

Full Length Research Paper

Superstitious knowledge of the phenomena of teeth eruption in rural area of Ferlo in Senegal

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Teeth are physiological phenomenon that appears in child and who begins around 6 to 8 months after birth. The aim of this work was to study superstitious knowledge of the phenomena of teeth eruption in the mothers peulhs of Ferlo in Senegal. The research method was a descriptive and qualitative study; comprising questioning the mothers of children in the phase of active teeth eruption by structured, semi-structured interviews and focus groups. Information collected were related to the signs and symptoms of teeth, the superstitions associated with the dental age of eruption, the first type of tooth on the arcade, the rhizalyse and the practices of oral hygiene in the child. Data were analysed manually and presented in framed and of verbatims. From the findings, it is seen that fever, the diarrhoea, the vomiting and the dribbles constituted the principal signs. The native or neonatal tooth and the use of the stick rub-tooth to clean the teeth in the evening and the phenomenon of rhizalyse were related to superstitious interpretations. Programs of information and communication would make it possible to better sensitize the populations to optimize the good practices in the children in active phase of teeth eruption.

Key words: Knowledge, superstitions, teeth, child, mother, Senegal.

INTRODUCTION

Teeth are a physiological phenomenon which appears in the child and begins around 6 to 8 months after birth. It consists of arcade which expose them in the mouth. It is not expressed only on the oral cavity but on the organization in entirety. Moreover, the studies on the relation between the teeth and the general state of a child have lasted for more than 5000 years (Owais et al., 2010). The recent studies carried out in the world through Canada, Australia, the USA or Brazil show a narrow

association of some symptomatologies with the phase of teeth in the child (Hulland et al., 2000). In the study of Coreil (Harnet, 1978) 35% of the questioned pediatricists estimated that there exists an association between the diarrhoea and the eruption of the teeth. Nonetheless, these signs are understood and interpreted in different ways by the mothers. In the Western countries like France, the mothers have a certain illustration of teeth (Harnet, 1978). In spite of the level of intellectual

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development, a good part of them cannot quote the whole of expressed clinical teeth but also made recourse to the therapeutic mixed one. The work of Owais (2010) eloquently proves it that nearly 75% of the participants wrongly allotted fever, diarrhoea and sleep disorders, to teeth. In Africa, this same report persists on the rare studies published (Okeigbemen, 2004; Yam et al., 2002). Diouf et al., exploring the sociocultural determinants and oral health in Ferlo at the 18 years old individuals and more, through a quantitative and qualitative approach, evoked an insufficiency of knowledge in keeping with oral health and the recourse of the populations to the traditional practitioners for the assumption of responsibility of the health problems (Diouf et al., 2013). In the same order of idea, Dieye (2004) showed in a study of the syndrome of eruption of the temporary teeth in children of the commune of Saint Louis in Senegal, that 18 symptoms can be highlighted in the dental push in the child. He concluded, in addition, that the health workforces still were not often solicited in the treatment of the symptoms of the dental eruption. So in urban area, where the access to the care is supposed easier, this phenomenon of teeth is badly apprehended, it does not remain less in the campaigns, in rural environment; the problem can be more important. The aim of this work was to study superstitious knowledge of the phenomena of teeth eruption by the mothers in peulhs of Ferlo, Senegal.

METHODOLOGY

Type and scope of study

This was a qualitative study that took place in the Great Green Wall (GGW) area in the Ferlo, in eastern central Senegal in the locality of Widou. The Great Wall is a project that involves the integrated development of plant species and extends from Dakar to Djibouti. The Senegalese portion is 500km long with a wide band of fifteen kilometers (Pan-African Agency, 2010). The area of the Great Green Wall is composed mainly of Peulh populations with the main activities of nomadic breeding and trade. The choice of this environment is justified by the existence of environmental changes, anthropogenic actions, and a peulh population attached to its culture.

Recruitment of participants

The individuals selected for the directive and semi-directive interviews were recruited and had to be mothers over the age of 18. Mothers had to have at least one child in temporary dentition and thus probably had the opportunity to know their child's teething experience. As for the mothers participating in the focus group, their choice was reasoned and based on experience; knowledge and level of responsibility within the family. For the interview, twenty people were listened to; considering that the level of saturation would be reached, that is to say that from this size the collected information would be repeated in other people. Two focus groups were organized according to age groups (18 to 35 and 36 years

and above) with six mothers of children under five years of age (active dentition period) per group.

