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Factors Associated with Exclusive Breastfeeding among Mothers of Children Aged 0 to 12 Months and Father's Perceptions of Exclusive Breastfeeding Practice in the Central Region of Burkina Faso: Case of the Boulmiougou Health District

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Abstract

Introduction: Neonatal mortality remains a major concern in West Africa, and exclusive breastfeeding is recognized as a crucial intervention to promote newborn survival. This study aims to identify the factors influencing the practice of exclusive breastfeeding among mothers, as well as the perceptions of fathers, in the Boulmiougou health district. Method: This cross-sectional mixed study was conducted between May and July 2022, involving 471 mothers and 103 fathers of children under one year of age. Questionnaires and interviews were used to collect data. Results: The practice of exclusive breastfeeding was observed in 44.6% of mothers surveyed. Logistic regression analysis revealed that mothers older than 26 years have a significantly higher chance of exclusive breastfeeding [adjusted OR = 1.7; 95% CI: (1.098 - 2.685); p = 0.019] compared to mothers under 26 years of age. Similarly, mothers with at least three antenatal visits were 2.715 times more likely to perform exclusive breastfeeding than those with less than three antenatal visits [adjusted OR = 2.715, 95% CI: (1.184 - 6.225); p = 0.018]. The vast majority of fathers (76.7%) were informed about exclusive breastfeeding, and 59.5% had a correct definition. The analysis of the father's perception highlighted a stronger focus on traditional practices

in 90.3% of cases than on medical recommendations. Conclusion: In light of these results, it is essential to increase sessions to raise awareness and involve men throughout pregnancy, childbirth and early childhood monitoring about the many benefits of exclusive breastfeeding.

Keywords

Exclusive Breastfeeding, Knowledge and Practices, Related Factors, Mothers and Fathers, Burkina Faso

1. Introduction

Breastfeeding is essential to achieving the global goals of nutrition, health and survival, economic growth and environmental sustainability. WHO and the United Nations Children's Fund (UNICEF) recommend that breastfeeding begins within the first hour of birth, and continues exclusively (*i.e.* giving infants only breast milk, without any water, other liquids, or foods) for the first six months of life and continues, alongside healthy and satisfactory complementary food till the age of two years or beyond [1]. Overall, these recommendations affect only a minority of infants and children: only 44% of infants begin breastfeeding within one hour of birth and 40% of all infants under 6 months are exclusively breastfed. At two years of age, 45% of children are still breastfed [2]. Inadequate breastfeeding refers to breastfeeding practices that do not meet the optimal recommendations for infant nutrition has a significant impact on the health care costs of children and women [3] [4]. Mothers who feed their infants with infant formula are more often absent from work than breastfeeding mothers, due to a higher frequency and severity of childhood illnesses [5].

The decision of the type of feeding seems to be most often left to the mother, but she is influenced in her decision by her close entourage, and by society [6] [7]. This aspect of the decision is probably interesting to deepen a global desire to promote breastfeeding. Recently, Sherriff and all proposed a father support model to promote breastfeeding [8]. Five essential characteristics were needed for such support: sufficient knowledge about breastfeeding; a favorable opinion on it; involvement in the decision-making process; technical and emotional support.

Levels of information and knowledge about breastfeeding would be barriers or factors promoting good practice despite awareness-raising efforts. These practices vary from one country to another and from one region to another within the same country. Adequate infant and young child nutrition contributes directly and indirectly to the achievement of the Sustainable Development Goals. Although it is an obvious strategy to promote health and improve child survival, knowledge, attitudes and practices are not always appropriate, it is true that the logic and social representations underlying them are susceptible to transformations [9]. In Burkina Faso, the proportions of exclusive breastfeeding vary by region and the studies that have been conducted in the Central Region are rare. This situation

leads us to undertake this study to investigate the factors influencing exclusive breastfeeding at the level of breastfeeding mothers and also to evaluate father's perceptions of exclusive breastfeeding in order to find a community approach on best practices for breastfeeding.

