

SOCIO-CULTURAL CONTEXT OF DEVELOPMENTAL MILESTONES IN INFANCY IN SOUTH WEST NIGERIA: A QUALITATIVE STUDY

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Abstract

Developmental milestones are generally understood to be milestones of neurological development such as neck control, sitting without support, crawling and standing. Child health care providers routinely use normative data on such milestones to evaluate child development. However, there is often a cultural context to expectations of developmental milestones. The goal of this research is to explore the socio-cultural context of developmental milestones in infancy in a Nigerian community. In-depth interview was conducted with 30 mothers enrolled from an infant welfare clinic, southwest, Nigeria. The transcripts were coded and analyzed using the Atlas ti 7.0 software package in a combination of thematic and narrative approaches. Mean age of participants was 33.3 (SD 5.1) years, 73% were married, 80% had two or more older children. Mothers expect that a child will be able to sit unaided, crawl and be able to stand by the age of one year. Opinion was divided about if it was possible to predict the age a child will attain a specific milestone. Most mothers reported that the age at which babies attain developmental milestones depends on childrearing practices utilized by the mother. Other factors they perceive as influencing developmental milestones include: having siblings, the age at which siblings and/or parents achieve similar milestones and the environment the child is reared in. Teething was considered an important milestone which has specific culture-bound connotations. Walking was considered one of the most significant

milestones, not only indicating normal development but also signifying some independence for both mother and child.

In this study of Nigerian mothers, developmental milestones in the first year of life have recognized influencing factors and a number of specific culture-bound associated beliefs. This exploratory study provides insights into intersections between biomedical and cultural concepts of childhood development.

Keywords: Developmental milestones, infancy, social-cultural, qualitative study, Nigeria

Introduction

Developmental milestones are generally understood to be vital stages of neurological development, for instance, neck control, sitting without support, crawling, standing, walking (Adolph & Berger, 2006; Bayley, 2005). “Milestone” is a descriptive term used to denote a specific level of achievement (e.g. sitting without support) of the child at a particular stage. Milestones have a range of normal variation, that is, they are not fixed because children vary in the progress of their development. Each child develops at its own unique pace and it may be difficult to predict exactly when a child will acquire a given skill. However, the developmental milestones give a general idea of when to expect specific changes as a child grows older (Gerber, Wilks, Erdie-Lalena, 2010). Normative data exists for these milestones, for example, a child should walk unaided at about one year.

Milestones provide a framework for observing and monitoring a child over time. Although neurological development follows a predictable course, it is important to understand that intrinsic and extrinsic forces produce individual variation, making each child’s developmental path unique. Intrinsic influences include genetically determined attributes, for example, physical characteristics, temperament as well as the child’s overall state of wellness. Extrinsic influences during infancy and childhood originate primarily from the family. Parent and sibling personalities, the nurturing methods used by caregivers, the cultural environment, and the family’s socioeconomic status with its effect on resources of time and money all play a role in the development of children. Parenting practices and ideas about child development are largely determined by cultural ideals (Carter, Lees, Murira et al, 2005)

While development often refers to processes and events that depend on neurological development, it should be noted that families and societies also consider some socially-defined milestones as critical, for instance, ability to run errands for the mother and age-cohort dependent maturation events. Moreover, recognition of “normal” development is often in

comparison to other children and/or siblings, rather than an objective age range. Each culture has specific ways of categorising the phases of childhood. While different stages may not be explicitly named, they are often recognised and talked about in terms of specific appropriate behaviours. In many indigenous West African societies, child developmental stages are not often directly tied to chronological age. The child is rather described by his development: “he walks; he talks; he has teeth” (Makoju, 1986). In other words, the child is seen as what he is at that moment, not what he should be because he is a certain age. There is usually great cultural significance attached to the moving from one stage to another and cultural values and attitudes regulate the child rearing values and developmental expectations (Rosenthal, 1999).

