

# Using the PEN-3 Model to describe factors influencing parental practices in Cross River State, Nigeria

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**Introduction:** Parenting is a potentially modifiable factor influencing positive outcomes for children.

**Objectives:** This study explores cultural factors that influence positive parenting practices among mothers in Obubra Local Government Area of Cross River State.

**Methodology:** Using a mixed methods design, the research explored the role of the three dimensions of the PEN-3 Model; cultural identity, relationships and expectations, and cultural empowerment on positive parenting.

**Results:** For cultural identity, the women in this study were predominantly farmers, 232(54.7%) are 25-34 years old, 237(55.9%) are married, 133(31.4%) are single mothers, and 324(76.7%) had attained secondary education. Those within the extended family system faced resistance to positive parenting interventions and education, from their mothers-in-law, mothers, husbands, and male intimate partners. Patriarchy and cultural beliefs informed the resistance. Many mothers were reluctant to seek formal assistance for emotional and psychosocial problems, with fear of stigma being the key theme. For relationships and expectations; Mothers' Perceptions mold the situational factors that promote positive parenting. Family systems, social groups, and religious and spiritual networks could be positive agents of change yet, may also impede change. The "nurturers" (inter-personal relationships) may or may not be supportive of positive parenting practices. For cultural Empowerment, Positive behaviours by respondents included not missing antenatal care and delivery at the health center, Existential behaviors included fasting and Prayers while Negative behaviors refer to behaviours that may likely negate parenting such as low childhood immunization uptake.

**Conclusion:** study participants engaged in some aspects of positive parenting and interpersonal relationships rooted in patriarchy and traditional gender roles may be positive or negative factors influencing practice. Fear of stigma hindered participants' ability to seek help for psychological issues. How this fear translates to parenting practice needs further study. Community health education targeting interpersonal relationships may improve positive parenting practices.

**Keywords:**c, Children, patriarchy, stigma, cultural beliefs

## INTRODUCTION

Parenting is a fundamental aspect of child development, involving behaviors and practices aimed at nurturing, guiding, and supporting children throughout their developmental journey.<sup>1</sup> It is a dynamic interaction between caregivers and children, profoundly impacting their physical, cognitive, emotional, and social well-being.<sup>2</sup> It also involves providing a risk-free physical setting, closely monitoring a child's activities, guiding practices, nurturing social, emotional, and cognitive development, and offering direction and support in everyday life.

This role is vital throughout different developmental stages, from birth to adulthood.<sup>3</sup> While most parents develop sufficient skills to facilitate healthy child development, some encounter difficulties such as lack of persistence, inadequate parenting skills, feeling burdened by the child, or finding little joy in the parenting role.<sup>4</sup> The quality of parenting is influenced by internal and external factors. Socio-economic disparities significantly shape parental practices, with economic challenges like poverty and limited access to services as additional stressors. Environmental conditions such as social support networks, also impact parenting practices, particularly in rural areas.

Cultural dynamics play a crucial role in shaping parenting behaviors, with deeply ingrained beliefs, values, traditions, and norms varying across ethnic groups. Understanding and respecting these cultural nuances are essential for designing effective interventions to support positive parenting practices.<sup>6</sup> In Nigeria, the diversity in culture and religion significantly influences attitudes towards parenting. With over 250 ethnic groups and various religious affiliations, Nigeria represents a mosaic of cultural practices and belief systems.<sup>6</sup> Despite acknowledging influential factors, there is a gap in utilizing comprehensive frameworks to understand parental practices in Nigeria. The PEN-3 Model emerges as a promising approach, offering a culturally relevant framework to analyze health-related behaviors within diverse populations.

Against this backdrop, this study aimed to explore cultural factors influencing parenting practices among mothers in the Obubra Local Government Area of Cross River State. By employing the PEN-3 Model, this research seeks to provide a comprehensive understanding of how cultural beliefs, values, and norms intersect with parental practices in this specific context. Through this exploration, the aim is to inform culturally sensitive interventions and policies that promote positive parenting and enhance child well-being in the region.