2. Methodology

2.1. Presentation of the Study Area

The study was conducted in the Central Region of Burkina Faso. The selection of this region was based on the results of low repeat rates of exclusive breastfeeding practice [10]. The Boulmiougou health area was chosen as the field of investigation for this study because of its high concentration of children under one year old, who represent the direct target population of our research. With the highest proportion of children under one year [11], it is an area made of a total of 961 km^2, of which 110 km^2 covers urban and peri-urban areas and the remaining 851 km^2 covers rural areas. It is limited to the East by the Bogodogo Health District (HD), to the West by the Koudougou HD, to the North by the Sig-Nonghin HD, to the Northeast by the Baskuy HD and to the South by the Saponé HD. Demographically, according to the 2006 General Population and Housing Census, the population of the Boulmiougou Health District is estimated at 813,802 inhabitants for the year 2014. The populations of the three districts of the commune of Ouagadougou and the rural communes of Komsilga, Tanghin-Dassouri and Komki-Ipala respectively represent 75.43%, 11.39%, 9.89% and 3.29% of the entire district. According to estimates in 2015, 75.43% of the population lives in urban areas and 24.57% in rural areas [12].

The health district of Boulmiougou is classified as zone 1 (known as less poor). According to the results of the INSD's (Institut National de la Statistique et de la Démographie), Comprehensive Household Living Conditions Survey 2009/2010, 17.3% of the population of Kadiogo province lives below the poverty line with an unemployment rate of 12.1% [13].

2.2. Study Description

It was a cross-sectional and anthropological exploratory study of descriptive type that identified all the factors that can influence the practice of exclusive breastfeeding at the level of mothers and the involvement of fathers in its practice. The study was conducted from May to July 2022 and took place in the health facilities of the Boulmiougou health district.

The study population consisted of mothers of children from 0 to 12 months of age who came to consult with a healthy infant in all health centres in the commune of Boulmiougou and Komsilga, both attached to the Boulmiougou health district. The secondary targets were the fathers of the children who were enlisted. At the end of the administration of the questionnaire to mothers, the cellphone contact of the spouse was requested. The fathers were then contacted to arrange an exchange appointment. The exchanges were made either at their place of service or

at their home. Included in the study were mothers of children from 0 to 12 months and their spouses who gave their consents after explanation of the purpose and conditions of the study. Only refusal was considered the non-inclusion criteria in this study.

2.3. Sampling

In this study, the probabilistic sampling method was used for direct targets that are mothers. An optimized sample size of 471 mothers was selected and served for this study. The sample size was calculated using the Lorenz formula developed by Cochran [14] and Ardilly [15]: $n = t^2 \times p(1-p)/m^2$ with $t = 1.96$ with a 95% confidence level, an accuracy of 5% and the exclusive breastfeeding rate in the Central region which is 64.1% [10]. At the level of secondary targets which are fathers, the principle of saturation of information allowed to determine the sample size.

2.4. Data Collection Tools

Data collection was carried out using a questionnaire and a semi-open interview guide. The questionnaire was carefully designed, digitized and deployed via ODK (Open Data Kit) Collect for optimal efficiency. Information gathered from the study's direct targets includes:

- Socio-economic and biodemographic profile of women: age, education, occupation, gender, socio-economic level, urban or rural background;
- Characteristics of pregnancy and childbirth: mode of delivery and pregnancy monitoring;
- Knowledge and practices of mothers regarding breastfeeding: time to breastfeed after childbirth, benefits and duration of exclusive breastfeeding, as well as difficulties in implementing exclusive breastfeeding. For this section, to better understand the concept of exclusive breastfeeding, mothers were first asked to provide a definition. Those who gave a correct response were then questioned about their exclusive breastfeeding practices. For mothers who were unable to provide an accurate definition, a detailed explanation of exclusive breastfeeding was provided before asking about their practices.
- Awareness of breastfeeding among mothers by health professionals.

This methodical approach collected detailed and relevant data to assess the various aspects influencing breastfeeding practices. Using this electronic form, respondent responses were recorded and sent to a dedicated server for operation. In parallel, semi-structured interviews were carried out according to a specific guide. These in-depth face-to-face one-on-one interviews included a series of open-ended questions that allowed participants to express themselves freely without any influence. The discussion grid focused on the following questions: socio-demographic characteristics of fathers, knowledge of exclusive breastfeeding practice, father's perceptions of exclusive breastfeeding, roles of fathers in the effective practice of exclusive breastfeeding and their attitudes to the difficulties encountered in the practice of exclusive breastfeeding.

All interviews were recorded using a dictaphone, allowing a full transcript of the interviews for detailed analysis. This methodology has ensured the collection of rich and in-depth qualitative data, essential for understanding the dynamics and perceptions around breastfeeding.

