

Paternal roles in promoting child well-being: what are the challenges facing paternal involvement in child healthcare in rural South Coast Kenya?

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Thesis submitted in partial fulfillment of the requirements for the award of the degree in Master of Medical Science in Public Health Medicine in the School of Nursing and Public Health, University of Kwa-Zulu Natal.

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January 2015

## Declaration

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the authorship owner thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.



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## List of abbreviations

<b>AI-CIGI:</b>	African Initiative-Centre for International Governance for Innovation
<b>BREC:</b>	Biomedical Research Ethics Committee
<b>CHWs:</b>	Community Health Workers
<b>DMOH:</b>	District Medical Officer of Health.
<b>ICBS:</b>	International Centre for Behavioural Studies
<b>INSTAPA WP6:</b>	Improved Nutrition through Staple foods in Africa – World Package Six (It is a programme that utilizes Novel staple food-based strategies to improve micronutrient status for better health and development in sub-Saharan Africa).
<b>KEMRI:</b>	Kenya Medical Research Institute
<b>MOH:</b>	Ministry of Health
<b>PDMS:</b>	Provincial Director of Medical Services
<b>PSI:</b>	Parenting Stress Inventory/Index
<b>SD:</b>	Standard Deviation

## Abstract

## Introduction

While it has long been accepted that mothers play a key role in child health outcomes, the role of the father is less well understood. The proposed study was nested in another study investigating the relationship between the social environment and child health, growth and development. The work took place in South Coast Kenya, Kwale County, an area characterized by low income, restricted health resources, and exposure to multiple infections, including malaria.

Child health clinics are largely contained within Mother and Child Health programmes <sup>[1, 2]</sup>. This has excluded the fathers who rarely visit the health facilities. This observation made during previous studies in the area was a clear indication of little paternal involvement with their children. Through previous studies carried out in this region, community consultation groups have consistently made recommendations on how to improve the existing situation<sup>[2]</sup>.

It clearly emerged that other family members, particularly fathers, need to be included in the process of addressing child health and development. Therefore, this study aimed to investigate how paternal involvement in child health services can affect child wellbeing in collectivist rural communities in South Coast Kenya. It has also highlighted their attitudes and beliefs towards parenting and how they affect child health outcomes.

## Objectives

This study had three main objectives to investigate parenting in a rural low income setting. They included describing and comparing the maternal and paternal

attitudes and perceived parenting roles and responsibilities in managing infant health, investigation of the relationship between parental psychosocial factors and child health outcomes in the two main communities (Mijikenda vs. Non-Mijikenda communities) within the study area and finally, to summarize the key factors affecting paternal inclusion or involvement in child health programmes.

## Methodology

Two types of interviews were administered to both parents (fathers and mothers) to find out their roles, attitudes and beliefs towards parenting. The first type of interview used was a quantitative structured interview and it investigated their parenting stress. The second was a qualitative semi-structured in-depth interview and investigated the parents' roles, beliefs, and attitudes towards parenting. Data analysis was carried out using SPSS21 Software for quantitative data and NVivo10 Software for qualitative data. The information has been used to explain the existing pattern of parental involvement in child health care programmes.

## Study findings

The results suggested that both mothers and fathers were very happy to be parents and were willing to be involved with their child or children in promoting their well-being. Nevertheless, although the mothers agreed with the fathers' reports that they were practically involved in supporting their children financially, decision making and providing their daily needs, they disagreed with paternal reports that fathers participated in taking their children to the hospital when sick.

None of the parental characteristics was significantly associated with the child health variables measured. The extra challenges parents experience in parenting and their inability to handle their children well were associated with poor parenting styles. Their low household income and health care system factors preventing working fathers from attending clinic were

also associated with low paternal involvement with their children and in the management of their children's health.

## Conclusion

Financial constraints and the design of the healthcare system, biased in favour of the mothers are major obstacles affecting paternal involvement with their children. The fathers in the study area are willing to take part in any activity undertaken to promote the well-being of their children and generally happy to be parents. Increased paternal involvement in the healthcare programmes may improve the wellbeing of their children and the public at large.