## THEORETICAL FRAMEWORK

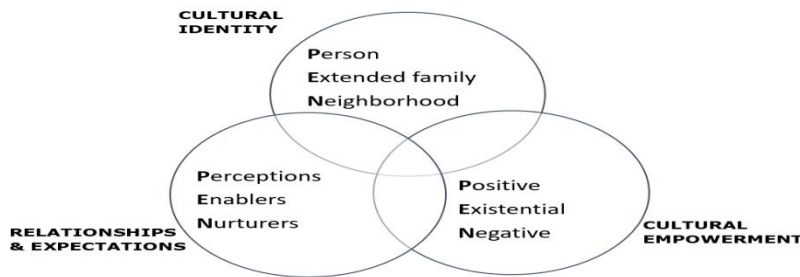
Airhihenbuwa developed the PEN 3 cultural model in response to the apparent omission of culture in explaining health outcomes in existing health behavior theories and models.<sup>7</sup> The PEN-3 cultural model centralizes culture in the study of health beliefs, behaviors, and health outcomes. The model also places culture at the core of developing, implementing, and evaluating successful public health interventions.<sup>8</sup> The model consists of three primary domains:

1. Cultural Identity,
2. Relationships and Expectations,
3. Cultural Empowerment.

Each domain includes three constructs that form the acronym PEN; Person, Extended Family, and Neighbourhood (Cultural Identity domain); Perceptions, Enablers, and Nurturers (relationship and expectation domain); Positive, Existential and Negative (Cultural Empowerment domain). The Cultural Identity domain highlights the intervention points of entry. These may occur at the level of persons (e.g., mothers or health care workers), extended family members (grandmothers), or neighborhoods (communities or villages).<sup>8</sup>

Cultural norms about parenting practices typically influence how children are raised. These norms affect what beliefs and values parents teach their children, what behaviors are considered appropriate, and the methods used to teach these values and behaviors.<sup>10</sup> However, despite some differences among cultures, there are key common parenting themes that emerge across cultures. Understanding the differences and commonalities in parenting practices and child-rearing goals across cultural groups is a significant step in developing culturally relevant guidelines and support for parents of all backgrounds.

**Figure 1:**The PEN-3 cultural model showing the domains and their constructs



**Source:** (Airhihenbuwa, 1989)

Moreover, in addition to the individual perceptions, the PEN-3 Model also considers broader community and societal factors shaping parenting behaviors. This holistic approach enables researchers to examine the interplay between individual beliefs, community resources, and cultural norms influencing decisions about health behaviours.

## Methods

**Study setting:** This study was carried out in Obubra Local Government Area which is one of the oldest Local Government Areas in Nigeria located in the Central Senatorial District of Cross River State with the administrative headquarters in Obubra Town. It occupies an area of 1,115km<sup>2</sup> with a density of 206.8km<sup>2</sup> and is bounded to the north by Yala Local Government Area, to the east by Ikom Local Government Area, to the south by Akamkpa Local Government Area, to the south-west by Yakurr Local Government Area, and to the west by Ebonyi State.<sup>11</sup> Today, it consists of a mono-cultural group of people of Mbembe descent.<sup>12</sup> The major units of this Mbembe-speaking people include Aduni Ofumbongha, Okum, and Osopong. Traditionally, the people are predominantly small subsistence farmers. It has an estimated population of about 172,543 people, as of the 2006 census.<sup>13</sup> The current estimated population of Obubra using an annual growth rate of 3% was calculated using the compound interest formula of  $A = P \times (1+r)^n$ , where A is the final population after n years, P is the initial 2006 census population figure, r is the annual growth rate in decimal form and n is the number of years between 2006 and 2023. Therefore,  $A = 172,543 (1+0.03)^{17}$ , giving the final 2023 estimated population of 272,673.

**Study design:** This qualitative study adopted a narrative design to describe the parenting practices among respondents using the PEN-3 Cultural Model lens.

**Study population:** The population of the study were mothers with children under-five years old, residing in Obubra Local Government Area of Cross River State, Nigeria.

## Data collection and analysis

A total of 22 participants were recruited purposively to participate in three separate Focus Group Discussions (10 participants in Group A, 6 in Group B, and 6 in Group C). This sampling strategy allowed the selection of informants with experience in the context of the subject matter (information-rich participants). This method of recruiting implies that data generated from the study can have substantial relevance to the participants.

A Focus Group discussion protocol was designed to explore the experiences of mothers on parenting. The FGD protocol was divided into three sections. The first section consisted of greetings, introductions, ground rules and ethical considerations. The second section covered questions on the mothers' pregnancy, childbirth and parenting experiences. The third section was closing remarks and appreciation of participants.

For each of the FGDs, there was a facilitator and a note-taker/recorder. Each FGD was convened at a venue free of interruption or excessive noise interference and convenient to participants. Each session lasted between 60-90 minutes. Participants were assured of confidentiality, and the right to withdraw from the FGD at any

time without fear of penalty. The focus group discussions were recorded and later transcribed for analysis. The tapes were locked in a filing cabinet where only the team lead has access to the tapes.

