

Knowledge, Attitudes and Practices of Mothers regarding the Nutrition of Children from 6 to 59 Months in the Urban Commune of Koniakary (MALI)

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Abstract: Introduction: Nutrition is a health package, which is defined as the body's processing and use of food. The primary pathological situation resulting from the quality of nutrition is malnutrition. **Objective:** To describe the knowledge, attitudes and practices (KAP) related to the practices of mothers on the nutrition of children aged 6-59 months and to bring about a change in behaviour among the target group in the urban commune of Koniakary. **The Methodology:** This was a prospective and descriptive action research study in the urban commune of Koniakary, involving 99 mothers or babysitters and their children aged 6 to 59 months. The action research is carried out in three phases: survey, action and evaluation. Our work focused on the evaluation after the actions. Results: In our study, the age range of 15-20 years was predominant among the mothers and childminders (28%), 57.6% were married and monogamous and 92% were housewives. The children were predominantly male (52%). The 6-10 month age group was the most represented, 29.3%. The vast majority of children were vaccinated 94%. In relation to the knowledge and attitudes of mothers and guardians: The importance of supplementary feeding for children increased from 59.2% to 92.9%. Concerning practices: exclusive breastfeeding up to 6 months increased from 50% to 80.8%, hand washing with soap increased from 62.6% to 96%, the use of the health centre in case of illness as a first intention was 65.7%, this rate increased to 91.9%.

Keywords: Nutrition, Children aged 6-59 months, Koniakary.

INTRODUCTION

According to WHO, nutrition is a health package, which is defined as the body's processing and use of food. The first pathological situation resulting from the quality of nutrition is malnutrition. (WHO ...) It is a health problem with a multifactorial and multisectoral dimension whose underlying causes are insufficient access to quality food, inappropriate infant and young child feeding care and practices, poor hygiene and sanitation practices, insufficient access to safe water and health services (SMART 2022-Mali Survey Final Report P-25). Infant and young child

feeding is a critical area for improving child survival and promoting healthy growth and development. Of children under five, 52 million are wasted, 17 million are severely wasted and 155 million are stunted, while 41 million are overweight or obese. An estimated 2.7 million children die annually from undernutrition, accounting for 45% of all child deaths (WHO, 2021). In Mali, according to EDSM VI 2018 (P 35) Overall, 27% of children under 5 are stunted or chronically malnourished and 10% are severely stunted. Nearly one in ten (9%) under-fives are wasted or acutely malnourished and 3% are severely wasted. The results also show that 19% are underweight (too thin for their

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age), including 5% who are severely underweight. The present work is therefore part of an approach to describe the knowledge, attitudes and practices of mothers on the nutrition of children aged 6 to 59 months after the awareness-raising sessions in the urban commune of Koniakary.

MATERIAL AND METHOD

Our study took place in the urban commune of Koniakary, Kayes region. According to the monograph of Koniakary, the urban commune of Koniakary is composed of nine districts, approximately 16,000 inhabitants (Ville or commune of Koniakary); 584 families, mainly composed of three ethnic groups, the Peulh, the Bambara and the Khassonké (Monographie de Koniakary, 2007). This was a participatory action research study, combined with a CAP (Knowledge Attitude and Practice) survey, which took place from 29 June to 30 September 2015. The study concerned mothers and their children aged 6-59 months and fathers who had been living in the urban commune of Koniakary for 6 months and who had given their consent. We did a simple random sampling of 99 mother/child pairs aged 6-59 months residing in the urban commune of Koniakary for at least 6 months during the study period and who gave their consent to constitute our study population. To calculate our sample size, we used the Daniel Schwartz formula $n = z^2 (1-p)/i^2$, n = number of samples, z = risk of error, $z = 5\%$ or 1.96, p = prevalence of malnutrition $p = 16.1\%$ or 0.161 and i = precision $i =$ we took 18% or 0.18. $n = (1.96)^2 (1 - 0.161)/(0.18)^2 = 99.47 \approx 99$

There are several models of action research, all of which use a progressive process of steps and cycles to bring about behaviour change. For the action research process, we have chosen the Australian model. According to Denise Cote Thibault, action research consists of writing down a situation, taking corrective action and making an evaluation in the third stage (Thibault D.C, 1991).