## Acknowledgements

I wish to thank my supervisors Prof. Myra Taylor (University of Kwa-Zulu Natal) and Dr. Penny Holding (Aga Khan University) for their continuous assistance and support in undertaking this study and in writing up this thesis. I greatly acknowledge their dedication and the sacrifices they made in terms of their highly valuable and limited time and energy to support me in different aspects without which I could not have achieved the enormous work of organizing the information in this thesis. I also thank them for their friendship.

Many thanks to Dr. Kvalsvig (University of Kwa-Zulu Natal), the PI for the INSTAPA WP6 study (herein called the 'main study'), for the rare opportunity she offered me to carry out my study thesis under her study. I would also like to acknowledge *African Initiative-Centre for International Governance for Innovation* (AI-CIGI) for funding this study and the *International Centre for Behavioural Studies* (ICBS) for organizing and managing the field work logistics and administrative operations for this study.

## Dedication

I would like to dedicate this work to the Ministry of Public Health and Sanitation-Kenya, all the Msambweni District Hospital staff and the people from Kikoneni location.

# Chapter 1: Introduction

## Background of the study

The family is an important unit in determining the wellbeing, nurturing and protection of their children<sup>[3]</sup>. While it has long been accepted that mothers play a key role in child health outcomes, the role of the father is less well understood. Policy makers advocating for investment in national programmes for child health have therefore largely focussed on the empowerment of the mother in the health seeking process.

However, a commitment to gender equity and to child rights, as enshrined in the UN Convention on the Rights of the Child (CRC), not only supports the importance of good enough mothering, but also raises the importance of parents working co-operatively in optimizing the development of the child<sup>[4]</sup>. Research carried out in Canada has identified significant, though as yet not well characterized, links between fathers' behaviours and positive outcomes for the child<sup>[5]</sup>.

The importance of studying fatherhood has also been identified as a priority in the African context, in recognition of the significant role played by the father in all aspects of family life, not merely as a decision maker <sup>[6,7]</sup>. Fathers, or whoever plays that role, have often been neglected by service providers as well as by researchers <sup>[8,9]</sup>. There are also questions why fathers are not included in the design of health services, and why so many of the services are available only at times inconvenient or impossible for working men to become directly involved in the care of their children.

The burden thus falls almost exclusively on the mother. The proposed study will take place in the context of another study investigating the relationship between the

social environment and child health, growth and development. The work is taking place in Coast Province-Kenya, an area characterized by low income, restricted health resources, and exposure to multiple infections, including malaria. Child health clinics are largely contained within Mother Child Health programmes.

Health education, aimed at improving health outcomes, takes place through health talks given to attending mothers, and the display of posters at the health facilities. Consequently it is the mothers who are the focus of the information dissemination process. Through previous work in the region, studies have explored barriers to the implementation of this acquired health knowledge <sup>[1,2]</sup>.

Community consultation groups have consistently made the recommendation that other family members, particularly fathers, need to be included in the process of addressing child health and development. As yet there is little information on the relationship between paternal attitudes and the health and development of the child, nor on the father's attitude to this potential policy change.

In order to address this imbalance we need to better understand the relative contribution to child health and developmental outcomes of both parents. The proposed research is specifically focussed on developing an understanding of the attitudes of fathers to their role in the care and treatment of their child when sick. It will acknowledge the potentially important, but possibly different, role of mothers and fathers.

Given that the decision making/implementation processes and financial support mechanisms involved in child care will vary from one community to another <sup>[6]</sup>, we also need to understand how the relationship between the attitudes of parents and child health outcome might differ between social contexts. This information will contribute to



policy guidelines designed to improve paternal involvement in promoting child health, developed within a framework that can address common principles at the global level as well specific features at the local and regional level.

This study, a sub-study of INSTAPA WP6 involved 61 couples who were recruited through their children who were participating in another nutrition intervention study, namely the Improving Staple Nutrition in Africa, Work Package 6 (INSTAPA WP 6) herein referred to as the '**main study**' which received funding from the European Union. My study targetted this population because the participation of the fathers of the children who were participating in the main study was very low. Both mothers and fathers were invited to participate, but although the response from mothers was good, the response of fathers proved disappointing. I wanted to find out the reasons for this low participation and in order to do this, I decided to question both parents.