Parents' beliefs and practices about children and their development are defined by what is considered adaptive in their cultural setting. For example, the early-childhood developmental goals valued by parents and educators in many Western societies reflect an underlying 'individualistic' cultural script. They are usually related to the acquisition by an individual of competence and independence, and they often value competition. In comparison, non-industrialised societies and 'traditional' cultural groups are often characterised by more 'collectivist' or 'inter-dependent' cultural scripts. They value collective goals more highly, such as learning to live in harmony with one another, competent participation in social events, obedience to authority, and a cooperative and altruistic orientation (Rosenthal, 2000; Trandis, Bontempo, Villareal et al, 1988). Such differences in goals and expectations mediate the daily experiences of children, their interactions with the persons, objects and symbols in their immediate environment (Rosenthal, 2000). Cultural differences in the timing of motor milestones are often accompanied by culture-specific expectations about when children should acquire various milestones.

Yoruba cultural background

The Yoruba are an important ethnic group mainly occupying Southwestern Nigeria. Many of the Yoruban's are now either Christian or Muslim, but some have held on to their traditional religious beliefs. Yoruba has one of the richest, enduring and perhaps, the most sophisticated ways of life on the continent of Africa. Yoruba people have similar culture which is evident in their beliefs, values, customs, practices, and social behaviors; and this is manifested in their arts, music, political institution, local economy, family structure, burial, cuisine, numerals, literature, and other related activities, which defines Yoruba ways of life. Agriculture was the predominant occupation in Yorubaland. The men were into farming while the women were mostly traders. The terracotta and bronze head of Ife,

reputed to be up to 800 years old, were products of traditional Yoruba craftsmanship. The handiwork of the Yoruba people is also visible in modern wood carving, crafts and fabrics such as Adire and Aso-Oke.

The family unit is of vital importance in the life of every Yoruba. As in many African societies, the concept of the family extends far beyond one's own parents, siblings, wife and children. It includes a whole clan often composed of more than a hundred people among which mutual assistance is compulsory. The head of this extended family is the clan elder called Bale (Mobolade, 1971). In Yoruba culture, like in most African culture only male children are allowed to share in family land holdings - this is facilitated by the prevailing extended family structure. Since farming is central to economic life and men are the chief decision-makers, the most economically rewarding reproductive goal a man could pursue is large family size. It is against this background that couples dread barrenness and until a "good" number of male children are born, extended family members exert pressure, which may culminate into the man marrying another wife (Wusu, 2001).

The traditional childrearing practices in Nigeria are communal within the extended family system or lineage, and the costs of raising children are not borne solely by the biological parents. A close knit of relatives commonly shares the costs of rearing children, in terms of emotion, time, finance and other material support, since all children together comprise the strength of the lineage (Fapohunda and Todaro, 1988; Isiugo-Abanihe, 1991).

The present study has the primary objective of understanding the socio-cultural context of developmental milestones in infancy in a Nigerian society.

Methods

This qualitative study was carried out in an infant welfare clinic, in one of the three public hospitals, southwest, Nigeria. The clinic provides routine growth monitoring, immunisations and health education for children from birth through the first year of life. The study site was purposely selected for this study because of the good mix of the different socio-economic classes.

The study was designed as a qualitative study that uses in depth interviews with mothers of infants as the primary research tool. In literature, there is no specified rule determining the number of participants who will be interviewed in a qualitative research (Emiroglu, 2002; Oksel, Ertem & Dönmez, 2008). Interviews continue till it is felt that there is no difference regarding participants' views, perceptions and beliefs. Using an in-depth interview guide, interviews were conducted by research assistants, having received extensive training on qualitative research. The study sample

consisted of 30 mothers, who were informed about the study and volunteered to participate. A separate component of the study consisted of structured observations made during clinics to evaluate to what extent child developmental milestones is addressed by health care providers during routine clinic visits. This component of the study helped in evaluating how much (if any) information from infant welfare clinics contributes to the conception of child development by the interviewed mothers.