The facilitator and note-taker coded the transcripts. First, general themes related to overall perceptions of the experience of mothers were examined. Two coders independently identified codes from the generated textual data, and then three forms of coding (descriptive, topic, and analytical) were applied. A summary of descriptors of each paragraph of text was developed, and then it was organized into sections by sorting text segments into groups and providing a label from the PEN-3 domains. For analytical coding, the researcher created codes that expressed new ideas about the data by considering the meanings in context. Next, coded data about participants' daily experiences as mothers were matched to the domains of the PEN-3 model: Cultural Identity (Person, Extended family, Neighborhood); Relationships and Expectations (Perception, Enablers, Nurturers); and Cultural Empowerment (Positive, Existential, Negative).

**Ethical considerations:** The full research protocol, an application for ethical approval, and a letter of introduction from the Department of Public Health, University of Calabar were submitted to the Research Ethics Committee, Ministry of Health, Cross-River State. After receiving an approval letter (CRSMOH/RP/REC/2018/105) from the Ethics Committee, recruitment of research subjects and data collection commenced. The subjects were briefed on the purpose of the study and that participation was voluntary. Only those who provided written consent were recruited. Respondents were informed that all the information provided would be confidential and that the results and reports from this study would not reveal the identity of the respondents. The researchers did not use any unfair means to influence the participants to obtain information. This study is part of a larger mixed methods study. The questionnaire used for data collection was without any personally identifying information and the researcher maintained an elevated level of confidentiality when treating the information collected. All data collected using a questionnaire and the audio tapes were domiciled in the Department of Public Health, University of Calabar, locked in a restricted file cabinet. All data entered into the computer were protected with password accessibility and kept in the custody of the team lead.

## Results

### Application of the PEN-3 model in the study

#### Cultural identity

The cultural identity dimension of the PEN-3 model identifies internal (intrapersonal characteristics) and external forces such as family, extended family networks, and the community that might influence parenting practices.

- **Person (description of the participants in the study)** The respondents had a mean age  $\pm$  standard deviation of  $25.37 \pm 4.6$ . the age range was 25-34 years, and more than half of the respondents were married while others were either single mothers or cohabiting with their sexual partners. Most of the respondents had a secondary education. For the occupation, traditionally, the women in this study were predominantly subsistent farmers. While all participants had at least one child below the age of five, the least number of child/children was one and the most was six. All the respondents were Christians but some reported leaning toward other belief systems.
- **Extended family.** Results from the FGDs showed that those within the extended family system might be resistant to some aspects of positive parenting interventions and education. First, mothers-in-law, mothers, husbands/male intimate partners may initially be willing to provide support for the young mothers in this study however, sometimes, these same relatives may not be open to change, particularly those who adhere to patriarchal and cultural beliefs. For instance, some mothers/mothers-in-law oppose exclusive breastfeeding by insisting that the infant should be given water to quench their thirst. Cultural beliefs about discarding colostrum are upheld by family members. Baby care and house chores are culturally viewed as a woman's job. Some respondents did not feel supported in baby care, house chores, and/or farm work leading to sleep deprivation, stress and exhaustion.

- **Neighborhoods:** There were social and institutional structures within neighborhoods or communities that could promote or impede positive parenting practices. Respondents reported high perceived stress and depressive mood swings due to lack of social support. Yet, many mothers were reluctant to seek formal assistance for emotional and psychosocial problems, relying instead on themselves or close family and friends. The stigma associated with mental health issues and the fear of being shamed for not being a capable mother formed barriers to help-seeking behaviours.

### Relationships and expectations

- **Perceptions:** Respondents believed that some practices such as throwing the baby up and catching them could be dangerous. They fear that the baby could fall but most did not know that there could be other dangers to the baby's internal organs and blood vessels. Mothers did not have any formal training on parenting but reported watching their parents or assisting their mothers to be parents to their younger siblings (parentification). Parenting practices therefore were based on family traditions rather than cognitive awareness of the pros and cons of each aspect of the practice.
- **Enablers:** Family systems, social groups, religious and spiritual networks, and community organizations can be positive agents of change; yet, a counterargument can also be made that these same enabling vehicles can also impede change. A mother could be taught in the antenatal classes that colostrum is a rich source of nutrients for the infant and may find opposition from their age mates, social networks and religious/spiritual parents (religious leaders). The same with exclusive breastfeeding where traditional enablers may insist on giving the infant, anointing oil, holy water, and/or other foods to babies under six months old.
- **Nurturers.** The majority of the nurturers are the grandmothers of the infant (especially the respondents' mothers-in-law). These bring their own traditional beliefs of child care and insist that their own practices are best for the infant. With support from Enablers, these group of people may support some aspects of positive parenting such as childhood immunization but may not be sticklers to the timelines thus leading to delayed or missed immunization. The extent to which "nurturers" (mothers, mothers-in-law, husbands/male partners, friends, and the community) may or may not be supportive of positive parenting practices needs to be evaluated further.

