city administration achieved 100% primary health care geographic access. It has 6 hospitals, 8 health centers that provide health services to the residents for the 9 urban kebeles (The smallest administration unit).

### *Study Design and Populations*

A community-based cross-sectional study was employed. All mothers of infants 6 to 23 months in randomly selected kebeles in the city administration were included. However, we had excluded mother-infant pairs whose house was closed after a minimum of 3 visits every other day.

### *Sample Size and Sampling Procedures*

The sample size was determined using a single population proportion formula with an assumption of 95% confidence level, 4.5% margin of error, 10% non-response rate, and taking 68.4% of the proportion of minimum Dietary diversity of children in Bale Zone.<sup>20</sup> Thus, the final sample size was 451 mothers of infants' 6 to 23 months. We had selected 4 from the 9 urban kebeles and using the simple random sampling method. A total of 1420 infants and young children aged 6 to 23 months are living in the selected kebeles according to data obtained from the kebele information desk. Moreover, proportional allocation to the sample size was performed to estimate the number of children that participate in the selected kebeles. The list of mothers with infants and young children aged 6 to 23 months residing in the selected kebeles of the city were taken from health extension workers and then the sampling frame was constructed. Finally, the simple random sampling technique was employed to select the study subjects.

### *Data Collection Tools and Procedures*

The data were collected using a face-to-face interviewer-administered questionnaire among mothers having children aged 6 to 23 months by allowing them to recall food items that feed their children in the last 24-hours. The questionnaire adapted from the different previous published studies, and the world health organization (WHO).<sup>21-26</sup> The questionnaire included socio-demographic characteristics of infants and young children, mothers, maternal health, obstetric history, and health service utilization related variables, and infant and young child feeding practices.

## Measurement

Minimum dietary diversity score is defined as the proportion of infants and young children aged 6 to 23 months who received at least 4 food groups out of 7 food groups in the previous 24-hours (grain, legumes, dairy products, egg, meat, fruits, and vegetables) recommended by the world health organization.<sup>26</sup>

## Data Quality Control

First, the questionnaire prepared in English was translated to the local languages and then translated back to English to check for consistency. To ensure the quality of the data, the data collectors and supervisors were trained for 3 days. The interview was conducted through a home-to-home visit. We had conducted a pre-test on 5% (23 participants) of the sample size out of the selected kebeles. Modifications of the questionnaire were carried out accordingly. The supervisors and investigators closely supervised the data collection process. Finally, to ensure the quality of the data, 2 independent data clerks performed double data entry.

## Data Processing and Analysis

The data entered and cleaned using EpiData version 4.2, and then exported to SPSS version 24 statistical software for analysis. Descriptive summary measures such as mean and frequency used and presented using texts, tables, and graphs. The association between the outcome variable and independent variables analyzed using a binary logistic regression model. Variables with a *P*-value <.25 were retained and entered into the multivariable logistic regression analysis. The model fitness was tested by the Hosmer-Lemeshow goodness of fit test. The direction and the strength of statistical associations were measured by the odds ratio with 95% CI. The Adjusted Odds Ratio (AOR) along with 95% CI was estimated to identify the associated factors for minimum dietary diversity practices. Finally, statistical significance was declared at *P*-value <.05.

## Results

### Socio-Demographic Characteristics

Four hundred thirty-eight mothers were included in the study making a response rate of 97.1%. The mean ( $\pm$ SD) age of the mothers was 29.04( $\pm$ 4.87) years. The majority, 372(84.9%) of the respondents were in the age group of  $\geq$ 25 years. Of the respondents, 255(58.1%) and 108(24.7%) were Orthodox Christian and Muslim religious followers respectively. Regarding the mothers,

educational status 195(44.5%) and 137(31.3%) attended secondary and primary education. About 57.8% of the husbands had attended secondary and above education level, and two-fifths (40.7%) of them have a private occupation. More than four-fifths (82.9%) of the mothers were married, and nearly three-fourth 328(74.9%) have a family size of less than 5 (Table 1).

