

## Original Research Article

# Perceptions of mothers with children aged 0 to 59 months regarding exclusive breastfeeding (EBF) in the rural community of Wogo, Sinder, Tillabery, Niger

### Abstract

The objective of this study was to evaluate perceptions and beliefs regarding exclusive breastfeeding (EBF) according to the sociodemographic and economic characteristics of mothers of children aged 0 to 59 months in the Wogo rural commune of Sinder/Tillabery/Niger. This is a cross-sectional descriptive study, on a representative sample of mothers of children aged under five years. A questionnaire was completed using a structured interview. The data were collected with ODK software then analyzed with SPSS and Epi Info version 7.2 software. Mothers in the age groups of 15 to 24 and 25 to 34 years mainly perceive that colostrum is bad for the health of the newborn 22.22% and 17.20%. These mothers use pre-lacteal products until the milk matures, which then changes color and becomes white. Mothers aged 35 to 53 years, for their part, perceive more of an insufficiency of milk secretion 26.87%. Among those not in school, 20.93% say that colostrum is bad; 14.53% think they don't have enough milk. 23.4% of those at primary level reject colostrum. Among unemployed mothers, 19.31% perceive colostrum as bad milk, and 16.55% of them perceive insufficient milk. First-time mothers mainly believe that the child is not satisfied with the consumption of milk only 28.67%. Despite their awareness, some mothers 10.24% say that the child will be thirsty, 14.45% perceive insufficient milk and 13.25% consider colostrum bad for health. The majority of mothers who gave birth in health centers and who did not practice EBF perceive insufficient milk secretion and the majority of women who gave birth at home say that colostrum is bad for the child 27, 37% and 22.10% say that the child is not satisfied with the consumption of breast milk alone. The perceptions and beliefs of mothers and their elders in traditional myths dangerously hinder the practice of EBF in this community.

**Key words:** perception, beliefs, myths, exclusive breastfeeding.

## **I. Introduction**

The WHO and UNICEF recommend that children be exclusively breastfed for up to 6 months (1). Introducing complementary foods too early exposes children to pathogens and thus increases the risk of contracting infectious diseases, particularly diarrhea (2). In addition, it reduces the child's milk intake and therefore sucking, which reduces milk production. On the other hand, from 6 months, breast milk alone is no longer enough to cover the child's nutritional needs. It is therefore strongly recommended that breastfeeding be supplemented by the introduction of appropriate foods to meet the nutritional needs essential for growth (1). In Niger, malnutrition problems begin early in life, mainly during the first two years. Indeed, feeding practices among infants and young children are not the best in Niger and constitute, with morbidity, one of the determining factors in the nutritional status of children (3,24,25). The objective of this study was to evaluate perceptions and beliefs regarding exclusive breastfeeding (EBF) according to the sociodemographic and economic characteristics of mothers of children aged 0 to 59 months in the Wogo rural commune of Sinder/Tillabery/Niger.

## **II. Methodology**

### **2.1 Study framework**

The study was conducted in the rural commune of Sinder, an island commune on the Niger River. It covers an area of 300 km<sup>2</sup> and is made up of around fifty islands. It is located in the Tillabery region (15°2'27''N 2°42'18''E), one of the eight (8) regions of Niger. Twelve (12) villages were the subject of this study by random draw.