## Research questions

- 1) What are the attitudes and perceived parenting roles and responsibilities in these communities?
- 2) What are the differences between paternal and maternal attitudes towards parenting in these communities?
- 3) What is the relationship between parenting and child health in these communities?
- 4) Do the effects of parenting on child health outcomes vary between social contexts?
- 5) Which are the key factors affecting paternal inclusion in child health services in these communities?

## Aim of the study

The proposed study aims at investigating how paternal involvement in child health services can affect child wellbeing in collectivist rural communities in South Coast Kenya. It will also find out their attitudes and beliefs towards parenting and how they affect child health outcomes.

## Study Objectives

- 1) To describe the attitudes and perceived parenting roles and responsibilities of mothers and fathers in low income settings in Coast Province Kenya.
- 2) To compare and explore the relationship between maternal and paternal roles, attitudes and beliefs towards the management of child health in low income settings.
- 3) To identify differences in the relationship between parental psychosocial factors and child health outcomes in the two main communities (Mijikenda vs. Non-Mijikenda communities).
- 4) To summarize the key components of the data as it impacts upon paternal inclusion or involvement in child health care programmes.

## Problem statement

Inadequate information existed to understand the reasons behind the low paternal participation in child health care services. This has been a challenge in designing father friendly policies which would improve their participation in services concerning child health care. Previous studies have mostly targetted and invested in mothers to understand their roles in child health. Since fathers have been left out in most of these child health programmes there is little literature to understand their roles

and the value of their involvement in the management of child health especially in the developing countries.

In addition, fathers, especially in Africa, play an important role in the entire family network which consists of several components whose environmental interrelationships play a key role in child health. Although there is enough evidence supporting a positive relationship between paternal involvement and child growth and development and that this is much better when both parents are involved, previous studies carried out in the study area for the last five years <sup>[2]</sup> have witnessed very low paternal involvement in the health programmes in which their children are participating.

Given the complex relationships between the environments within which children grow, develop and their health outcomes, it was important to find out the roles, beliefs and attitudes of the fathers from the communities in South Coast Kenya with the aim of understanding why they are less directly involved in child health care activities than mothers. While this study only covered some communities from a small region, literature from other countries with excellent child health programmes which have been emulated throughout the industrialized world such as Sweden, suggest that lack of paternal involvement is a global problem.

For instance, the level of paternal involvement especially when it comes to the care of the young child in Sweden, is still lower when compared to that of the mothers <sup>[10]</sup>. Also, another study by Madhavan and colleagues in South Africa on absent fathers, which investigated the association between children's connections to their fathers and paternal support, found that children born since 1991 are significantly less likely to receive support from their fathers than are those born before. This difference is due to real changes in paternal action <sup>[11]</sup>. Therefore, this emphasizes the need to understand

fatherhood in different contexts to generate evidence that would help in designing policies promoting their involvement in optimizing child well-being.

## Hypotheses

- 1) Increased direct paternal involvement in child health programmes leads to improved child well-being.
- 2) There is a lack of father-friendly policies to deliver child health care information in the study area.
- 3) Better parental background characteristics are positively associated with better child health outcomes.
- 4) The further the distance between the households and the nearest health Centre negatively affects paternal involvement in child health care programmes.

## Study aim

The study aimed at investigating the roles, beliefs and attitudes to understand the willingness of the fathers to be involved in the management of child health in the rural collectivist communities from Coastal Kenya. The parental background characteristics were explored to elucidate their contribution in promoting child well-being. Information was compiled to help in understanding paternal factors affecting their parenting roles to explain their existing low involvement in child health care programmes.

## Type of study and method

This was an empirical cross sectional sub-study utilizing both quantitative and qualitative methods of data analysis. Both structured and semi structured interviews

were used in the data collection process with the parents. Parental responses regarding their roles, attitudes and beliefs were collected and analyzed qualitatively while the parental stress questionnaire and the child's health records were collected from the main study, INSTAPA WP6, where they were originally collected and analyzed quantitatively.