2.5. Statistical Analysis

For this study, the analysis software STATA version 16 was used to conduct all analyses. A descriptive first step described the socio-demographic characteristics of mothers, presenting the results in the form of numbers, means, standard deviations, minimum and maximum values, as well as median for quantitative variables.

Analyses of quantitative variables were supplemented by percentages for qualitative variables. Then, regression analyses were performed to explore the association between the dependent variable (exclusive breastfeeding practice) and the independent variables consisted of the mothers' sociodemographic and obstetric characteristics, including age, education level, number of pregnancies, birth spacing, and delivery mode. These variables were used both as variables of interest and as explanatory factors. This analysis took place in three phases:

- Univariate analysis: Calculation of means, standard deviations for quantitative variables and percentages for qualitative variables.
- Bivariate analysis: Use the Chi2 statistical test for qualitative variables and the T test for independent samples to compare the means of quantitative variables. During this phase, the gross odds ratios were calculated with their 95% confidence intervals.
- Logistic regression model: Use of a logistic regression model to estimate the adjusted odds ratios, accompanied by their 95% confidence intervals. A binary logistic regression model was applied to identify factors associated with exclusive breastfeeding practices. Variables with a p-value ≤ 0.10 in the bivariate analysis were included in the multivariate analysis to control potential confounding factors. The adjusted odds ratio (OR) with a 95% confidence interval was used to indicate the strength of association, and a p-value < 0.05 was considered significant in the multivariate analysis.

The interviews conducted were fully transcribed, and the verbatim obtained was subjected to a thematic analysis of the content in two stages: identification of significant ideas and their categorization. The themes thus identified were classified into opinions, attitudes and stereotypes, thus allowing a thorough and contextual interpretation of the data collected.

2.6. Ethical Consideration

This study was conducted in accordance with ethical principles and was approved by the Ethics Committee for Health Research (ESRB) under deliberation no. 2021-01-019/ESRB. In addition, to ensure the collection and protection of data, a favorable opinion was obtained from the Regional Directorate of Health of the Centre

under number 2021, BF 0036MS/RCEN/DRSC.

Prior to any participation in the study, each participant was fully informed of the voluntary, free and unpaid nature of their participation. The objectives and details of the study were clearly explained, and informed consent was obtained before data collection. The confidentiality and anonymity of questionnaires and interviews have been strictly maintained to ensure the privacy of each participant.

3. Results

Table 1 shows the socio-demographic and obstetric characteristics of the mothers surveyed:

Table 1. Socio-demographic and obstetric characteristics of mothers.

Features	Numbers	Percentages (%)
Female age groups (years)	**(N = 471)**	
15 - 24	161	34.2
25 - 34	242	51.4
35 - 48	68	14.4
Female education level	**(N = 471)**	
Out of school	158	33.5
Schooled	313	66.5
Main activity of the mother	**(N = 471)**	
Housewife	208	44.2
Non-household	263	55.8
Parity	**(N = 471)**	
Primiparous	165	35.1
Multipare	306	64.9
Mode of delivery	**(N = 471)**	
Caesarean section	61	13
Low lane	410	87
Birthplace	**(N = 471)**	
Health center	471	100
Number of prenatal consultations	**(N = 471)**	
CPN < 4	120	25.5
CPN ≥ 4	351	74.5

In this study, the average age of the surveyed mothers was 27.66 years with a standard deviation of 6.1 years, and the ages ranged from 16 to 48 years. The age group most represented was the 25 - 34 age group, comprising 51.3% of mothers. Concerning professional occupation, 44.1% of mothers indicated that they did not pursue a main professional activity.

It is also notable that all mothers (100%) included in this study gave birth in a health facility. Of these, 74.1% performed at least four prenatal consultations,

demonstrating good coverage of prenatal health services in the study sample.

3.1. Mothers' Knowledge, Attitudes and Practices on Exclusive Breastfeeding

Among the mothers who participated in the study, 45.2% knew the meaning of exclusive breastfeeding and 80.6% of them knew at least three benefits related to this practice. Early breastfeeding within 30 minutes of delivery was performed by 64.1% of the mothers surveyed. The practice of exclusive breastfeeding was effective in 44.6% of mothers who participated in this study. All these results are recorded in Table 2 below:

Table 2. Mothers' knowledge, attitudes and practices on exclusive breastfeeding.