- 1st stage: Sampling, administration of the CAP survey form, interpretation and restitution of the results, It lasted three weeks from 29 June to 19 July 2015
- Stage 2: Acting and observing, which lasted two (2) months from 14 July to 15 September 2015
- 3rd stage: Evaluation and new reflection. It lasted two (2) weeks, from 17 September to 31 September 2015

The data was collected following the administration of a previously developed questionnaire. The data was manually tabulated, entered and analysed on Epi info 3.5.1. Other documents were processed in Excel and Microsoft Word. The variables studied were Socio-demographic characteristics of the respondents and their children: mother's age, mother's level of education, mother's occupation, child's age, gender,

siblings, inter-genital interval, vaccination status and child's health status. For mothers' knowledge and attitudes regarding child nutrition, before and after corrective activities: poor nutrition, breastfeeding before 6 months, complementary feeding, classes of food to give the child during complementary feeding. Concerning the practices of mothers in terms of child nutrition before and after corrective activities: Exclusive breastfeeding until 6 months, water or other decoctions before 6 months, complementary feeding, hand washing with soap, sources of water, first recourse to care in case of illness, water intake in case of child diarrhoea. The data were entered on world 2007 and analysed using Epi Info 2011 software (version 7.0.8.3). Furthermore, the women included in the study were recruited only after their prior consent. The information collected was analysed in strict confidence.

Definition of concepts:

Nutrition: Nutrition is the result of the consumption of food and the assimilation of nutrients by the body (Committee on World Food Security, 2012).

Nutrients: Nutrients are chemical substances, elements and compounds contained in food. They enable the body to grow, maintain itself, give it energy and keep it healthy. For all nutrients there are recommended daily allowances and specific safety levels (Committee on World Food Security, 2012).

Malnutrition: Malnutrition is defined as a nutritional disorder in any form, and therefore includes both undernutrition and overnutrition. It is related to imbalances in energy intake, in the intake of certain macronutrients and micronutrients, and in the pattern of feeding (Committee on World Food Security, 2012).

Food: For some, this term refers to anything that is eaten, that which nourishes. For policy makers, it includes any substance intended for human consumption (Committee on World Food Security, 2012).

Concept of food energy: Food energy is provided by all macronutrients (carbohydrates, fats and proteins) and is measured in calories, kilocalories or joules. It is essential for life, as the body needs energy both for basic involuntary functions and for voluntary activities, whether they are necessary for survival or for leisure activities. When the amount of dietary energy consumed is insufficient, there is weight loss; when it is excessive, there is weight gain (Committee on World Food Security, 2012).

Balanced diet: A diet is said to be balanced when it provides energy and all essential nutrients needed for growth and a healthy, active life. Since few foods provide all the nutrients needed for normal growth, maintenance and functioning of the human body, a diet must be diversified to meet a person's macronutrient

and micronutrient needs. Any combination of foods that provides the right amount of dietary energy and all essential nutrients in optimal amounts and proportions is a balanced diet (Committee on World Food Security, 2012).

Food security: Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. This definition was formulated on the basis of the four dimensions of food security availability, access, stability and utilisation. It includes the aspects of food and care practices that form the basis of good nutrition (Committee on World Food Security, 2012).

Action research: An "action research" study is a study that involves field actors in all stages and processes from the development of objectives to the final results, on a specific problem situation in order to bring about solutions and behaviour change in a cyclical manner (Jaques M et al., 2013).

CAP survey: A CAP or Knowledge Attitude and Practice survey is a survey that consists of Collecting information about what people know, feel and behave about a specific topic in a specific population (Save the children, 2012).

Knowledge: An exact idea of a reality, its situation, meaning, characters and functioning (Larousse, 2015).

Attitudes: Conduct that one adopts in given circumstances (Larousse, 2015).

Practices: It is the way of acting usually (Larousse, 2015).

RESULTS

Our results and comments are grouped into three (3) components: socio-demographic data of mother/child pairs aged 6-59 months, mothers' knowledge and attitudes regarding child nutrition before and after corrective activities, mothers' practices before and after corrective activities.

Socio-demographic characteristics: In our study, the age range of 15-20 years was predominant among the mothers and 28% babysitters. They were married and monogamous in 57.6%, not in school in 51.5% and not pregnant at the time of the study in 69%. The dominant occupation was housewife 92%, and the majority of children were male 52%. The 6-10 month age group was the most represented 29.3%. The 3rd sibling row was dominant 21.2% and the inter-genesic interval of 21-25 months was the most represented 43%. The vast majority of children were vaccinated 94% and they were not sick the last two weeks before the survey 63.6%.