## Significance of the study

The study has identified sources of parental stress and their relationship with the child health outcomes. The findings have also described the roles that parents have ascribed to themselves, and those that they would wish their partners to perform in promoting child growth and development. This is important in designing better health policies that would improve child well-being. Both the qualitative and quantitative data analyses have clarified the need to integrate maternal and paternal involvement in child health programmes. Suggestions on ways in which modifications can be made to the structure of the current health care system to increase paternal engagement have also been made.

## Definition of terms used in this study

- a) **Parenting stress:** the stress generated by parenting is conceptualized by Richard Abidin, author of the **Parenting Stress Index (PSI)**, as being comprised of salient parental characteristics, child characteristics, and situational variables directly related to the parental role <sup>[12]</sup>.

His model postulates that the stressors a parent experiences related to the role of being a parent will influence parenting behaviour, which can in turn have an impact on the psychosocial adaptation of the child.

- b) **Parent characteristics:** includes their education, occupation, income, ethnicity, religion, marital status and their household's distance from the local health Centre.
- c) **Child health indicators:** blood - haemoglobin (hb) levels, recorded number of clinic sick visits, vaccination history, height and weight-for-age (hfa, wfa).
- d) **Biological father:** the genetic father of a child.
- e) **Step-father:** a married non-biological father where the child is from a previous relationship.
- f) **Absent father:** father who cannot or will not spend time with his child or children.
- g) **Second father:** a non-parent whose contact and support is robust enough that a near parental bond occurs (often used for older male siblings who significantly aid in raising a child).
- h) **Stay-at-home dad:** the male equivalent of a housewife with a child, where his spouse is breadwinner.
- i) **Weekend/holiday father:** where child or children only stay(s) with father on weekends and holidays.

## Chapter 2: Literature Review

### Introduction

This chapter provides literature from previous studies demonstrating the diversity of paternal involvement with their children especially concerning health care services. Other literature outlining associations between paternal involvement, and the growth and development of the children has also been considered. It has also provided a summary of the findings from previous studies on some of the different levels and types of paternal engagement in child health care activities.

### Theoretical frameworks

A large body of research has shown that the underlying factors that determine health and well-being are deeply embedded in social circumstances, including social support, socio-economic status, psychosocial conditions, availability of material resources, and access to health services. Several theoretical frameworks describe reciprocal causal relationships between families and the macro-system conditions, and between children's environments and child health.

What are the roles that fathers play in shaping the social circumstances, or quality of the environments, in which their children grow and develop, and in turn how do these circumstances affect children's health trajectories across their life span?<sup>[5]</sup>Fathers' involvement can be incorporated into a number of existing theoretical frameworks in order to generate hypotheses about the roles of fathers directly and indirectly influencing child health.

Particularly promising for embedding concepts linking father's involvement to child health are the ecological theories advanced by theorists <sup>[13-16]</sup>. Research is now needed to explore the pathways for fathers to influence their children's health, the potential strength of these relationships, and to investigate factors that can moderate and confound these relationships<sup>[5]</sup>.

From an ecological perspective, child health is affected by multiple meso-systems, including the family, which in turn affect each other and also are affected by the micro-system, exo-system, and macro-system in which the child is embedded and with which he or she interacts. Everything is connected by varying degrees of proximity to everything else in a holistic system of child/human development.

To the extent that they are perceived to be involved in some way with their child, fathers are a part of the child's micro system. Fathers can influence the child's micro system by the quantity and quality of their interactions with the child and other family members. Cultural views of fatherhood and family roles and interactions, as exerted through a cultural macro system, also affect whether and how a father is engaged with his children and family.