### Child Characteristics and Health Service Utilization

From the total children, a quarter of 111(25.3%) were in the age group of 6 to 8 months, and nearly half (51.4%) of them were females. The majority of 379(86.5%) children's caregivers were mothers. Almost all 429(97.9%) of the children were singleton. Regarding birth order, the majority (44.1%) were first-order followed by second-order 149(34%) and only 104(23.7%) had a birth interval of 2 years and above. One hundred sixty-two (37%) of the children were sick before 2 weeks of the interview, and 96.6% of the mothers had 1 to 2 children. Regarding service utilization 362(82.6%) and 338(77.2%) had antenatal care and postnatal care follow-up for the index child respectively. Nearly three-fourths of 331(75.6%) of the mothers gave birth at health institutions, and 326(74.4%) had delivered through spontaneous vaginal delivery (Table 2).

### Child Feeding Practices

Of the total mothers, 374(85.4%) have ever been breast-fed their index child. Of which 322(73.5%) mothers were initiated breastfeeding in the first hour of birth. Nearly four-fifth 354(80.8%) of the mothers were applied exclusive breast-feeding for the first 6 months. Only 51(11.6%) of the mothers had started complementary feeding for their child for 6 to 8 months. Three hundred twelve (71.2%) and 353(80.6%) of the children were bottle-feeding and used vitamin medicine within the last 24 hours respectively. One hundred sixty-four (37.4%) of the child had been monitored for growth, and nearly half 227(51.8%) of them had snacks between meals (Table 3).

### Minimum Dietary Diversification Practice

The overall prevalence of minimum dietary diversity practice was 24.4% (95% CI: 20.3, 28.5). The most commonly consumed types of food were grains, roots, and tubers (74%). About (40%) of children were consuming eggs. Nearly half (48.9%) of children have received vitamin A containing fruits and vegetables. The least proportions of children consumed legumes and nuts food items (6.6%) (Figure 1).

**Table 1.** Socio-Demographic Characteristics of Parents in Dire Dawa Administration City, Eastern Ethiopia, 2019 (n = 438).

Variables	Frequency (N)	Percent (%)
Age of the mother		
Less than 25 years	66	15.1
25 years and above	372	84.9
Mothers religion		
Orthodox	255	58.1
Muslim	108	24.7
Protestant	55	12.6
Catholic	20	4.6
Educational status of the mother		
Uneducated	106	24.2
Primary education	137	31.3
Secondary education and above	195	44.5
Husbands' educational status		
Uneducated	51	11.6
Primary education	134	30.6
Secondary education and above	253	57.8
Husbands' occupation		
Governmental employee	111	25.2
None governmental employee	88	20.1
Private	178	40.7
Daily labor	41	9.4
Farmer	20	4.6
Marital status		
Married	363	82.9
Single	20	4.6
Divorced	49	11.2
Widowed	6	1.4
Family size		
Less than 5	328	74.9
Five and above	110	25.1

### Factors Associated with Dietary Diversity Feeding Practice

The result of the multivariate logistic analysis revealed that mothers' educational status, age of a child, birth interval, child's sex, place of delivery, and the mother involved in decision making, antenatal, and postnatal care utilization were significantly associated with minimum dietary diversity. Accordingly, mothers who had formal education were 2 times [AOR 2.20; 95% CI: 1.08, 4.52] more likely to practice minimum dietary diversity practices compared to their counterparts. Children aged between 9 to 11 months were nearly 3 times [AOR=2.84; 95% CI: 1.39, 5.83] more likely to practice MDD as compared to those ages 6 to 8 months.

**Table 2.** Maternal Health Service Utilization and Child Characteristics in Dire Dawa Administration City, Eastern Ethiopia, 2019 (n = 438).