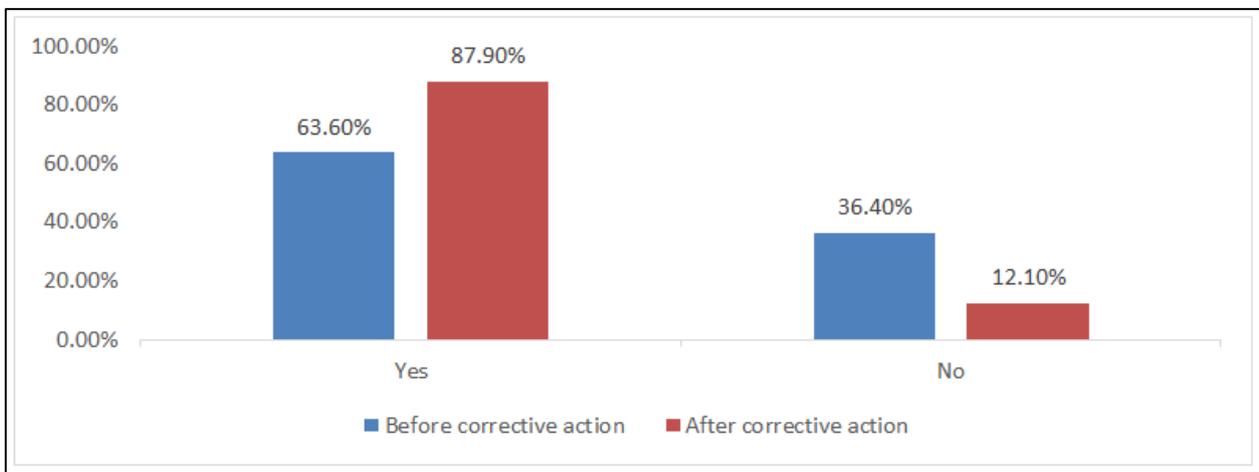


Figure I: Poor child nutrition and source of disease

Mothers' knowledge and attitudes on child nutrition, before and after corrective actions: Before the corrective actions, 63.6% of mothers thought that poor child nutrition can be a source of disease. In our study, the figure was 86.9%. Before the corrective actions, 48.5% of the mothers said that the child needs other

liquids or food than breast milk before 6 months, this rate dropped to 11.1% during our study. Before the corrective actions, 19.2% of the mothers knew at least three classes of food to give to the child during complementary feeding. In our study, this rate was 73.7%.

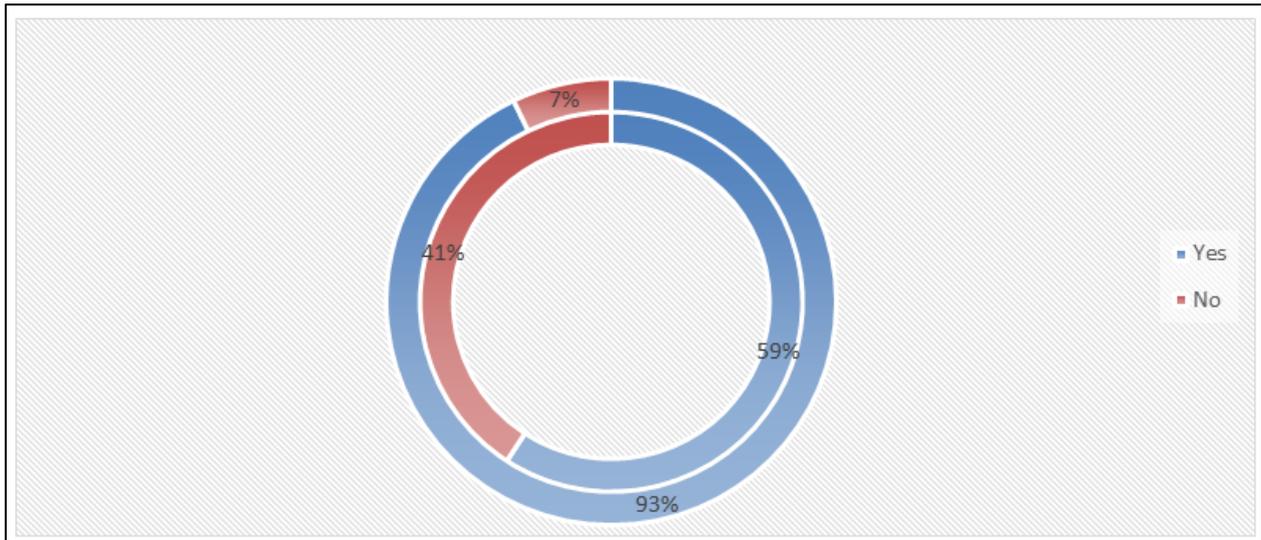


Figure II: Knowledge about the importance of complementary feeding

Mothers' child nutrition practices before and after corrective actions: Before the corrective actions,

50% of the mothers practiced exclusive breastfeeding up to 6 months, this rate was 80.8% during our study.