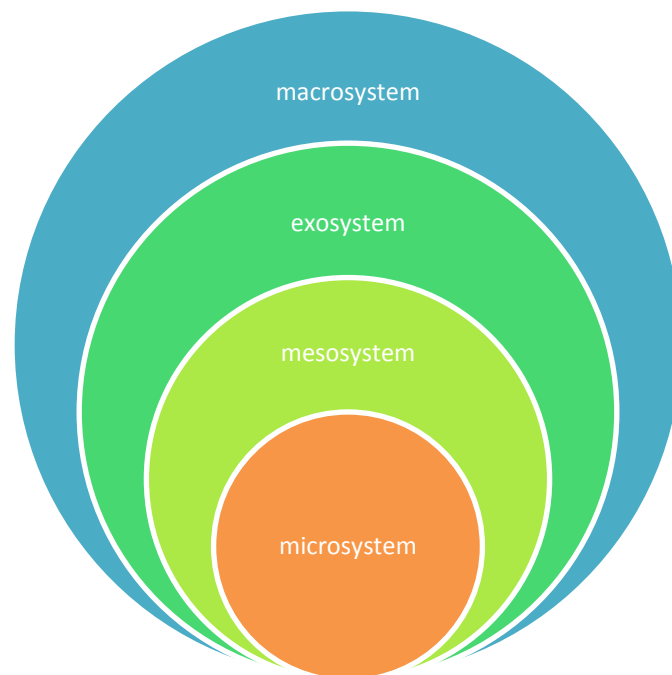
Fathers' involvement exerts an influence on each of these levels of society. For example, at the macro level, the trend of fatherlessness in some societies constitutes part of the structure of opportunity created by history – reflected in the observation that there is a tendency for father absence to repeat in future generations <sup>[17]</sup>. The presence or absence of a father's financial support has a significant effect on family/household income, thereby contributing to income inequalities which in turn are reflected in national wealth and income distribution.



At the micro level comprised of the family and personal support network, the effects of the father's involvement on the family are the subject of an increasing body of literature [18-20]. Interactions between the father, the family and the larger environment, and the outcomes resulting from these interactions, are reinforced, repeated, and realized over the life course as a child grows into adulthood and eventually becomes a parent him/herself.

Fathers' involvement can thus be construed as an important indirect determinant of health through connections to, and pathways between, father's involvement and child health status[21]. Since there is no previous study in this region which focussed on the relationship between fathers and their children, there is lack of an evidence based explanation of the existing pattern of father engagement with their children among the communities in this area. This study aims at providing the explanation for phenomena.

Figure 1: Theoretical framework adopted by this sub-study; the ecological systems which affect the growth and development of the child



## Definition of key concepts and child ecological systems

According to Bronfenbrenner's ecological systems' theory, there are five types of systems within which the child and his/her family are embedded, where they interact, and in which they can influence as well as be influenced by the ecological systems themselves<sup>[22]</sup>. Bronfenbrenner has provided the definition of these systems as follows: firstly, microsystem is the intimate realm of the family and the personal support network consisting of the close relationships in which an individual is engaged.

The microsystem forms the primary context for development. Secondly, the meso-system characterizes the interactions between and among two or more microsystems. It includes such characteristics as institutional responsiveness, social trust, and social cohesion<sup>[22]</sup>. Thirdly, the exo-system includes institutions, organizations, and policies that constrain and support development, such as parents' workplace or a child's school. Fourthly, the macro-system is the general social and cultural contexts in which the individual and their personal social networks interact over the life course.

It includes such features as national wealth, income distribution, degree of industrialization and urbanization, level of employment, and the structure of opportunity created by history, geography, and fortune. Figure 1 is an illustration of the ecological systems which affect, positively or negatively, the health, growth and development of the child.

Elsewhere, in another study by Sherriff and Hall on fathers, they obtained views from fathers to provide insights into possible interventions which could contribute to increasing rates of exclusive breastfeeding. The study found that fathers were

interested in breast-feeding and wanted to be involved more broadly in preparation for, and in support of, breastfeeding<sup>[23]</sup>.

Although this study did not directly look at the relationship between paternal involvement and child feeding it did investigate the relationship between paternal characteristics and their child health (growth) characteristics such as underweight and stunting. The assumption was that the children whose fathers reported to have spent some quality time with them and whose fathers were involved with their children, would have better health outcomes than those children whose fathers reported not to have spent some time with their child or children<sup>[23]</sup>.

Maternal engagement: The findings from a study that was carried out by Tamis-LeMonda and colleagues about the contributions of fathers and mothers at play with their 2- and 3- year olds in low-income settings suggested that fathering at 24 months predicted mother's later engagements with the children. In contrast, mothers' earlier engagements did not predict fathers' later engagement except for maternal intrusiveness<sup>[24]</sup>.