Each interview lasted about 45 minutes. All interviews were voice-recorded and were later transcribed. The transcripts were coded using the Atlas ti. Version 7.0 software package and analysed in a combination of thematic and narrative approach. The themes identified for analysis were: mothers knowledge of expected developmental milestones in infants before the age one; perceived age of attaining these milestones; significant milestones and if any, cultural belief regarding them, mothers opinion regarding difference in stages of the milestone in male and female child, comparing development between children of similar age and mother's view about being able to predict a child's development from that of the older siblings or parents. The study was approved by the State Ministry of Health ethical review committee. Each participant provided written informed consent before enrolment in the study.

Results

Characteristics of study participants

The 30 participating mothers were aged between 24 and 41 years, with a mean age of 33.3 (SD 5.1) years. Most (73.3%) of them were married, 40.0% had secondary and 53.3% were of the Islamic faith. About one-half (56.7%) of the mothers were traders, 20.0% public servants, 13.3% were self-employed while 7.0% said they were full time housewives. Apart from the index child, 46.7% of the mothers have 2 older children while 33.3% have 3 children.

General expectations of milestones

Regarding the expected milestones before a child is one year old, most mothers expected rapid development in the first year of life. Expected milestones mentioned by these mothers included the fact that a child is able to sit unaided, crawl, play like a normal child and be able to stand and possibly have one or two teeth. Some of the mothers also reported that a child at this age should be familiar with his/her name (i.e. respond to being called by name), know the parents and siblings from strangers and start saying some words or making sound, walk and do a lot of things. Typical notions expressed by two of the mothers were:

In the Yoruba culture, there are some things parents look out for in their children as they are growing up. After a month or so, the child's face begins to change and when you play with the child, he/she can smile back at you and will turn at any sound. That way a mother knows that the baby is not deaf or blind. We also look out for when a child sits down, have teeth, walk and talk. Even if the child is fat or thin and is able to do all these things, then the child is developing well. [30 year old trader]"

Before my child is one year old, I expect many things from him. At least you can see that he was not like this the day he was born. He is already making sound as if he wants to talk. He knows me. He can lift his body, so before one year, I expect him to crawl, stand even if it is with table, have teeth, and even walk.[33 year old self-employed]

Some of the mothers opined that it was difficult to attach a specific age to any of these milestones because they expect their children to grow "normally" and they just watch them doing things as they grow and they are happy. Some of the mothers said that in Yoruba tradition, not many people tell you the exact age of their children because of fear of witchcraft or something evil may happen to their children. This according to them will make it difficult to tell the exact age at which their babies attain any of the milestones although some of the mothers claim they do not look at date.

Specific milestones

(i) Smiling: Majority of the mothers reported that babies use to smile in their sleep few hours or days after delivery and that as these children grow older simple interaction with babies will elicit expected responses such smile. According to one of the participants,

Babies nowadays smile from their mother's womb (laughs). You see them smiling in their sleep because they are smiling or playing with their mates or spirits. But from three months, babies should smile when you tickle them, when they see their mothers or when breastfeeding. [36 year old house wife]

The view that babies who smile in their sleep are smiling with their mates or spirits as a cultural belief was one of the statements made by most mothers.