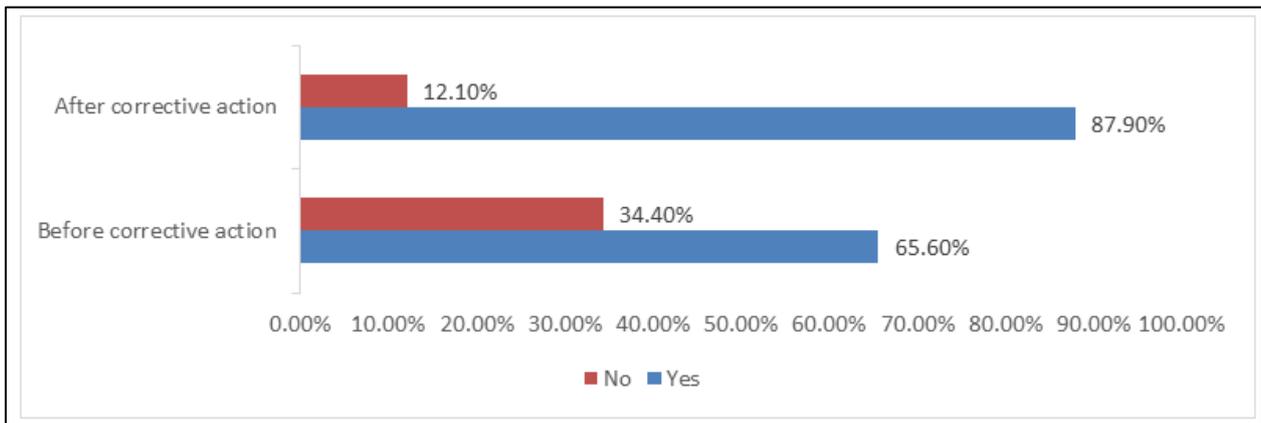


Figure III: Knowledge of exclusive breastfeeding (EBF)

In our series, 51.5% of the mothers gave water or other concoctions to the children after the corrective actions, this rate increased to 19.2%. In our study, 77.8% of the children were given supplementary food

after 6 months, this rate was 48.5% before the corrective actions. Hand washing with soap was 62.6% before our study, this rate increased to 96% after the corrective actions.

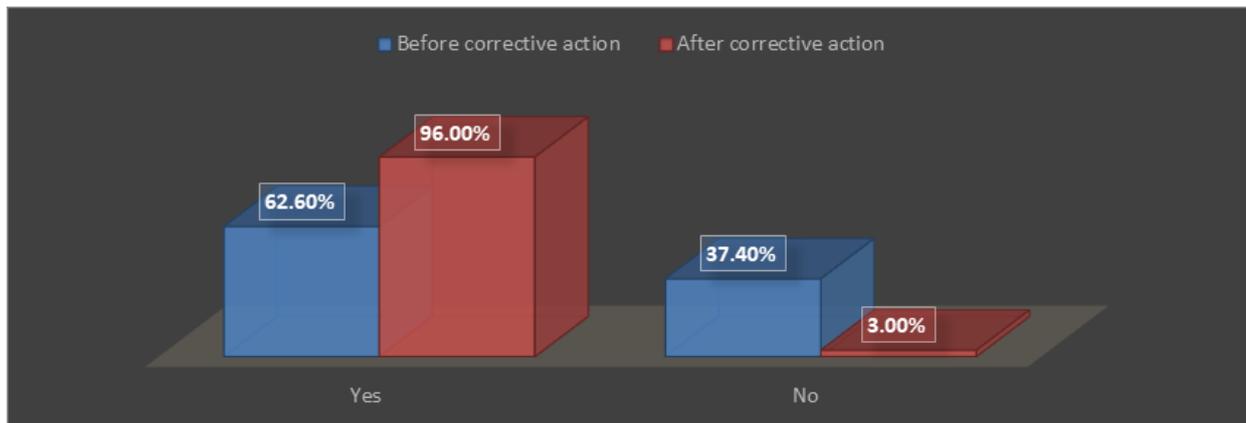


Figure IV: Practice hand washing with soap

In our series, 86.6% of the mothers used tap/fountain water as a source of drinking water compared to 93.3% and 13.4% used wells with curbstones compared to 3.7% without curbstones. The use of the health centre in case of illness was 65.7% in the first instance, this rate increased to 91.9% after the corrective actions. The increase in water intake rose from 61.6% before the study to 93.9% after the corrective actions.