This is a suggestion that paternal involvement does not only contribute to the improved well-being of their child or children, but also increases the chances of maternal involvement with their children which would culminate in improved well-being of their children. However, this was a cross-sectional study which interviewed parents whose children were 24 months or older. Therefore, more research is needed at a later age to find out if the above study findings were sustained. A further study could be initiated to explore whether these findings are applicable to the fathers from the coastal Kenyan communities.

## Literature on some of the factors affecting paternal involvement with their children

### Public policies

The way policies to address child health, growth and development are designed may in one way or the other act towards engaging or disengaging fathers in child health care services at different stages of the child's life<sup>[25]</sup>. Creating father friendly policies have been found to help increase father involvement in their children's lives. For instance, a publication by Abubakar and colleagues in 2011 featured in 'The Commission on Paternal Involvement in Pregnancy Outcomes' (CPIPO) which had carried out an in-depth analysis of existing laws<sup>[1]</sup>.

The commission identified some potential social barriers to paternal involvement during pregnancy and outlined a set of key policy priorities aimed at fostering paternal involvement<sup>[1]</sup>. The commission considered revision or amendment of several policies to increase the involvement of expectant fathers during pregnancy as follows. For example, revision of existing laws and initiatives to focus on the family, the father, mother and child, no matter the legal composition (married or cohabiting or not).

Revision of policies penalizing families with present fathers and policies which do not promote informal paternal involvement as well as policies discouraging fathers and mothers from reporting paternity and policies that help eliminate economic barriers to paternal involvement, are required. Other policies proposed included laws to allow equal allocation of maternal and paternal leave<sup>[1]</sup>.

Given the size of this study and the limited resources, this study only focussed on health policies expected to affect paternal involvement with their children. Particularly, the study aimed at investigating the policies which governed the flow of

information and the administration of child health care services including health education to the parents.

## Paternal attitudes

A literature analysis carried out by Wells and Sarkadi on Swedish parents to investigate the impact of father friendly policies on child rearing practices suggested that, some of the reasons which have been associated with less paternal than maternal involvement in parenting are, firstly, some fathers preferred to consult male colleagues and friends about parenting concerns and did not feel comfortable talking with Child Health nurses<sup>[26]</sup>.

Secondly, the Child Health Centres are only open during normal working hours<sup>[27]</sup> neglecting any parent who is unable to take time off from work, and thirdly, when fathers do come to the Child Health Centres, they may feel unwelcome because the Child Health Centres are dominated by women<sup>[28]</sup>. Fourthly, many conversations during the child's first months are about mothers and breastfeeding<sup>[27]</sup>, leading fathers not to wonder about a suitable role that they can play in the care of their infant<sup>[29]</sup>.

Fathers may feel this way because even though they consider themselves to be a significant influence in their child's life, they may feel insignificant due to the biological need to breastfeed, which they cannot participate in directly, making fathers feel like secondary parents from the beginning<sup>[29]</sup>. Moreover, the Child Health nurses often see mothers as the primary parent and fathers only as secondary<sup>[30, 31]</sup>. This view is changing as fathers want to share the responsibility for raising their child, but the system has not fully integrated fathers to be equal partners in their child's health care<sup>[10]</sup>.

## Marital status

According to a study carried out on urban African American fathers by Coley and Chase-Landsdale in 1999, marital status does not affect the level of paternal involvement because results suggested that about half of unmarried fathers were highly involved at the time of birth, but when children were of preschool age, half were uninvolved. The study also found out that paternal education and employment increased the likelihood that fathers will be highly involved as children age<sup>[11, 32]</sup>. Involvement of other family members such as the grandmothers, did not deter paternal involvement<sup>[32]</sup>.

## Child health status

The health status of the child can be used to predict the level of paternal financial support. A study carried out by Hofferth and Pinzon to investigate the effect of nonresidential fathers' financial support and contact on kindergarten children's health, found that children who were healthier in kindergarten received greater financial support from their father although contact and child support were not positively related. Greater contact with the father did not influence and was not influenced by child health, but contact and support were highly associated<sup>[33]</sup>.