Who else will a baby who cannot even see anything be smiling with if not with their mates in the spirit world? Anyway, that is the general belief and what our mothers told us. [26 year old trader]

(ii) Sitting without support: Findings regarding age at which babies sit without support revealed some associated cultural beliefs. Majority of the mothers reported that the age at which babies attain these milestones depend on the mode of childrearing or childrearing practices utilized by the mother,

which includes the way mothers carry and hold their infants. Some of these acts they claim facilitates early sitting in children. As one of the participants puts it:

It is believed in Yoruba land that many things depend on the hand [childrearing practices] used in raising children. For instance, when we are bathing new born babies, we sit them on our laps; hold them around the waist as if they are already sitting. And at three months girls should be trained to sit while boys are not allowed. [41 year old house wife]

Some mothers responded that before the child starts sitting without support, they usually put the child in a cardboard box or a basin (propped up with cloth) or they ask the older sibling to sit behind the child from around the age of four months for girls and five months for boys. There is a general cultural belief that putting a male child to sit early will adversely affect the child's 'back bone' and this in turn will affect his ability to perform his sexual role as a man in the future. This is backed up by these general quotes:

In Yoruba tradition, you do not put a male child to sit early because of his manhood. In our society, we do not allow boys to start sitting early. It is not good for their back which may affect their manhood and ability to impregnate their wives. [33 year old public servant]"

When asked if girls do not have backbones, participants responded that girls have back bones but they are not going to use it the way the male child will use his own.

They do, but it does not affect their reproductive system. But for the boys, in Yoruba culture, they believe it will affect the male child. That is what our mothers taught us. [40 year old trader]

Female babies have backbones but can never compare with the male because they will work very well with their body when the time comes. Our mothers said the female has seven bones [in the spine] and the male nine. It is our cultural belief. [26 year old trader]

(iii) Crawling: Regarding age at which babies crawl, majority of the mothers indicated that most babies start to crawl when they are between the ages of six and seven months old. Also, they were of the opinion that babies can actually be taught how to crawl by sitting them down and putting attractive items like toys a little distance away from them. This action they said will encourage the child to move to get the objects, although some babies may decide to drag their buttocks or stomach on the floor without crawling until they start standing. It was also reported that the ability for a baby to crawl early depend on the mother's specific childrearing practices. This explanation was put thus:

You know in Yoruba and other cultures, most times we back our children for convenience to enable us do our work, so we do not put babies

to sit because nobody will watch them. This does not allow the children to crawl early. But where babies are encouraged to crawl and older siblings are around, most babies do crawl faster. [29 year old trader]”

Some of us put our babies on the floor once they start to sit while mothers do other things. This will encourage them to crawl especially when they want to reach out for something or trying to reach their mother. [36 year trader]”

(iv) Teething: Another stage of development mentioned by mothers was teething. More than half of the mothers reported that it was difficult to tell the exact age at which a child should attain this milestone; it varies from child to child and that there are cases, although very rare, where babies are delivered with a tooth in their mouth. Culturally, they are seen as evil children who want to bite off their mother’s breast. It was also reported that some mothers only know that their babies are about to teeth when the babies start drooling saliva, having redness in the gum, stooling, having fever, putting things in the mouth frequently and sometimes vomiting, hence it is difficult to say the exact age babies teeth as one of the mothers puts it:

I really cannot say because it is only when we see our child stooling, having fever and always putting everything in the mouth that we know they want to bring out teeth. Sometimes, the mouth will be red and before you know it, teeth will come out. But if you want me to attach age, maybe around eight months and beyond. [29 year old housewife]

In as much as these mothers reported that teething varies from child to child, age at teething was put between six and 10 months. Respondents also reported the use of herbs and teething powder; and that many times mothers do nothing when their babies are stooling because they believe that it is teething stool.

From my first child, I did not know the exact time because she started having fever and was stooling. That was when my mother in-law said my baby is teething and that no need to go to hospital. By around 7 months, two teeth came out. [35 year old trader]

(v) Walking without support: This was another milestone mentioned by mothers they expect babies to attain before one year. Some of the mothers reported that before babies start walking without support, they usually stand up aided with a table or wall. They can even start using the wall or table as support to walk. This is usually when they are around 11 or 12 months old. It was reported that it also depend on the child and mode of childrearing. According to a majority of the respondents, putting a child on the lap and allowing him or her to bounce on the laps can make the bones strong and may facilitate walking. Although some other mothers believe that

this act can result in the child having bent or bow legs because the legs are not strong enough. Some children are also faster than others as reported by the respondents.