Variables	Frequency (N)	Percent (%)
Age of the child		
6-8 months	111	25.3
9-11 months	52	11.9
12 months and above	275	62.8
Child caregiver		
Mother	379	86.5
Other	59	13.5
Birth order for the index child		
First	193	44.1
Second	149	34
Third and above	96	21.9
Birth interval the index child		
No previous birth	222	50.7
Less than 2 years	112	25.6
Two years and above	104	23.7
Child sick within 2 weeks		
Yes	162	37
No	276	63
Mode of delivery		
Vaginally	326	74.4
Cesarean section	112	25.6
Number of children		
1-2	423	96.6
3-4	4	0.9
≥5	11	2.5
Place of delivery		
Home	107	24.4
Health facility	331	75.6

Moreover, mothers who had birth interval 2 and above years for the index child were 3 times [AOR=3.29; 95% CI (1.37, 7.92)] more likely to practice MDD compared to those who have less than 2 years of birth interval. Furthermore, mothers who had postnatal and antenatal care follow up were nearly 6 and 2 times [AOR=6.4; 95% CI: 2.78, 14.94] and [AOR=2.19; 95% CI: 1.20, 3.99] more likely to practice minimum dietary diversity to their children compared to their counterparts, respectively. Also, mothers who had a male child were nearly 3 times [AOR=2.85; 95% CI: 1.64, 4.94] more likely to practice minimum dietary diversity as compared to those of females, and mother involved in decision making were 2.5 times [AOR=2.5; 95% CI: 1.19, 5.29] more likely to practice minimum dietary diversity. Mothers who gave birth in a health facility for the index child were 2.66 times [AOR=2.66; 95% CI: 1.35, 5.25] more practice minimum dietary practice compared to those who gave birth at home, (Table 4).



**Table 3.** Feeding Practice among Children Aged 6 to 23 Months in Dire Dawa Administration City, Eastern Ethiopia, 2019 (n=438).

Variables	Frequency (N)	Percent (%)
Baby ever been breastfeed		
Yes	374	85.4
No	64	14.6
Initiation of breastfeeding within 1 hour of birth		
Yes	322	73.5
No	116	26.5
Exclusive breastfeeding for the first 6 months		
Yes	354	80.8
No	84	19.2
Baby start complementary feeding 6 to 8 months		
Yes	51	11.6
No	387	88.4
Snack between meal		
Yes	227	51.8
No	211	48.2
Have used vitamin or medicine within 24 hours		
Yes	85	19.4
No	353	80.6
Current breastfeeding		
Yes	355	80.3
No	82	18.7
A child being monitored for growth		
Yes	164	37.4
No	274	62.6
Breastfeeding 8 or more times within 24 hours		
Yes	112	25.6
No	326	74.4

## Discussion

This study aimed to assess dietary diversity practice and its associated factors among children aged 6 to 23 months in Dire Dawa City, Ethiopia. In this study, the prevalence of minimum dietary diversity practice among children aged 6 to 23 months was 24.4% (95CI: 20.3%, 28.5%). This finding was similar to other studies conducted in Bale Zone Southeast, Ethiopia (23%-28.5%),<sup>20,26</sup> Wolyita Sodo town, southern Ethiopia (27.3%),<sup>23</sup> Tanzania (26%)<sup>27</sup> systematic review in Ethiopia (23.2%),<sup>14</sup> and India 27.4%.<sup>28</sup>