### Cultural empowerment

- **Positive behaviors.** Attending and not missing antenatal care and delivery at the health center are some of the positive behaviours exhibited by the mothers in this study. Respondents who reported having a helpful family member (mother, mother-in-law, and/or sister), were more likely to engage in positive behaviours and reported better mental well-being.
- **Existential behaviors:** encompass neutral practices; that is, they have no adverse health consequence and do not need to be changed. E.g soliciting for prayers from social and religious acquaintances, fasting and Prayers, using palm-kernel oil on baby's skin to ward off evil spirits etc. were reported practices among the respondents.
- **Negative behaviors:** Negative behaviors entail beliefs and practices that are harmful or likely to negate parenting for example
  - Home births, without a trained midwife or skilled birth attendant. A few respondents in this study reported giving birth at the home of an un-trained Traditional Birth Attendant (TBA).
  - Delaying and/or low uptake of childhood immunization is another negative behaviour found among the respondents. Having an unfriendly mother-in-law visit after childbirth who does not help the new mother in caring for the baby and/or help with some house chores seemed to be a major theme contributing to the delayed or missed childhood immunizations as well as the perceived poor mental health status of the new mothers.



**Table 2. Cross-tabulation of Cultural Empowerment and Relationships and Expectations domains of the PEN-3 Model describing parental experiences, relationships and parenting decisions among Mothers in Obubra Local Government Area of Cross River State, Nigeria**

<b>Cultural Empowerment</b>				
	Domains	Positive	Existential	Negative
<b>Relationships/Expectations</b>	Perceptions	<p>Knowing that her husband/partner is willing to provide support.</p> <p>Mothers' knowledge about pregnancy, childbirth and positive parenting (engaging in exclusive breastfeeding, uptake of immunization, child development milestones, age appropriate feeding, physical and emotional needs of the child etc.).</p> <p>Knowing and believing that delivery at the health centre is safe.</p>	<p>The birth of a new child added joy to the family</p> <p>Mothers knowledge and use of cultural and religious relics such as palm kernel oil, Holy water and anointing oil on the baby</p>	<p>Believing in and implementing cultural practices such as taboo foods during pregnancy.</p> <p>Not attending ante-natal clinic</p> <p>Mothers behavioural change during pregnancy isolation, information support, depression, religious practice and cultural practices.</p> <p>Discarding colostrum</p> <p>Introducing other liquids and foods to a baby before six months of age.</p> <p>Belief or prefer not to start talking to baby at early age</p>
	Enablers	<p>Information on positive parenting are available and accessible at the health center, community-based organizations etc.</p> <p>Mothers received support and love throughout pre- and postpartum period.</p> <p>Acquire parenting skills from mothers and also learn during parenting</p>	<p>Mother belong to age grade association</p> <p>Dressing baby in culturally sensitive ways</p> <p>Culture plays strong role on how child is raised</p>	<p>Patronizes traditional birth attendants or Religious organization-based birth homes.</p> <p>Poor or delayed childhood immunization uptake,</p> <p>Disciplined with corporal punishment, withholding food, withholding playtime, and assigning extra chores.</p>
	Nurturers	<p>Grandparents, aunts, and siblings help mothers in everyday caregiving responsibilities</p>	<p>Prayers from the pastor, and friends</p>	<p>Delaying and/or low uptake of childhood immunization.</p> <p>Relying on self-diagnoses and traditional remedies for the management of childhood disease.</p> <p>Unfriendly/unhelpful mothers/mothers-in-law during the immediate post-partum period.</p>