(vi) Uttering the first words: Some of the mothers reported that a child saying their first words depend on certain factors like being the first born of the family, the environment in which the child is growing up and also the family setting. Children tend to imitate what they see and hear around them. All these reports by the mothers were summarized in the following quotes:

Sometimes, firstborns are slow in developing speech ability especially if the parents do not talk to them always. But for a child with older siblings, they talk faster because the older siblings will be playing and talking to them. I expect a child to say his first words like “tata” by 10 months. By one year, a child should be repeating things they hear, wave and say “bye bye. [33 year old self-employed]

This also depends on the environment in which the child is growing up. For educated people with so many places a child can learn from, those children can talk faster. Children that have older ones, watch cartoons and children’s programmes on television talk faster. So I cannot say for sure because it also applies to the local people who leave in crowded places with so many people around or in the market, children can easily pick up words. Children of nowadays are very smart. But my children started saying words from eight months. [41 year old trader]

The mothers also said that babies generally are expected to start imitating words they hear from between age nine and 10 months. Only a few of the mothers reported that babies say their first words at the age of five or six months, because they make sounds like “ta ta” or “da da”. Some of the mothers used their personal experiences with their babies as example:

Using my child as an example, at five months, I started giving him water and anytime I give water, I will say to him “water”, water”. So at 10 months, I noticed that anytime I hold a cup or he sees water, he will say “ta ta” “ta ta”. So I believe that if a child is developing normally and parents communicate with them very well whether they understand or not, there is no age limit at which they can say words, but at least from nine or 10 months. [30 year old lawyer]

From my experience, children utter their first words as from the age of five or six months. You see these children, they are very funny. They know how to imitate adults a lot. They will like to say or repeat what people say. Some children even start early especially children from rich homes who attend good day care and watch television or Cartoon. Even among the poor, when they have many people at home or older siblings, the children tend to

talk early except there is something wrong with the child”. [37 year old public servant]

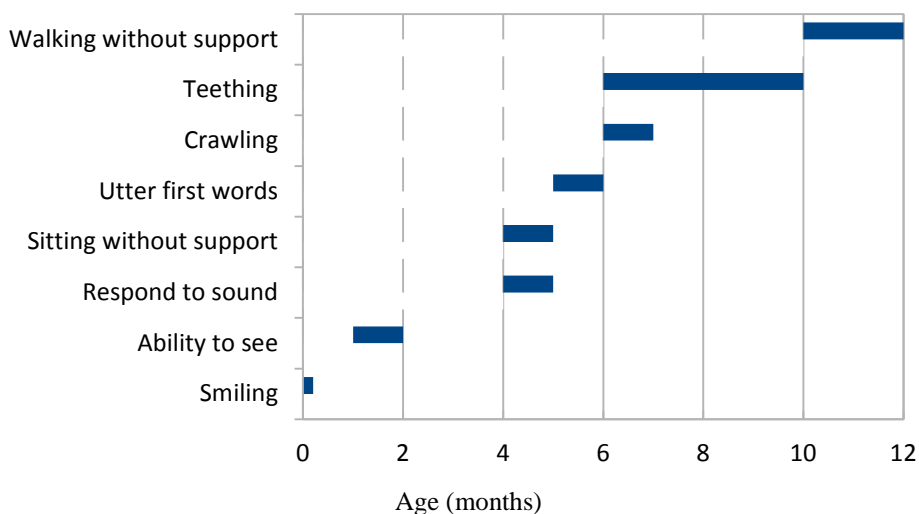
Most of the mothers in the study reported that if their babies turn to the direction of sound, it reassures them that the child is not deaf and that the child is developing normally. It was also reported by these mothers that the fact that babies know their mothers at a certain age and use eyes to follow them, shows that the child is not blind. Typical quotes regarding hearing and sight:

At three months, if a child does not react to sound or respond when you play with the child, then something is wrong. Maybe the child is deaf or cannot see. Some babies do not even get to 3 months before they start responding to sound in their environment, especially when you drop something hard on the floor or slam the door hard. It frightens them and they show it unless they are deaf. [35 year old teacher]

As for sound oh, children respond easily. Like from age two months, a child who is not deaf should shake or be frightened when you slam the door loud or something heavy drops on the floor. But for the answering to the name, it is when they are much older like after one year. [32 year old teacher]”

Figure 1 represents a summary of the ages at which mothers expect milestones to be attained.

Figure 1: Ages at which mothers expect to observe specific milestones



Milestones perceived to be most significant

Regarding significant and/or important milestones mothers look out for in children - one significant reoccurring milestone among the respondents was the child’s ability to take his or her first step and walk without support. Apart from this act reassuring the mother that the child is not deformed or

have problems with the legs, it is also a relief for the mother as the child gains some form of freedom which gives the mother time to attend to household and other duties. This is also the time that most mothers begin to wean their infants and introduce toilet training. Another significant milestone is the ability of a child who is a month old and above to be able to see, follow objects with their eyes and as they grow, recognise family members as different from strangers and appearance of teeth. It was also reported by a few mothers that some people sacrifice a chicken to appease the gods for the appearance of more teeth.

In our culture, when children are bringing out teeth, it is very important. Some people even kill a chicken to thank the gods and beg for more teeth to come out. Another important stage is when a child takes his first step. Parents are usually excited for the freedom for both the mother and the child. Most mothers are happy when their children can respond to sound or their names around 4 or 5 months plus because it reassures them that their children are not deaf or blind without going to the hospital to do test. I cannot remember any other although all the stages are important to a mother. [41 year old trader]

The significant development we look out for in our children is standing up with or without help and trying to walk or actually walk. This gives the child freedom to go anywhere and I can actually send the child on errands because they are happy when you tell them to do this or that. It also shows that that the child is not a cripple. Other important development we watch out are that the child should respond to things and sound in the environment like when you call the name or something drop, because that way you know the child is not deaf. We also want to see them sitting down, talking or trying to repeat what people say. The child should also be able to recognize the parents different from strangers at a certain stage. There may be others I do not know. [40 year old teacher]

Prediction of age at which milestones are achieved

Regarding the prediction of a child's development from that of older siblings, more than half of the mothers reported that it was not possible to predict a child's development from that of the older siblings with the following beliefs: every child have their own destiny and pace at development; the age at attaining these milestones differ in both male and female children and that older siblings can only stand as a guide.

In this our environment, we cannot because it is believed that every child comes with his or her destiny. Because my first child started crawling at 6 months does not mean my second child must crawl at 6 months, you understand? All these ages I am telling you are estimates, not that a child must do this at a particular time. Most times, we do not even remember the

age, we just know that our children are sitting, crawling or walking. [39 year old trader]

We cannot predict from older siblings because children are different. My first child was fast with everything and I expect my son to do the same but he is a little slow. By five months, my first daughter already had two teeth, but her brother brought out his first teeth at almost seven months. [37 year old teacher]

On the other hand, a few of the mothers reported that it was possible to predict a child's development from that of the older siblings because they have the same mother and live in the same house. So if an older sibling attained a certain milestone at a particular age and the younger one is slow at attaining that milestone at that same age, it gives the mother cause for concern.

I am their mother so I can predict when my child will crawl or walk because that was when the older ones did theirs. It may not be exactly the same month or day but it will be close to it. [40 year old trader]

In traditional African culture, if the first child developed at a certain age and the second child does not, a mother will begin to worry. For example, if my older child started bringing out teeth at seven months and by eight months the second one did not, I will begin to worry that maybe there is something wrong with my child. [34 year old public servant]

As for the fifth theme: predicting a child's development from that of the parents - most of the mothers were of the opinion that it was possible to predict a child's development from that of the parents because it is believed that a child inherits traits from their parents and development is not an exception. Although some of the mothers were not sure of predicting a child's development from that of the parents, they reported that they hear their mothers-in-law say things like "like father like son", which to them meant that one could predict a child's development from that of the parents.