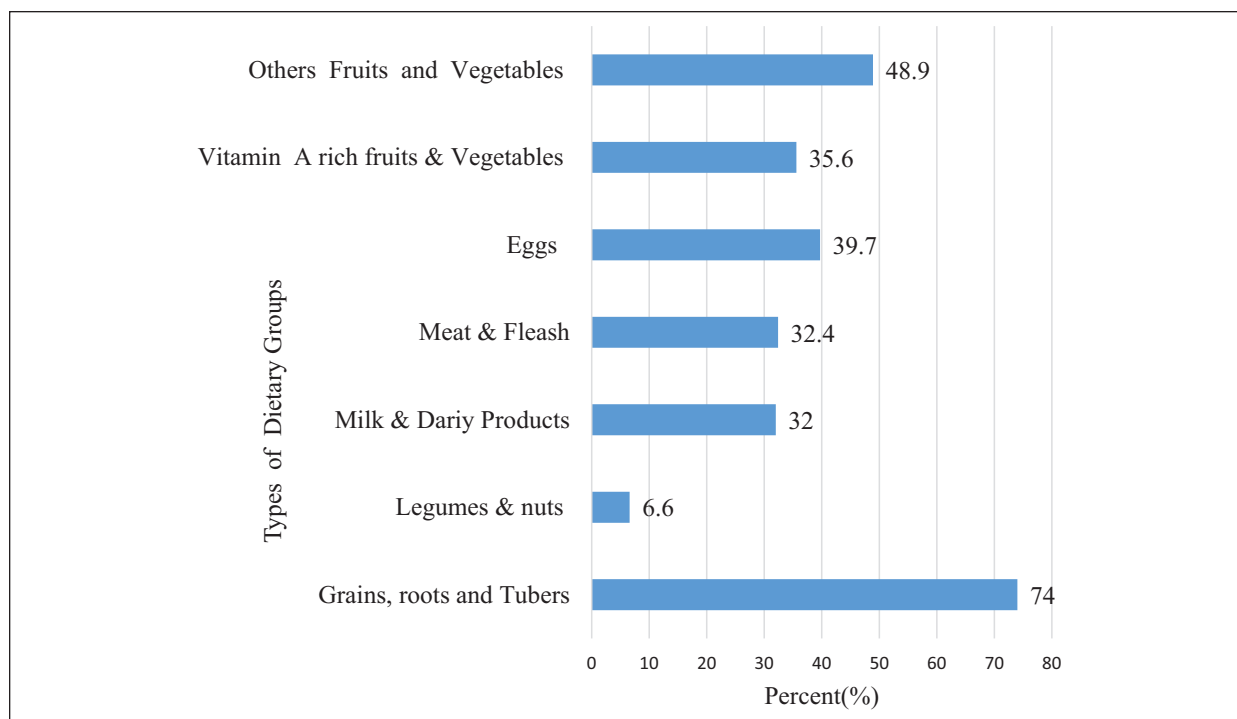
However, it was higher than the 2016 Ethiopian Demographic Health Survey (EDHS) report(14%).<sup>13</sup> The difference might because of variation in the sample size, study area, and time of the study. The EDHS report incorporated both the urban and rural parts of the country with a large sample size while our study included only the urban participants. Moreover, this study was higher than studies conducted in Southern Ethiopia (10.6%),<sup>29</sup> Northwest Ethiopia (12.6-13.6%),<sup>30-32</sup> Kamba district of Ethiopia 23.3%,<sup>33</sup> Tigray region

(17.8%),<sup>34</sup> India (13%),<sup>35</sup> and Uganda (17.8%).<sup>36</sup> The differences might be due to the variation in the study period, where now a day's mothers' might have easy access to information through media and education about dietary diversity and child feeding practices.

On the other hand, the result was lower than studies conducted in Addis Ababa (59.9%),<sup>37</sup> Bench Maji, Southwest Ethiopia(38%),<sup>38</sup> Madagascar (52.4%-57.9%),<sup>39</sup> Tobago (48.23%),<sup>40</sup> Cambodia (44%),<sup>41</sup> and Kenya (39.2%).<sup>42</sup> This difference might be due to socio-cultural, and traditional variations in child feeding habits, and preparing a few varieties of food for the family, the low purchasing ability of food items, the seasonal variations of data collection, and the role of religion in the Ethiopian diet.<sup>30</sup>