DISCUSSION

This work involved 99 women and female guardians with children aged 6-59 months, residing in the urban commune of Koniakary for at least 6 months. The aim of our study was to describe the knowledge, attitudes and practices of mothers and caretakers regarding nutrition in children aged 6 to 59 months. Our study showed that the age group of 15-20 years was predominant among mothers and caregivers, i.e. 28%. Our age group is superimposed on that of (Bieteke *et al.*, 2014) at the point G 15 to 29%, i.e. 61.8%, but it is lower than that of (Mavuta *et al.*, 2018), which found the predominance of the age group of 25 to 29 years, i.e. 25.59%. This could be explained by the context of early marriage that occurs in some in the Kayes region (EDSM VI, 2018). Mothers and babysitters were not in school in 51.5%. Our level of schooling is superimposed on that of (Kalifala HD *et al.*, 2020, P 51-52) a Bla 43.5%, but lower than that of (Bieteke *et al.*, 2014) in the village of Point G which found a schooling rate of 63% among mothers. The difference in the level of education of the mothers in our sample with that of Bieteke can be explained by the fact that our study took place in a rural area. The majority occupation was housewife in our series 92%. Our result is identical to that of (Mavuta *et al.*, 2018) who found a predominance of housewives with 75.59% and (Thimou A *et al.*, 2001) 86% of housewives. This confirms the data from (EDSM VI, 2018 P 11) according to which the rate of non-enrolment of women is 66%. Our result is identical to that of (Kalifala HD *et al.*, 2020, P 51-52) who found a male predominance of 60%. However, it is different from that of (Bieteke *et al.*, 2014) in the village of Point-G in 2014 and of (Laure PFM *et al.*, 2010) in Bougouni who found a female predominance of 59.4% and 51.5% respectively. The 6-10 month age group was the most represented at 29.3%. Our results are superimposed on those of (M. M. DIALLO *et al.*, 2014) who found a predominance of the 6-17 month age group at 30.8%. The complete vaccination rate of children in our study was 94%. Our result is higher than the national average (ESDM VI 2018, P 30). In terms of knowledge, in our study 86.9% of mothers and caregivers had knowledge about the causes of malnutrition. Our result is higher than that of (AURELIE M. B *et al.*, 2014) who found that 60% of mothers and caregivers who had no knowledge about the causes of malnutrition in children. Our result could be explained by the corrective actions carried out in the field. Exclusive breastfeeding before 6 months, which

was 48.5% before the corrective actions, was 88.9% in our study. Our result is higher than that of (Mukuku O *et al.*, 2017) who found early food diversification < 6 months in 72.5% of the surveyed mothers. This knowledge of exclusive breastfeeding is a positive impact of awareness raising activities. In our series, 91.9% of mothers and caregivers started feeding after 6 months. Our result is far superior to that of (Kalifala HD *et al.*, 2020, P 85) who found that 3.5% of mothers were aware of the WHO recommendations on the introduction of complementary foods from 06 months. Our result demonstrates the positive impact of the action research. In relation to the attitudes of the participants in the study, 51.5% of mothers knew how to feed a sick child before the corrective actions. In our study, this rate was 90.2%. Our result is higher than that of (AURELIE M. B *et al.*, 2014) who found 37.1% of mothers who knew this modality. For the improvement of children's nutritional practices, 78.6% of mothers knew the importance of attending centres. This rate was 85.9% after the corrective activities. This positive evolution shows the importance of action research.

CONCLUSION

This study shows that the knowledge, attitudes and practices of mothers and caregivers on nutrition in children aged 6-59 months were in line with WHO recommendations before the corrective actions. The action research allowed us to have a consequent improvement of this knowledge, attitudes and practices on child nutrition in the urban commune of Koniakary. For the improvement of children's health, the action research method must be sufficiently practiced and popularized at the community level and in all our health structures.

Conflicts of Interest: None.

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