Ah, that one I do not know but when I had my first child, I used to hear my mother-in-law say, "just like his father, he did not walk in time, he was lazy and I thought something was wrong with him". My first son did not walk until he was a year and 4 months. So I do not know if that is what you are saying. [39 year old trader]

Yes children can inherit things from their parents and development is not different. I used to hear my mother-in-law say that my husband walked at the age of 10 months and so expects my children to do the same. [36 year old housewife]"

With respect to the sixth theme: if boys develop faster than girls or vice versa, most of the respondents agreed that girls develop faster than boys generally and especially in the area of sitting down without support. This is

because culturally, the male child is not allowed to sit early because it is believed that it will affect their reproductive system.

It is from my experience. The twins il had is a boy and a girl. If you see the two of them the difference is clear. The girl grew faster, taller and bigger than the boy. [38 year old teacher]

The girl child develops faster than the male child because of certain superstitions and traditional practices. For example, we teach the girls early to sit down with support around five months but the male child will not sit till like seven months. The girls also grow fat and bigger than boys of the same age when they are babies. [37 year old trader]

Regarding any specific things mothers do to ensure normal development, most of the mothers said they did nothing extraordinary other than breastfeeding and weaning diets to make their babies grow normally. Respondents who reported they did anything extra said they prayed while some others said they added food items like egg and fish to the baby's pap to enrich the food and make the baby grow well and healthy.

You know there are some food items that they say we should not give to children, meanwhile that is what will make them grow and develop well. For example, I add egg to my child's pap, I mash fish and put in his mouth and sometimes, I chew meat and put in his mouth. All these foods make him grow well. [38 year old teacher]

Another theme that emerged was the issue of comparing participants' babies' development with those of similar age. Some of the mothers said they do compare their babies with other babies of similar age especially when they come for immunization and in their neighbourhood. Reason given for comparison is because they want to be sure their children are growing well.

If a child of the same age with my own is crawling and my own is not, I will be worried. I also compare with other children around in my neighbourhood. It is normal. I told you before that I was comparing my second son with my first daughter and that was how I knew the boy was slower than the girl. He was very slow in crawling. [39 year old trader]

Mothers (participants) who indicated that they did not compare their babies with babies of similar age believed on the influence of environment, parental background and difference in upbringing.

I do not compare because I do not know how those children are been brought up or what the parents are feeding the child with. But when I see a child bigger than mine and the mother is in my level, I can just ask what and how she is taking care of her child. Even when you ask, many people do not want to tell you. It is very common among our people. People do not like talking about their children or themselves outside so as to avoid evil thing happening to them. [32 year old teacher]

I do not compare oh because you do not know what they are giving the child or doing for the child. For example, people that have money can buy many things to make their children develop faster, how can I compare myself with that person? If my child is not crawling at the same time with a child of similar age does not mean he will not crawl. Do not forget I said what the child inherit from parents matters too. So I do not compare with other children. [36 year old trader]

Education about developmental milestones during clinic visits

The final theme was on health education on child development received during the infant welfare clinic. Almost all the mothers reported that health education received in the clinic are on how to exclusively breastfeed babies, how mothers should take proper care of themselves, including family planning. Health education regarding development of their babies is only discussed during growth monitoring before vaccination. The nurses informed them the weight of their babies and if any child is underweight, the mothers are usually counselled on feeding habits that will improve their baby's weight.