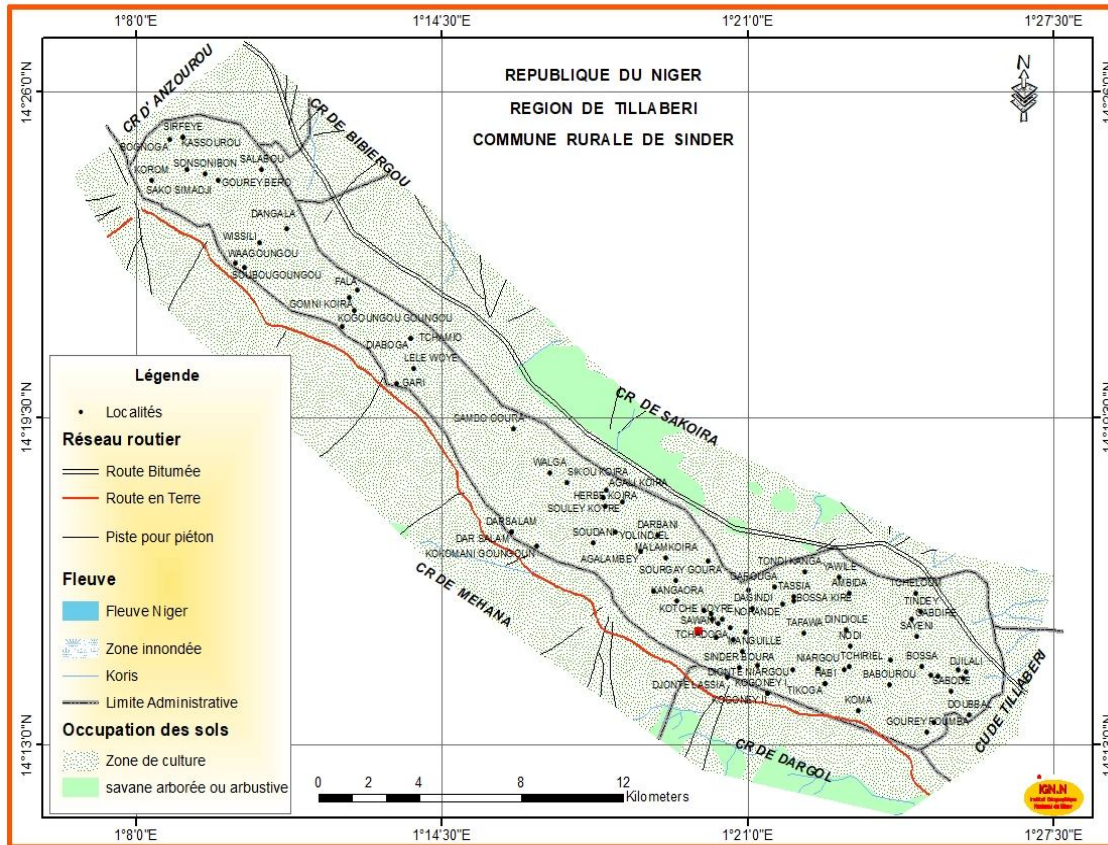


Figure 1: Map of the rural commune of Sinder (IGNN, 2021).

## 2.2 Type, Period and Duration and Population of the Study

This is a descriptive cross-sectional study with two passages. The 2 visits to the study area were carried out just after the harvests (October-December) and during the lean period (June-August) of the year 2021. Questionnaires relating to the perception of mother about the practice of Exclusive breastfeeding was administered to all study participants.

## 2.3 Inclusion criteria

. It was authorized by the regional and municipal administrative authorities. The protocol conformed to the 1975 Declaration of Helsinki as revised in 2008. Participation in the study was voluntary.

## 2.4 Data collection and processing

The ODK Open Data Kit software (<https://opendatakit.org>) was used for data collection and processing was carried out with SPSS software (version 28.0) IBM Corp. Released 2021. IBM SPSS Statistics for Windows, Version 10. Armonk, NY: IBM Corp and Epi info

software version 7.2. Atlanta Center for Disease Control and Prevention (CDC), United States in collaboration with the World Health Organization (WHO) free software tools for public health practitioners and researchers worldwide.

## 2.5 Sampling

The minimum household size  $n$  which will ensure a level of confidence  $\alpha$  will be determined by the following formula:

$$n = z\alpha^2 p(1-p) / d^2 \text{ (Schwartz, 1960).}$$

$$n = 1.96^2 \times 0.09(1-0.09) / 0.05^2$$

$n = 188.77$  so the minimum size  $n$  of our sample is 189.

For this work we collected a sample of 250 children aged between 0 and 59 months.

## III. Results and commentary

### 3.1 Economic and socio-demographic characteristics of the child's mother/guardian

The study involved 250 mothers and their children aged 0 to 59 months. The economic and socio-demographic characteristics of the mothers were reported in Table II. The age of the mothers is between 15 and 53 years old with an average age of  $28.49 \pm 3.88$  years and the dominant age group is 15 - 25 years old 42.4%. Married mothers are 96.4%; widows and divorcees represent 3.6%. Around 68.8% are out of school, 19% have primary education and 12.4% have secondary and higher education. Around 58% of mothers are unemployed and 28.4% work in small businesses or crafts. Primiparous represent 12%, biparous 16.8% and multiparous 71.2%. 62% of deliveries took place in health centers and 38% at home.