Features	Numbers	Percentages (%)
Early initiation of breastfeeding		
Yes	302	64.1
No	169	35.9
Awareness (informing, educating, and encouraging mothers) regarding EBF	**(N = 471)**	
No	154	32.7
Yes	317	67.3
Source of information	**(N = 317)**	
Health center	304	95.9
School	6	1.9
Family	7	2.2
Definition of exclusive breastfeeding	**(N = 471)**	
Only breast milk without any intake	213	45.2
Other answers	258	54.8
Source of information		
Health workers	331	70.3
Entourage	87	18.4
Media	46	9.8
Non-governmental organization	7	1.5
Knowledge of at least 3 exclusive breastfeeding benefits	**(N = 471)**	
No	91	19.3
Yes	380	80.7
Possibility to practice exclusive breastfeeding	**(N = 471)**	
Yes	320	67.9
No	151	32.1
Effective practice of the exclusive breastfeeding	**(N = 471)**	
No	261	55.4
Yes	210	44.6

In the bivariate regression analysis, variables such as “Mother’s Age”, “Number of Births”, “Mother’s Occupation”, “Mother’s Education Level”, “Number of Prenatal Visits”, “Child’s Sex” and “Knowledge of at least three benefits of exclusive breastfeeding” was identified as factors associated with exclusive breastfeeding practice. However, in multivariate analysis, only the age of the mother and the number of prenatal visits remain significantly associated with exclusive breastfeeding practice in the $p < 0.05$ study area, as shown in Table 3 below:

Table 3. Determinants of exclusive breastfeeding practice by Logistic Regression.

Features	Rough OR	P	CI (95%)	Adjusted OR	P	CI (95%)
Mother’s age						
26 and +	1.613	**0.012****	1.110 - 2.344	1.717	**0.018****	1.098 - 2.685
Less than 26	1.000			1.000		
Parity						
Primiparous	0.779	0.203	0.531 - 1.144	1.015	0.949	0.643 - 1.602
Multipare	1.000			1.000		
Mother’s profession						
No-household	0.862	0.427	0.598 - 1.243	0.845	0.391	0.575 - 1.241
Housewife	1.000			1.000		
Mother’s level of education						
Schooled	0.777	0.199	0.529 - 1.142	0.858	0.460	0.572 - 1.288
Out of school	1.000			1.000		
Number of Prenatal consultation						
3 and +	2.675	**0.019****	1.179 - 6.066	2.715	**0.018****	1.184 - 6.225
Less than 3	1.000			1.000		
Mode of delivery						
Low lane	1.385	0.248	0.796 - 2.410	1.473	0.192	0.823 - 2.636
Caesarean section	1.000			1.000		
Sex of child						
Masculine	0.852	0.388	0.592 - 1.226	0.840	0.359	0.578 - 1.220
Female	1.000					
Immediate breastfeeding after childbirth						
Yes	1.052	0.794	0.720 - 1.537	1.086	0.689	0.727 - 1.622
No	1.000			1.000		
Knowledge of at least 3 benefits of exclusive breastfeeding						
Yes	0.784	0.300	0.496 - 1.241	0.774	0.308	0.174 - 0.466
No	1.000			1.000		

Mothers over 26 years have a significantly higher chance of exclusive breastfeeding [adjusted OR = 1.7, 95% CI: (1.098 - 2.685); p = 0.019] compared to mothers under 26 years of age. Similarly, mothers with at least three antenatal visits were 2.715 times more likely to perform exclusive breastfeeding than those with less than three antenatal visits [adjusted OR = 2.715, 95% CI: (1.184 - 6.225); p = 0.018].

3.2. Father's Perceptions of Exclusive Breastfeeding

3.2.1. Socio-Demographic Characteristics of Fathers

The sample consisted of 103 fathers. The main socio-demographic characteristics are represented in Table 4 below:

Table 4. Sociodemographic characteristics of fathers.