Structured observations of 10 nurse-mother interactions revealed that topics covered by the nurses during health education at the immunisation clinic include: exclusive breastfeeding, family planning, child growth in relation to weight and general wellbeing of both mother and child. There was little or no information provided on the different developmental milestones and the age at which babies are expected to attain these milestones. Also, these topics were not covered in the health talks or educational material in the clinic. Therefore, it is unlikely that the mothers' notion of developmental milestones is influenced by health education provided in the clinic.

Discussion

A major goal of this study was to provide information about socio-cultural context of developmental milestones in infancy in a Nigerian society. In this study, irrespective of mothers' age, education, social level and the number of older children, all participants mentioned more than one developmental milestones an infant is supposed to attain before the age of one year which include among others sitting and walking without support, crawling and lifting of head and neck. In paediatrics and child health, developmental milestones are generally understood to be milestones of neurological development Examples are neck control, sitting without support, crawling, standing, walking (Gerbe et al, 2010; Makoju, 1986). In all the interviews, mothers highlighted the importance of a particular milestone in their babies' development: the ability to walk. For most mothers, it was important that their babies reached the basic stages of motor

development at an early age in order to become independent as soon as possible. In other words, the ability to walk seemed to be an objective of primary importance and this is the time some mothers begin to wean their babies off breast milk. The present findings buttress Ainsworth's (1967) findings, where it was observed that walking as a milestone is important to Ugandan mothers because it is linked with the age of weaning and toilet training. It was also culturally important for children to teeth as it was reported that some aspect of the Yoruba culture recommend the killing of a chicken when a child brings out the first set of teeth to thank the gods and to beg for more teeth to come out.

In the present study, some cultural beliefs regarding the different developmental milestones were observed. For instance, it was the general believe that one can predict a child's development from that of the older siblings because they have the same mother and live in the same house and the adage of "like father like son" was held onto as a way of predicting a child's development from that of the parents. It is of importance to note that the time of onset, and the rate of appearance of different aspects of human development vary enormously from one child to another; this is the principle of individual differences. For example, a child may get the first set of teeth at seven months while the other child gets the first set of teeth at 12 months. A child may stand and take the first steps at 10 months, while the next child stands at 24 months. Though the time table may differ, all children will attain the goal of development ultimately if the environment is cooperative (Super & Harkness, 1997).

In this study, the belief that the male child should not be put to sit down early as a result of their backbone which can affect their reproductive system was strongly attested to by majority of the mothers interviewed. It is important to note that though mothers had some cultural beliefs regarding the different age at which babies attain the different developmental milestones, they had a very precise idea about the age at which babies should sit (4–5 months), to crawl (6–7 months), teething (7-10 months), and to walk (9–12 months). At one year of age, a child should be able to walk without any assistance from adults. In Uganda, Teso mothers teach infants to crawl and infants' average age at the onset of crawling is 5.5 months (Lugo & Hershey, 1974). Quite a number of the mothers believed that "hand care" can hinder or facilitate the pace at which babies attain these milestones such as, the way babies are carried, put on the lap to sit or put inside a carton or basin propped with clothes (Goodnow & Collins, 1990). The finding in this study is in agreement with that of Kilbride, Kilbride, (1975) and Kilbride (1980) who reported that mothers hold newborns on their laps and support them around the waist. In similar studies, when infants are three months of age, mothers sit them on the floor, supported by a hole in the ground, a basin with clothes

wrapped around the hips or propped with a cushion (Carter, Lees, Murira, et al, 2005, Konner, 1977).

In conclusion, developmental milestones have an age level and the actual age when a normal growing child reaches that milestone does vary. Cultural differences in the timing of these milestones are often accompanied by culture-specific expectations about when children acquire various milestones. This study revealed that some cultural values like child rearing practice can hinder or facilitate the pace at which babies attain these milestones.

Acknowledgements

The authors thank the study participants, the staff of the Hospital and Mrs. Abiola Oluwasola, Apata Oluwayemisi and Asaolu Bukola who conducted most of the interviews.

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