

OPTIMAL BREASTFEEDING OF INFANTS UNDER SIX MONTHS OF AGE IN BURKINA FASO : REGIONAL VARIATION AND SOURCES OF CHANGE.

1- Summary

The first six months of life are a critical period for infants. In many contexts, nutritional practices for this age group do not meet the norm, despite international initiatives. In Burkina Faso, according to the 2021 Demographic and Health Survey (DHS), 51.3% and 60.3% of infants under six months of age were exclusively and early breastfed respectively.

This study aims to understand the influence of place of residence and family on optimal breastfeeding (combining early and exclusive breastfeeding) in Burkina Faso. The study concerned 0-23 month olds. The DHS and the National Nutrition Survey were used as the database. Descriptive analysis by region and simple decomposition were used.

The main results show that the North region is experiencing the greatest decline in optimal breastfeeding. The proportion of infants under six months of age who benefited from optimal breastfeeding fell from 10.4% to 9.8% between 2010 and 2021. The composition effect through household structure has largely contributed to the decline in optimal breastfeeding. Extended households have contributed most to this decline.

2- Theoretical approach

✓ Rationale, issues and objectives

Breastfeeding is one of the main strategies used to improve infant nutrition and improve child survival worldwide (Siziba et al., 2015). The World Health Organization (WHO) has described breastfeeding as ‘an unparalleled mode of providing ideal nutrition for the healthy growth and development of infants’ (World Health Organization, 2002). Countries must therefore focus on improving breastfeeding practices in order to produce a healthier, smarter population. However, the practice of breastfeeding despite the benefits is not optimal (Engebretsen et al., 2018). For infants under six months of age, two indicators have been developed that are valid and reliable for assessing feeding practices : early initiation of breastfeeding and exclusive breastfeeding before the age of six months (Organization World Health, 2009). The WHO recommends that children should be breastfed for the first hour after birth and exclusively breastfed (with no other food added) for the first six months of life. Early initiation of breastfeeding is associated with a lower risk of diarrhoea (Ahmed et al., 2020). As for the second recommendation, exclusive breastfeeding is considered to be one of the most effective behaviours for preventing infant mortality and a key element of the WHO Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea (WHO and Unicef, 2013).

In short, early and exclusive breastfeeding has been shown to reduce neonatal and infant mortality. Given the impact of breastfeeding, researchers have been interested in the factors associated with good nutritional practices. The literature has shown that socio-cultural characteristics (Sakib et al., 2021) ; socio-demographic and economic characteristics of the mother (Ghosh et al., 2022) ; and obstetrical characteristics explain early and exclusive breastfeeding. However, to promote optimal infant-feeding behaviour, it is necessary to intervene at family level (Beaudry Micheline, 2011).

Our main objective is to find out how do family environment and region of residence influence optimal breastfeeding of infants under six months in Burkina Faso ? Based on this, we have two secondary questions :

- How is the practice of optimal breastfeeding of infants under six months in Burkina Faso evolving at the level of Burkina Faso's administrative regions ?
- How does family structure (household) influence the practice of optimal breastfeeding of six-month-old infants in Burkina Faso ?

✓ **Indicative conceptual framework and main hypotheses**

Research on child nutrition must adopt an ecological view of the family in order to understand and adequately address the multiple actors and other determinants of nutrition in family contexts (Aubel et al., 2021). As mothers are embedded in a family system, a family systems approach is needed in the design of public health nutrition programmes (MacDonald et al., 2020). Our main hypothesis is that optimal breastfeeding of six-month-old infants in Burkina Faso is strongly influenced by the health context of the region and by household structure.

The specific hypotheses are :

- The practice of optimal breastfeeding of six-month-old infants in Burkina Faso is declining in certain regions of Burkina Faso due to health and security challenges.
- The practice of optimal breastfeeding of six-month-old infants in Burkina Faso is negatively influenced by an extended family structure.

3- Research methodology

✓ **New methodological approach**

This approach involves questioning and defining the notion of optimal breastfeeding for infants under six months of age. It is based on WHO and UNICEF recommendations, which state that infants should be breastfed for the first hour after birth and exclusively breastfed for the first six months of life. For this purpose, breastfeeding is considered optimal on the basis of a dual

criterion, namely infants who have been breastfed early and exclusively for the first six months of life.

✓ **Data**

The data used come from the 2010 and 2021 Burkina Faso Demographic and Health Surveys (DHS) and the 2020 and 2021 Burkina Faso National Nutrition Surveys (NNS).

✓ **Study variables**

To carry out our analysis, we have two categories of variables : the variable of interest (optimal nutritional practice) and the classification variable, namely household structure (single-parent, nuclear and extended households).

✓ **Analysis methods**

Using data from the NSS, we will examine the evolution of optimal breastfeeding practices for infants under six months of age in Burkina Faso at the regional level. Finally, using data from the DHS data and the simple decomposition method, we will analyse the influence of the composition and performance effect on the practice of optimal breastfeeding in Burkina Faso.

4- Main results

✓ **Descriptive analysis**

The analysis shows that the North, Centre, East and Hauts Bassins regions will experience a decline in optimal breastfeeding between 2021 and 2022 in all 13 regions of Burkina Faso. The regions of the North and East (regions facing major security and health challenges) are those with the greatest declines.