Features	Numbers (n = 103)	Percentages (%)
Age group (years)		
18 - 24	49	47.6
25 - 34	36	34.9
35 - 40	18	17.5
Level of education		
Primary	53	51.4
Secondary	15	14.6
Academic	6	5.8
Out of school	29	28.2
Professional occupation		
Student	3	2.9
Shopkeeper	62	60.2
Civil servant	11	10.7
Cultivators	27	26.2

3.2.2. Father's Knowledge of Exclusive Breastfeeding and Source of Information

According to the results presented in Table 5, 76.7% of fathers had heard of exclusive breastfeeding. The main source of information cited was entourage, representing 39.2% of cases. However, only 59.5% of fathers were able to provide a correct definition of exclusive breastfeeding. Of these, 53.2% knew that the optimal duration of exclusive breastfeeding practice is six months.

3.2.3. Importance of Breastfeeding

Almost all the fathers interviewed had a positive perception of breastfeeding and were favourable to its practice. According to them, breastfeeding is the traditional means most commonly used to feed children, and no other food can replace it. They described breastfeeding as healthy, natural, and beneficial to the child's health and growth.

Table 5. Father's knowledge of exclusive breastfeeding aspects.

Features	Numbers	Percentages (%)
Heard about (103)		
Yes	79	76.7
No	24	23.3
Sources of information (79)		
Entourage	31	39.2
Community relay	19	24.1
Medias	16	20.2
Health workers	13	16.5
Definition of exclusive breastfeeding (79)		
Give only breast milk without any intake	47	59.5
Other definitions	32	40.5
Optimal age of exclusive breastfeeding (79)		
Up to 6 months	42	53.2
Up to 6 months	26	32.9
Don't know	11	13.9

3.2.4. Father's Perceptions of Exclusive Breastfeeding

When asked whether exclusive breastfeeding was possible, 9.7% of fathers said yes. They pointed out that "exclusive breastfeeding protects against infection." Here are a few examples of these perceptions:

Testimony 1: "Before I got married, I was at my uncle's house. When his wife gave birth, I noticed that she was only giving her milk and this child had no health problems. Until he was six months old, this child only went to the hospital for his monthly weigh-ins. That's when I realized the importance of exclusive breastfeeding. Then I had more clarity on this by accompanying my wife to her prenatal consultations. This is what prompted me to follow the advice of health workers. Now I say with confidence that exclusive breastfeeding is possible if you are psychologically well prepared for a child."

Testimonial 2: "Exclusive breastfeeding is good for fathers because buying formula is not easy for us who cannot afford it. In addition, drinking water poses a risk of contamination for children if its quality is not guaranteed."

For 90.3% of fathers, it is not possible to apply exclusive breastfeeding. The reasons were varied: for many, giving water to the child is essential to avoid dehydration and ensure good growth by associating decoctions while the daily fluid intake for an infant range from 80 - 100 ml/kg in the first week to 140 - 160 ml/kg between 3 and 6 months, depending on environmental conditions and the baby's weight, these requirements are met through on-demand exclusive breastfeeding. Breast milk is high in water content and low in solutes, ensuring adequate hydration [16] [17]. However, 17.2% of these fathers (90.3%) think that it is possible to

stop giving infusions to babies, because children no longer react to traditional treatments and therapeutic plants are often contaminated with pesticides. However, water remains essential for them, because no human being can live six months without drinking. Here are some testimonials illustrating these perceptions:

Testimony 3: "It is not possible to apply this recommendation in our warm regions. Children must necessarily be given water. For example, after childbirth, most women do not have milk. While waiting for the milky rise, we give hot water or formulas for those who have the means, to calm the crying. We can't stand to watch a child up to six months without drinking water."

In addition to highlighting the importance of water for child survival, 82.8% of fathers who said it is impossible to practice exclusive breastfeeding indicated that it is necessary to associate decoctions and purges in the treatment of children under six months.

Testimony 4: "No, we need to treat children with plants because their survival depends on them. Our big problem in Africa is that we prefer to blindly follow the recommendations of Westerners, forgetting our traditions. Before, when someone died, he was an elderly person, but today, it is the children. How can a child live six months without drinking water when milk is fat? Since the baby cannot talk, we do not know that not drinking water does not suit him. A child who does not drink water is not healthy because he becomes weak and will be sick all the time."

3.2.5. Constraints Related to Exclusive Breastfeeding

For the entire sample, only 6.8% described breastfeeding as an easy practice. The constraints related to the practice of breastfeeding cited by the fathers are: mother's illness, insufficient milk, breast pain, professional occupation of the mother. These difficulties most often cause feelings of stress and restlessness in fathers resulting in early weaning in the majority of cases. Fathers report that these constraints create psychological pressure and can negatively affect the continuity of exclusive breastfeeding, despite their support and positive intentions.