In the present study, mothers who had formal educational status were significantly associated with dietary diversity practice compared to those who had no formal education. This study is consistent with studies conducted in Addis Ababa, Wolaita Sodo town, and Bale Zone.<sup>16,19,32</sup> The possible reasons might be educated mothers were more likely to have more information, aware of educational messages, disseminated through various media, participated in rewarded works and might learn on child feeding in the program of education at their school. This is the fact that mothers' level of education is very important for child's health status, growth and development, and practicing of good child feeding, and it has a positive impact to build up their confidence, decision power in the family, and employed IYCF based on a recommendation.<sup>15,34,43,44,45</sup> In addition to this, studies revealed that mothers with a high level of educational status have great opportunities to have better capital than mothers with lower education levels. As a consequence, those mothers might have a higher probability to obtain diverse food groups and feeding diversified foods for their children.<sup>46</sup>

Those mothers who had postnatal care (PNC) for the index child were positively associated with dietary diversity practices. Mothers who had postnatal care follow up were nearly 6 times more likely to practice dietary diversity to their children compared to their counterparts. This study was consistent with studies conducted in Ethiopia,<sup>14,31</sup> Sri Lanka,<sup>47</sup> and Tanzania.<sup>48</sup> Similarly, the odd of minimum dietary diversity practices were higher among mothers who had antenatal care service utilization for the index child compared to their counterparts. This was supported by different studies in Ethiopia.<sup>14,38</sup> This was the fact that mothers who had health institution visits during the PNC and ANC period have potential opportunities to get information related to IYCF practice from trained health care workers. Furthermore, it was due to mothers counseling during the ANC and PNC period could abolish cultural and



**Figure 1.** Dietary diversification practice among children aged 6 to 23 months in Dire Dawa administration city, Eastern Ethiopia, 2019 (n=438).

traditional beliefs and impose a positive impact on minimum dietary diversity practice.<sup>49</sup>

This finding also revealed that those mothers involved in decision making in the household were positive predictors of minimum dietary diversity practices. This was in line with studies conducted in Ethiopia.<sup>14,31,32</sup> This might be due to in Ethiopia child feeding practice mostly the responsibility of mothers. Hence, increasing mothers' involvement in household decision-making could make the mother empower to feed diversified food for their infant and young child.

Children aged between 9 to 11 months were more likely to practice minimum dietary diversity as compared to those aged 6 to 8 months. This study was in line with other studies conducted in Ethiopia,<sup>20,50</sup> India,<sup>51</sup> and Sri Lanka.<sup>47</sup> The possible reason might be infants below 9 months of age, mothers would not give semi-solid and soft food; they are simply fed animal or other milk together with their breast milk. Furthermore, mothers who gave birth in a health facility for the index child were nearly 3 times more likely to practice minimum dietary diversity practice to their child compared to those who gave birth at home. This study was consistent with studies conducted in Ethiopia.<sup>14</sup> The possible justification for this might be due to better counseling at the time of delivery enhances women's awareness about dietary diversity practice and food preparation for their children.

The findings of the present study revealed that male children were 3 times more likely to meet minimum dietary diversity compared to female children.<sup>52</sup> This might be due to the traditional influence on male sex preference in Ethiopian populations and they gave attention to the feeding of a variety of food items to their male child. This study did not free from recall and social desirability bias. It did not also reflect the child's previous feeding experience because the study included only the last 24-hours feeding practice before this survey. Besides, this study did not show a cause and effect relationship since it is a cross-sectional study.

## Conclusion

In this finding, only 1 out of 4 children get the minimum dietary diversity practice, this is a public health concern in the city. Age of the child, birth interval, post-natal care and, antenatal care utilization, child's sex, mothers' decision power, maternal education, and place of delivery were significantly associated with minimum dietary diversity practice. Therefore, maternal education, women empowerment, increase maternal health services utilization, and give special attention to girls is crucial to improve dietary diversity practice in Ethiopia. We strongly recommend that intensive activities should do to maximize the number of children that get the minimum recommendations of dietary diversity practice.

**Table 4.** Factors Associated with Dietary Diversification among Children Aged 6-23 in Dire Dawa City, Eastern Ethiopia, 2019.