Collection procedure and variables

The information collected included signs and symptoms of dentition, superstitions associated with age of dental eruption, the first type of tooth on the arch, rhizalysis and oral hygiene habits in children. The collection of these data was done by a dentist assisted by a socio-anthropologist, both assisted by an interpreter speaking French and the local language. Prior to the actual survey, exchanges were organized for standardization and fidelity in the translation of the questions asked. This collection took place within ten days, from August 10 to 20, 2014. During this collection, in addition to the papers, pens and pencils used to record the questions and answers, a digital camera made it possible to film the sessions, to photograph some practices and record the speeches.

Data analysis

The data was processed by the manual method of selecting, condensing, categorizing, and organizing the information using linguistic or numeric codes. The raw data has been broken down into verbatim or boxed notes. A triangulation of information from the interview and the focus group was carried out for their analysis.

Ethical considerations

People were informed about the purpose and objectives of the study in order to obtain their free consent. A motivation and teaching session on hygiene and scaling was offered if necessary to the mother and her child at the end of the interview.

RESULTS

The results summarize the information obtained after triangulation of three techniques of collection which were: structured interview, semi-structured interview and the focus group.

Signs and symptoms of teeth

The dental eruption considered as a manifestation of the growth in the child, was known populations of Ferlo. Some signs and symptoms which accompany it were evoked. The majority of the mothers having taken part in the talks, mentioned fever, diarrhoea, vomiting and dribbles as principal signs. Certain mothers insisted on the term "reached of malaria" to summarize the symptoms. The "refusal to nurse itself" was also underlined among the signs for this period.

Superstitions

At these populations, the baby tooth is the object of superstitions. Indeed, the children with native or neonatal teeth will be the wise ones, marabouts or "Borom



Figure 1. Dental persistence.

“A young girl of 7 has persistences of the 4 incisors mandibulaires and whose parents refused extraction. Her mother claimed that the teeth would fall by itself or she would remove it by hand after increased mobility”.

xamxam” meaning scientists for certain mothers while others think “that they will be man-eaters if they are not dealt with on the mystical level”. Still, certain people regarded the phenomenon as the return in of a deceased grandfather. Thus, the arcade where the dental eruption is carried out in first intention, of the sociological beliefs were made in the jawbone. For example, it is known as:

“if a child makes his first eruption with the jawbone, it is necessary protected. Since it could be the object of target of the assemblers of trees (bad spirits), which will want to regard it as one as of theirs”.

As regards the dental rhizalyse or “Fokh”, it was not controlled perfectly by these populations. Many ideas or considerations were put in obviousness to explain this phenomenon: “replacement of teeth to the image of the generations of families, problem of resistance of the teeth compared to food hard to consume at adulthood, environmental problems and duration of life or expectancy”. Moreover, no mother considered it necessary to bring her child for an extraction of baby tooth. They declared that the teeth fell naturally or it is themselves which “removed them with the hand when they are movable” (Figure 1).

Once the tooth is removed, most mothers preferred to throw it with special precautions. This mother of about thirty year reported that:

“When a tooth of child is removed, one puts it in a piece of fabric. One adds to it some grains of millet which one will throw in the forest. These grains will push and give new, thus new tooth also will push instead of that fallen without difficulty”.

At the populations of Widou, some methods and

instruments were used to take care of the teeth of their children. Moreover some mothers who have infants tried to inculcate some oral hygiene education to them. They made recourse to the toothpick or stick rub-tooth, brushing, using charcoal or only water to clean the teeth. The stick rub-tooth remained by far the instrument used more in view of medicinal virtues that their grandfathers thought them. However, this stick was to be used only a day before to support the death of a relative. For certain mothers, it is the father and for others the mother (Figure 2).

DISCUSSION

The dental eruption called in popular speech “dental pushes” in the children is a subject of important concern for the parents. All the children pass, usually towards 6 months of age. The list of the signs and the symptoms allotted to the eruption of the first long teeth and is varied, vague and even complex. The history of the opening of the teeth is a good example of absurd conclusions which can result from a prescientific approach of the disease, as it exists still, with the theory of moods and homeopathy (Poncet, 2000). Philosophers of the past as Hippocrates allotted to the opening of the teeth a set of minor symptoms, like itchings of the gum or the diarrhoea. Several of these symptoms are always in the list of what the parents allot to the eruption of the teeth. Due to the bad knowledge of human physiology of the time, the infants were regarded as being extremely vulnerable to any disturbance of their nervous system and the most important consequences were allotted to the eruption of the new teeth, including death (Philippe, 2011). Furthermore, in the African popular belief, the “traditional scientists” allude to apocalyptic phenomena in



Toothpick

Figure 2. A 12 year old child with a toothpick stick.

the mouth of the child and whose consequences are felt as well as the local level at general. They add that if the mothers could apprehend the heaviness of the burden of the child for this period, they would be less enthusiastic to give birth to infants.