4. Discussion

One of the most important indicators of the Infant and Young Child Feeding (IYCF) strategy is early breastfeeding within an hour of birth. This practice is crucial because it reduces the risk of infection and death of the newborn, and also prevents postpartum bleeding. It is also a recommendation of the World Health Organization (WHO) [18]. In the present study, 64.1% of mothers initiated early breastfeeding less than one hour after delivery. This proportion is comparable to the results reported by the national nutrition survey in Burkina Faso, where the rate of early breastfeeding is 62.1% at the national level [10]. This proportion of mothers who have not been able to practice early breastfeeding could be explained by insufficient awareness during pregnancy or by constraints and/or difficulties in accessing health facilities. These results highlight the importance of intensifying

awareness sessions on optimal breastfeeding, particularly early breastfeeding. Better education and relevant information for pregnant women can significantly improve the management of parturients and increase the practice of early breastfeeding, with positive impacts on newborn health.

The results also show a small proportion (44.6%) of mothers who breastfed exclusively compared to the national average of 69.6% and 64.1% observed in the Central Region, according to the 2021 National Nutrition Survey [10]. These gaps suggest significant regional disparities and highlight the need to strengthen local exclusive breastfeeding promotion initiatives to align practices with national and regional objectives. We have seen a slight increase in this indicator since 2013. This improvement could be attributed to the implementation of the Infant and Young Child Nutrition (IYCF) scale-up plan, which includes a set of activities focused on promoting essential family practices in health and nutrition. [19]. Breastfeeding rates remain low and are a public health priority in Burkina Faso and many countries around the world. Indeed, in the Democratic Republic of Congo (DRC) and Mozambique, the exclusive breastfeeding rate represents respectively 30.67% [20] and 37% [21]. Breastfeeding is even less practiced in other countries such as Saudi Arabia with a proportion of 12.2% [22] and Egypt with a rate of 9.7% [23]. The exclusive breastfeeding faces several obstacles, including practices rooted in community beliefs, influenced by social norms and cultural beliefs. These barriers are exacerbated by a health system organization that is not always supportive of promoting exclusive breastfeeding. A thorough knowledge of mothers about the many benefits of exclusive breastfeeding is essential to ensure adherence and effective practice. However, cultural beliefs, often influenced by mothers-in-law, sometimes prompt mothers to administer herbal decoctions or give water to infants to hydrate them, especially due to hot weather conditions. In addition, the frequent crying of infants is sometimes interpreted as a sign of hunger, attributed to alleged insufficient production of breast milk, which can lead to the early introduction of foods other than breast milk before the age of six months. This claim has been reported by some studies conducted in Demographic Republic of Congo [20], Tunisia [24] and Kenya [25]. The practice of exclusive breastfeeding is largely influenced by current traditions, often dictated by authority figures in the home. Thus, it is crucial to actively promote awareness of the many benefits of exclusive breastfeeding and practical methods during prenatal and postnatal consultations, as well as during awareness campaigns. This awareness must be conducted in an accessible and persuasive manner, adapted to the cultural and linguistic context of the target communities.

An analysis of factors associated with exclusive breastfeeding practice using logistic regression was performed. The results of the multivariate analysis identified two significant factors: the number of prenatal visits and the mother's age. It has been observed that having at least four prenatal consultations during pregnancy promotes the practice of exclusive breastfeeding. This is consistent with previous studies, such as those conducted by Gueye and colleagues in 2023 in Senegal [26],

Al Ghwass and al. in Egypt [23] and Mahamadou Traoré and al. in Mali [27] where mothers who had more prenatal counselling had more exclusive breastfeeding than those who had less. These results could be partly explained by the fact that women benefiting from regular medical monitoring are better informed of the advantages of exclusive breastfeeding, thus increasing their adherence to this practice. Support from healthcare professionals during these consultations is essential to overcoming breastfeeding-related barriers. Furthermore, maternal age is a key factor in the practice of exclusive breastfeeding in this population considered and the same observation was made by Savadogo *et al.* (2018) in Burkina Faso [28] and Amin *et al.* in Saudi Arabia [23] which also demonstrated a higher adoption of EBF among older mothers, with significant odds ratios which are respectively 2.11, 95% CI: [1.44 - 2.98] and 1.14 ,95% CI: [1.03 - 1.23].