**Table 1. Economic and socio-demographic characteristics of the child's mother/guardian**

Parameters	Percentage (%)	Number (N)
<b>Age (years)</b>		
15 to 24	36	90
25 to 34	37.2	93
35 to 53	26.8	67
<b>Level of education</b>		
No scolarised	68.8%	172

Primary	18.8%	47
Secondary + higher	12.4%	31
<b>Occupation</b>		
Unemployed	58%	145
Agriculture/Livestock	6%	15
Casualwork / Daily work / Civil servant	7.6%	19
Commerce / Craft	28.4%	71
<b>Parity</b>		
Primiparous	12%	30
Biparous	16.8%	42
Multiparous	71.2%	178
<b>Motherswhoreceived information about</b>		
<b>EBF</b>		
Yes	66,4%	166
No	33,6%	84
<b>Marital status</b>		
Brides	96.4%	241
Divorced/widowed	3.6%	9
<b>Place of delivery</b>		
Health Center	62%	155
Home	38%	95

Table 2 presents the perception and practice of mothers and guardians of children regarding the practice of EBF according to their economic and socio-demographic characteristics. In total, 56% of mothers do not practice EBF until 6 months. Depending on the age group, approximately 79% of mothers aged 35 and over, 52.22% of the 15 to 24 year old group and 43% of 25 to 34 year olds do not practice EBF for up to 6 months. Mothers in the age groups of 15 to 24 and 25 to 34 years mainly perceive that colostrum is bad for the health of the newborn 22.22% and 17.20%. These mothers use pre-lacteal products until the milk matures, which then changes color and becomes white. Mothers aged 35 to 53, for their part, perceive more of an insufficiency of milk secretion 26.87%. They also think that feeding the infant during the first six months with breast milk alone will not be enough to satisfy the baby who will always be hungry which means he cries a lot (16.42%). Among this same age group, 16.42% also believe that colostrum is bad milk that should be avoided at all costs to

newborns. However, the differences in mothers' perceptions and beliefs are not significantly different depending on age ( $p=0.73\%$ ).

The level of schooling also does not predict significant differences in mothers' perceptions and beliefs regarding the practice of EBF up to 6 months ( $p = 0.78$ ). Among those not in school, 20.93% say that colostrum is bad; 14.53% think they don't have enough milk. 23.4% of those at primary level reject colostrum while 17.02% say they do not have enough milk to exclusively feed their baby. On the other hand, of those at secondary and higher level, around 29% think that the child breastfeeding exclusively with breast milk will be thirsty.

On the other hand, the reasons why mothers do not practice EBF until 6 months are significantly different (0.006). Among unemployed mothers, 19.31% perceive colostrum as bad milk, and 16.55% of them perceive insufficient milk, which pushes them to introduce foods in the first weeks of the baby's life. However, among mothers who are farmers and breeders, only 6.67% declare that they gave other foods to the child before these six months because of an illness of the mother or child; and 13.33% believe that breast milk alone is not enough to satisfy the infant. Those who practice occasional, daily work and civil servants, the vast majority think that colostrum is bad for the baby because it can cause illness or misfortune in his adult life (63.15%) and 15.79% have a feeling of lack of milk. Those who practice commerce and crafts more perceive the fact that the child is not satisfied with the donation of breast milk exclusively 21.12%.

First-time mothers mainly believe that the child is not satisfied with the consumption of milk only 28.67%. Biparous mention that they have insufficient milk 23.81%. Multiparas more believe that colostrum would be bad 20.79%. The difference is significant ( $p=0.037$ )

Among those who received information on the practice of EBF, despite their awareness 10.24% say that the child will be thirsty, 14.45% perceive an insufficiency of milk and 13.25% consider colostrum bad for the health. Those who have not been made aware, 15.48% say that the child does not get enough, that he is hungry and cries a lot, around 30% of them say that colostrum is bad for the child. The difference is very significant ( $p=0.000$ ).