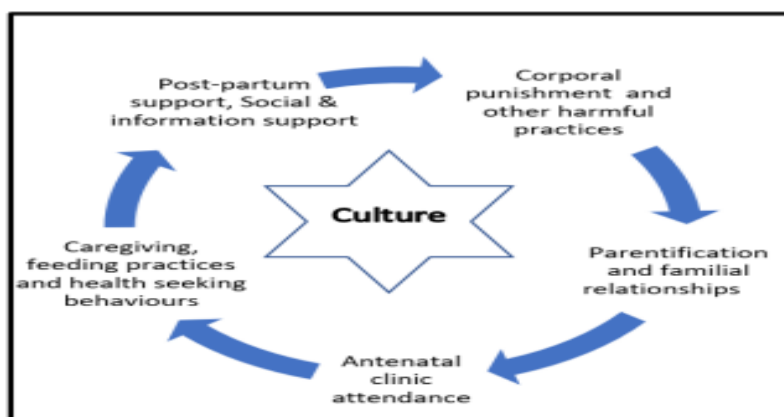
## DISUSSION

Parenting has become one of the most challenging tasks in recent times considering the emergence of the different family structures and varied needs of children.<sup>15</sup> Understanding the knowledge gaps and practices on parenting among mothers is a prerequisite to the development of interventions that are context-specific and culturally sensitive. Understanding perceptions of mothers towards parenting and their meanings can help identify situational factors that promote positive parenting. While mothers could list some of the expected developmental milestones, but could not link them as part of the outcome of their parenting. This is in line with a study conducted by Bornstein et al,<sup>10</sup> where they demonstrated fair but less than adequate basic parenting knowledge among mothers in Europe. Mothers' knowledge of child development has been shown to have a significant influence on the way mothers interact with their children and the learning opportunities they provide.<sup>16</sup> Parents need a basic understanding of their children's physical and emotional needs. This will inform the types of parenting practices that promote children's achievement of the developmental milestones.<sup>17</sup>

All the participants indicated that they never had any formal parenting training but rather learned by observing their mothers and becoming ‘parents’ to their younger siblings (parentification). Parentification is a common practice in Obubra and environs. The application of parenting behavior can be influenced by culture and participants in this study acknowledged the role of culture in how children are raised. Parenting practices therefore were based on family traditions rather than cognitive awareness of the pros and cons of each aspect of the practice. According to Ulfa, Husniah, and Wijaya,<sup>18</sup> culture helps parental development and culture influences parental cognition which then translates to parenting practices. Culture shapes how parents care for children Ndep et al, found that culture plays a central role in parenting (Figure 1).

The transition to parenthood is believed to be one of the most challenging normative developmental life stages which usually start from conception to the post-conception period with significant others playing a key role in the parenting process.<sup>19,21</sup> Mothers who participated in the FGDs narrated their experiences in the pre- and post-conception period. The excitement of birth overwhelms their parenting role. Most of the participants experience support and love throughout the postpartum period. Despite the fact that participants in the FGD reported experience of a social support system, only 22% of the surveyed population had poor knowledge of child support services and systems in the community. Tossing or throwing up a child to stop him/her from crying is a common practice in the study area. Although tossing an infant into the air may likely not generate enough force to cause harm to an infant, however forcefully shaking an infant can cause tearing of the small blood vessels on the surface of the brain, which can interrupt blood flow, leading to brain damage and also the baby is at risk of being accidentally dropped down.<sup>20</sup> Mothers and mothers-in-law often insist on introducing water to infants below six months old. Good breastfeeding practices especially EBF could prevent about 11.6% of under-five deaths in developing countries.

**Figure 2:** Culture as a central theme influencing all aspects of parenting among women in Obubra Local Government Area of Cross River State, Nigeria.



**Source:** (Ndep et al., 2022)

Although some respondents reported missing immunization appointments, they also reported that the age of the child’s first appointment was less than two weeks. Similarly, a study conducted in Abakaliki, Nigeria, reported 4.1% and 6.9% missed vaccination at 6<sup>th</sup> and 10<sup>th</sup> week respectively among mothers.<sup>23</sup> Immunization against childhood diseases has been recognized as one of the most important means of preventing morbidity and mortality among children.<sup>24</sup>

Poor knowledge of parenting could lead to unnecessary clinic visits, increased vaccine preventable disease including childhood illness, unintended injuries thereby increasing maternal anxiety and depression.<sup>25,26</sup> Giallo, Rose and Vittorino<sup>27</sup> found that Mothers reported moderate levels of fatigue, which was associated with high levels of depression, anxiety and stress. Fatigue was also significantly associated with low parental self-efficacy, parenting warmth and involvement, and high parenting hostility. Limited health and self-care behaviours, unrealistic expectations about sleep, and high need for social support were significant predictors of fatigue.

## CONCLUSION

Mothers in Obubra engaged in some aspects of positive parenting and interpersonal relationships rooted in patriarchy and cultural gender roles may be positive or negative factors influencing practice. Fear of stigma hindered the mothers' ability to seek help for psychological issues. How this fear translates to parenting practices need further study. Community health education targeting interpersonal relationships may improve positive parenting practices.

## LIMITATIONS

Information on participants' mental health was based on self-report. Future research using standardized mental health assessment tools is recommended.

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