However, we did not find any association between exclusive breastfeeding practice and early breastfeeding. This is different from the result found by Traore M *et al.*, in 2014, where mothers who breastfed within an hour of giving birth were twice as likely to perform exclusive breastfeeding than mothers who did not [27]. In summary, the interaction between maternal age and the number of prenatal consultations significantly influences the practice of exclusive breastfeeding. Integrating these factors into a holistic maternal and child health approach could effectively contribute to increasing exclusive breastfeeding rates within a targeted population.

The last part of this study was the exploration of father's perceptions of exclusive breastfeeding. The results reveal that the majority of fathers consider breast milk as the best food for their newborns. However, it has emerged that many of them are not fully aware of the importance of exclusive breastfeeding and its essential links to child health. Observed practices are often influenced by family traditions rather than medical recommendations, which could be explained by a lack of awareness among key family members, including fathers. In 2009, a study conducted by TEUMA [29] found that most of the men interviewed had little knowledge about breastfeeding and expressed a need for objective information. This research also suggests that when fathers are well informed about breastfeeding, they are more likely to support their spouse with confidence. In addition, another study conducted by HOTE in 2015 [30] indicated that the majority of fathers interviewed had limited or no knowledge about breastfeeding before birth. This study highlights that newborn feeding was mainly perceived as a woman's domain when discussing pregnancy and parenthood.

Fathers can greatly benefit from a better understanding of breastfeeding, including learning about its many benefits for children and mothers, strategies to facilitate breastfeeding practice, and methods for assessing well-being-be their child, thus promoting better health and optimal development. Contrary to popular belief, breastfeeding is not simply a natural act. It is strongly influenced by the traditional practices transmitted by key people within families. That is why it is crucial to promote information sessions that cover all aspects of breastfeeding,

including early breastfeeding, colostrum donation, exclusive breastfeeding and its continuation until at least the age of two or more years, whenever possible. The present study highlights that the positive perception and knowledge of the benefits of exclusive breastfeeding before childbirth, as well as a smooth start to breastfeeding, are determining factors for an effective practice of exclusive breastfeeding. These conclusions echo those of Noirhomme-Renard and her colleagues in 2015, in their study on the representations and experiences of primiparous fathers with regard to breastfeeding [31].

A thorough understanding of the factors associated with exclusive breastfeeding will better guide interventions to promote this practice for the optimal well-being of children and mothers. To overcome the various barriers to exclusive breastfeeding, interventions must target not only mothers, but also families, community members, and health professionals, as recommended by Art and colleagues in Mozambique in 2011 [20].

The results of this study on exclusive breastfeeding can be used to improve breastfeeding practices at different levels. At the community level, they make it possible to design awareness and training programs for mothers, while engaging local leaders. At the political level, these results can influence health policies, guide public health plans, and justify investments in programs to support exclusive breastfeeding. Finally, for health practitioners, they make it possible to adjust clinical practices, strengthen prenatal and postnatal consultations, and guide interventions at the health district level.

5. Conclusions

It appears from this study that socio-demographic characteristics such as the age of the mother, as well as health factors such as the number of antenatal consultations carried out during pregnancy, cultural practices, the lack of knowledge about exclusive breastfeeding and the challenges associated with its practice are all significantly related to the effective implementation of exclusive breastfeeding. Taking these factors into account can significantly improve the prevalence of exclusive breastfeeding in the Central Region of Burkina Faso.

The promotion of exclusive breastfeeding from the first prenatal consultations to follow-up visits during the first six months of life is of crucial importance for improving indicators related to this practice. This approach will guide parents toward an informed choice of food for their child. In light of these results, it is essential to raise awareness and involve men throughout pregnancy, childbirth and early childhood monitoring about the many benefits of exclusive breastfeeding. This will help increase their understanding of the benefits of this practice, thus facilitating informed decisions about infant feeding.

Authors' Contribution

Hama/Ba F was involved in designing and supervising the study. Kere I. was involved in designing the study, collecting and analysing the data, as well as writing

the manuscript. Bougma S, Sankara S, Ouedraogo M, Zoungrana B participed in analysing the data and writing the manuscript. Savadogo A. supervised the study. All authors declare that they critically reviewed the manuscript and approved the final version submitted for publication.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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