Variables [n = 438]	MDD achieved		COR (95% CI)	AOR (95% CI)	P-value
	Yes	No			
Age of the child					
6-8 months	20 (18)	91 (82)	1	1	
9-11 months	23 (44.2)	29 (55.8)	3.61 (1.74, 7.490)	2.84 (1.39, 5.83)*	.004
12 and above months	64 (23.3)	211 (76.7)	1.38 (0.79, 2.14)	0.53 (0.28, 1.02)	.56
Birth interval					
Two and above years	33 (31.7)	71 (68.3)	6.44 (1.17, 3.39)	3.29 (1.37, 7.92)*	.008
Less than 2 years	32 (28.6)	80 (71.4)	1.71 (1.01, 2.91)	1.75 (0.77, 3.99)	.185
No previous birth	42 (18.9)	180 (81.1)	1	1	
Family size					
Five and above	21 (19.6)	89 (26.6)	0.67 (0.391.13)	0.7 (0.331.32)	.237
Less than 5	86 (80.4)	242 (73.1)	1	1	
Mother's education					
Formal education	23 (45.1)	28 (54.9)	2.96 (1.62, 5.41)	2.20 (1.08, 4.52)*	.031
No formal education	84 (21.7)	303 (78.3)	1	1	
Postnatal care					
Yes	99 (39.3)	239 (70.7)	4.76 (2.23, 10.18)	6.4 (2.78, 14.94)*	.001
No	8 (8)	92 (92)	1	1	
Sex of the child					
Male	69 (32.4)	144 (67.6)	2.36 (1.50, 3.70)	2.85 (1.64, 4.94)*	.001
Female	38 (16.9)	187 (83.1)	1	1	
Antenatal care					
Yes	34 (44.7)	42 (55.3)	3.2 (1.28, 3.88)	2.19 (1.20, 3.99)*	.011
No	73 (20.2)	289 (79.8)	1	1	
Mothers involved in decision making					
Yes	19 (39.6)	29 (60.4)	2.25 (1.20, 4.20)	2.5 (1.19, 5.29)*	
No	88 (22.6)	302 (77.4)	1	1	
Birth order					
First	41 (21.2)	152 (78.8)	1.69 (0.97, 2.93)	1.2 (0.54, 2.69)	.658
Second	113 (75.8)	36 (24.2)	1.18 (0.71, 1.96)	0.48 (0.23, 1.02)	.055
Third and above	30 (31.2)	66 (68.8)	1	1	
Place of delivery					
Health facility	90 (27.6)	236 (72.4)	2.13 (1.91, 7.80)	2.66 (1.35, 5.25)*	.005
Home	17 (15.2)	95 (84.8)	1	1	

\*Significantly associated at  $P < .05$ .

## Abbreviations

ANC: Antenatal Care  
 EDHS: Ethiopian Demographic and Health Survey  
 IYCF: Infant and young child feeding  
 LMICs: Low and Middle Income Countries  
 MDD: Minimum dietary diversity  
 NNP: National Nutrition Programs  
 PNC: Postnatal Care  
 WHO: World Health Organization.

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## Authors' Contributions

AS, YB, AD, and AG were involved from the inception to the write-up of this paper. Then, AS, YB, AD, AG, AM, YS, YG, DT, TM, and YS undertook the analysis and prepared the manuscript for publication. All authors read and approved the manuscript.

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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## Ethics Approval and Consent to Participate

Ethical clearance was obtained from the Research and Technology interchange of Dire Dawa University with Ref No: DDU/RTI/1852/2019. Following approval, a written official letter of cooperation to district/ kebele administrators. The administrators were informed about the objective of the study including the risks, benefits, and confidentiality issues. Informed written consent was obtained from all participants. Confidentiality was assured throughout the process. The names and addresses of the participants were not recorded in the questionnaire. Furthermore, all the basic principles of human research ethics (respect of persons, beneficence, voluntary participation, confidentiality, and justice) were respected.

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## Availability of Data and Materials

All the data of this study are available from the corresponding author upon reasonable request.

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