The majority of mothers who gave birth in health centers and who did not practice EBF perceive insufficient milk secretion and the majority of women who gave birth at home say that colostrum is bad for the child 27, 37% and 22.10% say that the child is not satisfied with the consumption of breast milk alone. The reasons given by mothers for not practicing EBF until 6 months are significantly different depending on their place of delivery ( $p=0.000$ ).

**Table 2: Perception and practice of mothers and guardians of EBF children according to their economic and socio-demographic characteristics.**

Parameters	Perception and practice of mothers at EBF up to 6 months						Total	Probability
	I %(N)	II %(N)	III %(N)	IV %(N)	V %(N)	VI		
<b>Age</b>								
15 to 24	88.9(8)	2.22(2)	13.33(12)	5.56(5)	22.22(20)	47.78(43)	100(90)	0.73
25 to 34	6.45(6)	3.22(3)	5.38(5)	10.75(10)	17.20(16)	57(53)	100(93)	
35 to 53	8.96(6)	10.44(7)	16.42(11)	26.87(18)	16.42(11)	21(14)	100(67)	
<b>Education level</b>								
Noscolarised	4.65(8)	4.06(7)	11.04(19)	14.53(25)	20.93(36)	44.77(77)	100(172)	0.78
Primary	6.38(3)	4.25(2)	10.64(5)	17.02(8)	23.4(11)	38.29(18)	100(47)	
Secondary+ Higher	29.03(9)	9.68(3)	12.9(4)	0	(0)	48.39(15)	100(31)	
<b>Occupation</b>								
Unemployed	11.03(16)	4.83(7)	6.9(10)	16,55(24)	19,31(28)	41,38(60)	100(145)	0.0056
Agriculteur/ livestock	0	6.67(1)	13.33(2)	0	(00)	80(12)	100(15)	
Casualwork / Daily work / Civil servant	0	0	5.26(1)	15.79(3)	63.15(12)	15.79(3)	100(19)	
Commerce+Craft	5.63(4)	5.63(4)	21.12(15)	8.45(6)	9.86(7)	49.29(35)	100(71)	
<b>Parity</b>								
Primiparous	3.33(1)	3.33(1)	28.67(8)	13.33(4)	16.67(5)	36.67(11)	100(30)	0.037
Biparous	9.52(4)	0	4.76(2)	23.81(10)	11.90(5)	50(21)	100(42)	
Multiparous	8.43(15)	6.17(11)	10.11(18)	10.67(19)	20.79(37)	43.82(78)	100(178)	
<b>Information for mothers on the practice of EBF</b>								
Yes	10.24(17)	6.02(10)	9.03(15)	14.45(24)	13.25(22)	47(78)	100(166)	0.000
No	3.57(3)	2.38(2)	15.48(13)	10.71(9)	29.76(25)	38.1(32)	100(84)	
<b>Marital status</b>								
Brides	8.3(20)	4.98(12)	9.54(23)	12.86(31)	19.09(46)	45.23(109)	100(241)	0.39
Divorced +Widowed	0	0	55.56(5)	22.22(2)	11.11(1)	11.11(1)	100(9)	
<b>Place of delivery</b>								
Health center	7.74(12)	6.45(10)	4.52(7)	15.48(24)	13.55(21)	52.25(81)	100(155)	0.000
Home	8.42(8)	2.1(2)	22.10(21)	9.47(9)	27.37(26)	30.53(29)	100(95)	

The number in parentheses indicates the number of mothers %(N). I: The child is thirsty; II: Mother/child illness; III: Crying, hungry, not satisfied with breast milk alone; IV: Insufficiency of milk secretion; V: colostrum is bad milk; VI: mothers who believe in and practice AME as recommended by WHO.