✓ **decomposition analysis**

The analysis shows that, in Burkina Faso, the proportion of infants under six months of age who have benefited from optimal breastfeeding has fallen from 10.4% in 2010 to 9.8% in 2021, so this rate is decreasing slightly. The composition effect and the performance effect contributed 51% and 49% respectively to the decline in optimal breastfeeding. This means that the change in household structure between 2010 and 2021 has largely contributed to the decline in optimal breastfeeding in Burkina Faso according to the DHS data. Also, according to the results, extended households contributed the most to the decrease in optimal breastfeeding practices, unlike nuclear households, which improved optimal breastfeeding practices in Burkina Faso.

5- Bibliographical references

- Ahmed, K. Y., Page, A., Arora, A., Ogbo, F. A., & collaboration (GloMACH), G. M. and C. H. R. (2020). Associations between infant and young child feeding practices and acute respiratory infection and diarrhoea in Ethiopia : A propensity score matching approach. *PLOS ONE*, 15(4), e0230978. <https://doi.org/10.1371/journal.pone.0230978>
- Aubel, J., Martin, S. L., & Cunningham, K. (2021). Introduction : A family systems approach to promote maternal, child and adolescent nutrition. *Maternal & Child Nutrition*, 17(S1), e13228. <https://doi.org/10.1111/mcn.13228>
- Beaudry Micheline (avec Chiasson Sylvie, Lauzière Julie, & Latham Michael C). (2011). *Biologie de l'allaitement : Le sein, le lait, le geste* / Micheline Beaudry, Sylvie Chiasson, Julie Lauzière ; préface de Michael C. Latham. Presses de l'Université du Québec.
- Dhami, M. V., Ogbo, F. A., Diallo, T. M. O., Olusanya, B. O., Goson, P. C., Agho, K. E., & Collaboration (GloMACH), on behalf of the G. M. and C. H. R. (2021). Infant and Young Child Feeding Practices among Adolescent Mothers and Associated Factors in India. *Nutrients*, 13(2376), 2376. <https://doi.org/10.3390/nu13072376>
- Engelbrechtsen, I. M. S., Doherty, T., Horwood, C., Moland, K. M., & Dierkes, J. (2018). Entwicklungen und Herausforderungen der Stillpraxis in den Ländern des südlichen Afrikas. *Bundesgesundheitsblatt - Gesundheitsforschung - Gesundheitsschutz*, 61(8), 937-944. <https://doi.org/10.1007/s00103-018-2783-2>
- Ghosh, P., Rohatgi, P., & Bose, K. (2022). Determinants of time-trends in exclusivity and continuation of breastfeeding in India : An investigation from the National Family Health Survey. *Social Science & Medicine* (1982), 292, 114604. <https://doi.org/10.1016/j.socscimed.2021.114604>
- MacDonald, C. A., Aubel, J., Aidam, B. A., & Girard, A. W. (2020). Grandmothers as Change Agents : Developing a Culturally Appropriate Program to Improve Maternal and Child Nutrition in Sierra Leone. *Current Developments in Nutrition*, 4(1), nzz141. <https://doi.org/10.1093/cdn/nzz141>
- Organisation mondiale de la Santé, A. (2002). *La nutrition chez le nourrisson et le jeune enfant : Stratégie mondiale pour l'alimentation du nourrisson et du jeune enfant : Rapport du Secrétariat*. Organisation mondiale de la Santé.
- OMS Saisir le moment – La mise au sein précoce : Le meilleur point de départ pour chaque nouveau-né. (2018). WHO ; World Health Organization.
- OMS et Unicef. (2013). *Mettre fin aux décès évitables d'enfants par pneumonie et diarrhée d'ici 2025 : Le Plan d'action mondial intégré pour prévenir et combattre la pneumonie et la diarrhée*.
- Organization World Health. (2009). *Indicateurs pour évaluer les pratiques d'alimentation du nourrisson et du jeune enfant : Conclusions d'une réunion de consensus du 6 au 8 novembre 2007, à Washington, DC, États-Unis d'Amérique*.
- Sakib, Md. S., Ripon Rouf, A. S. Md., & Tanny, T. F. (2021). Déterminants de l'initiation précoce des pratiques d'allaitement maternel des nouveau-nés au Bangladesh : Preuves tirées de l'enquête démographique et sanitaire du Bangladesh. *Nutrition and Metabolic Insights*, 14, 11786388211054677. <https://doi.org/10.1177/11786388211054677>
- Sankar, M. J., Sinha, B., Chowdhury, R., Bhandari, N., Taneja, S., Martines, J., & Bahl, R. (2015). Optimal breastfeeding practices and infant and child mortality : A systematic review and meta-analysis. *Acta Paediatrica*, 104(S467), 3-13. <https://doi.org/10.1111/apa.13147>
- Siziba, L. P., Jerling, J., Hanekom, S. M., & Wentzel-Viljoen, E. (2015). Low rates of exclusive breastfeeding are still evident in four South African provinces. *South African Journal of Clinical Nutrition*, 28(4), Article 4.