The physiological process recognizes that the tooth leaves while crossing the bone and the gum, often preceded by a small mass. There can occasionally be the eruption of a larger cyst, and the area can appear somewhat bluish and swollen during approximately a few days before the emergence of the tooth. The total process takes approximately 2 years, with an average tooth which appears each month until the 20 teeth of the child are present in mouth.

In this study, majority of the mothers points the fever, diarrhoea, vomiting and "refusal to nurse itself" as principal signs. Certain mothers insisted on the term "reached of paludism" to summarize the symptoms. According to the study of Wake et al. (1999), bearing the perception of the parents, salivation and mordillement were quoted by 77% of the families. The scientific work of Macknin et al. (2000) and Lloyd (1996) had described these signs and had even evoked a behavioral problem of the child who is often agitated. The baby tooth, although involving a behavioral disorder in the child at the time of his eruption, can be associated with superstitions when it is native or neonatal; according to whether it makes its eruption with the mandible or the jawbone. It appears that these superstitions can be at the origin of favour more than that of dental pathologies. The parents are apprehensive with regard to the children as one regarded either as scientists or as man-eaters. Yam (1990) found these evil interpretations in other ethnoscultural groups of Senegal (Wolof, Sérère), where the newborn with teeth "will be excluded from the company".

For fear of curses, these children were even often killed in Africa (Baumgart et al., 2006). Among advantageous interpretations, one can quote the example of Alexandre the Large one, Louis XIV, Mirabeau in Occident and Africa de Sourou Migan Apithy (statesman dahoméen) (Yam, 1990).

However, these teeth are generally temporary, having made an early eruption; but they can also be supernumerary teeth, called teeth *déciduales* (Moulis et al., 2002). Their etiology remains often unknown. However, a surface position of the germ or a hereditary factor could be the cause. As regards the rhizolyse or physiological resorption of the roots commonly called "fokh", the mothers estimated that the teeth fell themselves and that one should not act even for an expert (modern or traditional) consultation (Figure 1). These multiple considerations could be explained by the lack of information, the anchoring and the integration of the natural laws in the daily practices instead of resorting to a consultation at the time of dental health problems. A former study in the zone had also mentioned a very low level of elimination of illiteracy in the population with children who had often left the school to the profit of pastures (Barro, 2014). Moreover, when the tooth falls by itself or removed by a relative, it will be cloth-lined with grains of millet and pier in the bush to allow the germination which should correspond to perfect eruption of the replacing tooth.

In Ferlo, certain equipment or instruments used for the hygiene of the mouth and the teeth was quoted. Indeed oral hygiene is defined like a set of practices, making it possible to eliminate the dental plaque which is formed naturally and permanently on the surface of the teeth. Even if the access to the brush with tooth and the cosmetic toothpastes is not very easy in rural area, most

mothers used the brush with traditional toothpaste or toothpick, called stick rub-tooth by hook (Bitte, 2010). Concurrently to this instrument, the charcoal and the water of drilling were also used especially at the evening to avoid the superstitious evil events such as the death of a relative. In 1965, Dupin noted that in a good amount of areas of Black Africa, the personal hygiene was respected, the care and the cleanliness of the mouth was also (Dupin, 1965). Beyond its cultural significance, its therapeutic or preventive virtues are well put in obviousness. Already in 1976, Schmid in USA evoked the effectiveness of the toothpick compared to the control of plate on the lingual or palatine faces of the teeth in comparison to the brush with tooth (Schmid et al., 1976). That means that the traditional methods, to a certain extent, constitute an important alternative for a satisfactory health buccodentaire of the populations.

Conclusion

The knowledge of mothers on teeth in Ferlo is associated with superstitions. The native or neonatal tooth and the use of stick rub-tooth to clean the teeth in the evening were related to superstitious interpretations, in discredit of a good health buccodentaire. Programs of information and communication would make it possible to better sensitize the populations to optimize the good practices of children in teething phase.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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