## **IV. Discussion**

### **4.1 Economic and socio-demographic characteristics**

During the present study, the age of mothers ranged from 15 to 53 years and the dominant age group was 25 to 34 with 37.2%. These results are consistent with previous observations which reported an age of mothers between 15 and 55 years with a predominance of the age group between 25 and 34 years (4;5). In this study, 68.8% of mothers are not educated, 18.8% of mothers have primary education and 12.4% have secondary education and higher. Generally speaking, the level of education of the Nigerien population remains one of the lowest in the world, particularly with regard to women (2). A study done in Ethiopia reported that 48.2% of mothers are not in school; 35.2% have primary level and 16.6% of mothers have secondary or higher level (5). The data collected by EDSN-IV show that the out-of-school population is largely in the majority: 85% of women aged 15-49 and 71% of men aged 15-59 have never attended school (7). Household heads and mothers with a primary education level represent 48% and 18.8% respectively and those with a higher secondary education level represent 22.8% and 12.4% respectively. These national indicators blatantly highlight the existing gap between the educational level of men and that of women, especially with regard to access to secondary or higher education (7). The mother's level of education is one of the key variables taken into account in the status of women. These results could be due to the fact that schooled mothers have a less fatalistic attitude than non-schooled mothers towards their children's illnesses (8).

### **4.2 Perception and practice of EBF according to the economic and socio-demographic characteristics of mothers and guardians of children.**

#### **4.2.1 Perception and practice of EBF according to the age of mothers.**

In this study, mothers aged 15 to 24 and 25 to 34 mainly perceive that colostrum is bad for the health of the newborn, followed by mothers aged 24 to 34 and those aged 35 and over. with 22.22%, 17.20% and 16.42% respectively. In a recent study carried out in Chile, the authors mention that adolescent mothers perceive significantly ( $p=0.001$ ) more poor quality of breast milk 43% and dissatisfaction with infant milk intake 33% (9). In another study carried out in Kenya, young mothers perceived the crying of newborns during the first days of life as an insufficient volume of colostrum and that the baby was at risk of starving, hence the administration of pre-lactic breastfeeding (10). In a study carried out in Russia, the authors stated that women aged 20 to 24 (7.3%) and 30 to 34 (8.7%) most often stopped EBF due to

their illness, and mothers aged 35-39 and 40 and over with respective frequencies of 3.8% and 4.5% ended the practice of EBF due to the child's illness (11).

#### **4.2.2 Perception and practice of EBF according to the mother's level of education.**

The results of the present study show 62% of mothers at primary level, 55% of mothers not in school and 52% of mothers at secondary level and above do not practice EBF. Primary school or non-school-educated mothers cite the poor quality of colostrum as the main reasons, followed by insufficient milk and the child's hunger. Mothers in high school and above cite thirst and illness. However, the level of education of mothers is not predictive of the perception and non-practice of EBF ( $p=0.78$ ). In a study on the effect of parental education on the perception of exclusive breastfeeding, the authors reported that mothers' education has a very strong impact on the perception of exclusive breastfeeding. She can access information about colostrum and understand its benefit for her baby, she is also less likely to be influenced by the traditional beliefs and myths related to soul of the region where she lives (12). In a previous study in China the authors reported that out-of-school mothers had more positive perceptions towards the use of infant formula and were likely to introduce formula in the first days of the infant's life. earlier than mothers with a high level of education (13).

#### **4.2.3 Perception and practice of EBF according to the mother's profession.**

Among unemployed mothers, 19.31% perceive colostrum as bad milk, and 16.55% of them perceive insufficient milk, which pushes them to introduce foods in the first weeks of the baby's life. However, among mothers who are farmers and breeders, only 6.67% declare that they gave other foods to the child before these six months because of an illness of the mother or child; and 13.33% believe that breast milk alone is not enough to satisfy the infant. Those who practice occasional, daily work and civil servants, the vast majority think that colostrum is bad for the baby because it can cause illness or misfortune in his adult life (63.15%) and 15.79% have a feeling of lack of milk. Those who practice commerce and crafts more perceive the fact that the child is not satisfied with the donation of breast milk exclusively 21.12%. The mother's profession is significantly associated with the perception and non-practice of EBF ( $p=0.0056$ ). In a study carried out in the state of Osun in Nigeria, the authors reported that 20% of farming mothers perceive that they cannot breastfeed their babies exclusively due to lack of time; also 20% of these mothers refuse exclusive breastfeeding to avoid sagging of their breasts (14). Similarly, in another study, the author reported on the challenge faced by working mothers. professional by indicating that some mothers have difficulty returning to work after childbirth because they think that work and breastfeeding are

incompatible and therefore, they decide to stop EBF (16). In a study in Tswelopele, South Africa, unemployed mothers cited extreme breast pain while breastfeeding, insufficient breast milk to satisfy the child, illness of the mother and child as the main obstacles to the practice of EBF (16).

#### **4.2.4 Perception and practice of EBF according to parity.**

First-time mothers mainly believe that the child is not satisfied with the consumption of milk only 28.67%. Biparous women mention that they have insufficient milk 23.81%. Multiparous women believe more that colostrum is bad milk and causes illnesses of various kinds in babies 20.79%. Parity is significantly associated with mothers' perception of EBF ( $p=0.037$ ). In a study done in Shanghai, China, first-time mothers mentioned the main reasons for not practicing exclusive breastfeeding as being lack of time due to work (34.78%), perception of insufficient milk. (29.34%), breast engorgement, cracks (10.87%), the infant's refusal to breastfeed (7.61%) and 11.96% express concerns about the nutritional quality of breast milk for the newborn (17). Despite the fact that first-time mothers viewed the practice of EBF as vital to a child's health and an effective practice for birth spacing and mothers' personal well-being, some first-time mothers perceived EBF as having several disadvantages for mother and baby implied that water was irreplaceable in wetting babies' throats and relieving pain associated with breast sucking (18). In a previous study carried out in Kigali, Rwanda, first-time mothers introduced more pre-lacteal foods to babies and therefore were less likely to exclusively breastfeed their babies compared to biparous and multiparous mothers (19).

#### **4.2.5 Perception and practice according to the information received on the mother's EBF**

Among those who received information on the practice of EBF, despite their awareness 10.24% say that the child will be thirsty, 14.45% perceive an insufficiency of milk and 13.25% consider colostrum bad for the health. Those who have not been made aware, 15.48% say that the child does not get enough, that he is hungry and cries a lot, around 30% of them say that colostrum is bad for the child, the association is very significant ( $p=0.000$ ). In a study carried out in rural Egypt, mothers who did not receive appropriate advice from health workers on EBF practices perceived breast engorgement, breast pain, insufficient milk production as obstacles to the practice of EBF (20).

#### **4.2.6 Perception and practice of mothers according to their marital status.**

Most of the mothers who threw away colostrum were married (19.09%), this proportion is 11.11% among single mothers (divorced/widowed). 55.56% of them say that the child is hungry and cries a lot. A study carried out in Burkina Faso found that in most households, the mother-in-law and the spouse were the main people involved in feeding the child in addition to the mother (21). However, the association is not significant ( $p=0.39$ ). At the Second International Health Meeting in 2016, researchers reported that married mothers who live with relatives or in-laws generally show a trusting attitude toward their parents and tend to get outdated advice. because most of the time parents give information that is still closely linked to old customs and culture that disadvantages the EBF (22). In a previous study carried out in Indonesia on married teenage mothers, the authors reported that they had a better perception of formula milk and it was the impression that breast milk alone was not enough to nourish the baby during its first 6 months(23).

#### **4.2.7 Perception and practice of mothers on EBF according to place of delivery.**

The majority of mothers who gave birth in health centers and who did not practice EBF perceive insufficient milk secretion and the majority of women who gave birth at home say that colostrum is bad for the child 27.37%; 22.10% say that the child does not become satisfied with the consumption of breast milk alone. And this association is very significant ( $p=0.000$ ). However, we do not have data from previous work to compare these results.

#### **V. conclusion**

The practice of exclusive breastfeeding is not optimal in the rural commune of Sinder because on the one hand still today young mothers receive advice on the practice of EBF from their grandmother, mothers, mothers-in-law etc. which are in most cases contrary to WHO recommendations. On the other hand, the perception of insufficient milk secretion, the baby's thirst, the beliefs of mothers and their elders in traditional myths according to which colostrum is bad for newborns dangerously hinders the practice of EBF and immediate breastfeeding in this community.

#### **consent**

All mothers with children aged 0 to 59 months whose informed consent was obtained were included in the study. No biological samples of any kind were taken.

#### **Ethical Approval**

The study was approved by the University's Academic Scientific Council

## Disclaimer (Artificial intelligence)

### Option 1:

Author(s) hereby declares that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

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