Of concern was the fact that fathers appear to invest less in children with poor health<sup>[34]</sup> while the prevalence of childhood chronic conditions are on the rise<sup>[35]</sup>. Lack of father investment could present more serious problems in future. Despite the fact that not all the possible financial support measures were used in our Kenyan study, it was interesting to find out if a similar relationship exists among residential fathers from the context of this Kenyan study<sup>[34]</sup>.

## Economic resources

Fathers may influence their children's access to quality early childhood education, schooling, extracurricular educational opportunities and media. In turn, these opportunities for education and literacy may influence children's health outcomes. Household income and maternal employment has also been frequently associated with paternal involvement. Economic hardship adversely affects effective parenting<sup>[36]</sup>. Elder and his colleagues suggested that economic stress affects fathering behaviours more than mothering behaviours because the provider role is more central to fathering than it is to mothering<sup>[37]</sup>.

Fathers' involvement has been reported to be proportionately greater when mothers are employed<sup>[38]</sup>. Fathers with jobs and education are likely to be more involved with their children after unusual situations such as divorce or a non-marital birth<sup>[39, 40]</sup>, possibly because these characteristics are related to greater levels of responsibility, or because such fathers are more able to fulfill the typical provider role and to pay for child support<sup>[32]</sup>.

## Parenting stress

There is evidence to suggest that both parents experience stress in parenting although that may vary between them. Women caregivers have been reported in many studies as being more exposed to more experiences causing stress than fathers, especially those parents of children with special needs. Studies suggest that men feel depressed, weak, guilty, powerless, and very angry, this simply can lead them to withdraw from the situation by engaging in activities such as working longer hours or drinking more<sup>[37]</sup>.

On the other hand, some fathers with special needs' children take that as a challenge and become proud of their ability to positively contribute towards the quality of life of that child<sup>[9]</sup>. Therefore, since parenting stress is a complex phenomenon with enormous consequences, quantitative data will be collected in this study to be used to estimate the parenting stress levels for both parents (fathers and mothers).

The sense of control and competence, which comes as a result of having the right information about what to expect in child care, adds to the feelings of optimism and trust in oneself<sup>[37]</sup>. Therefore, lack of information, not only in taking care of children with special needs but also those without, can lead to poor parenting and increase the feeling of being incompetent, leading to poor child health outcomes<sup>[38]</sup>.

A study conducted by the National Healthy Start Association in 2010 suggested that fathers in the study region had been overlooked by the then health information system, which mostly targetted the mothers attending Maternal Child Health (MCH) programmes<sup>[41]</sup>. Children whose father have at least a high school education and who work are less likely to weigh under 2500 grams at birth and their mothers are less likely to drink, use drugs or smoke<sup>[42]</sup>.

## Age of the child

Research to date has noted that fathers appear more involved with younger than older children and that involvement tends to decrease over time following a non-marital birth or divorce<sup>[32, 42]</sup>. Research has also suggested that it appears that many fathers, even those who start out being highly involved, tend to decrease their commitment over time, although the causes of this particular pattern remain unclear



## Socialization process

Parenting is also sometimes based on the socialization framework. This is because of the differences in socialization and hence differences in role identity. According to Ehrensaft, fathers perceive parenting as something you 'do' while mothers identify parenting with who you 'are'<sup>[43]</sup>. Many fathers report that they see their parenting role as providing assistance to the primary parent, the mother, something that they have to 'make time for'<sup>[44]</sup>. Women are socialized to view parenting as a complex role, whereas men are still primarily socialized to be the breadwinners.

Despite the vast social and economic changes that have occurred<sup>[45]</sup>, the ideology of the 'new father' has not been incorporated into a suggestion that determinants of parenting will differ for fathers and mothers because there are still differences in their socialization experiences. The socialization process was also considered in this study and it investigated community perceptions as a way to understand how people are socialized as parents.

In-depth interviews were conducted and collected information about how their different cultures prepared them to take up their parenting roles as mothers and fathers. The theoretical framework proposed in this study offers opportunities to explore the factors at different levels that can influence fathers' involvement with the health of their children.

## Chapter 3: Methodology

### Introduction

This chapter describes the study population and the sample population, the study inclusion and exclusion criteria, the instruments used in the data collection process and how they were developed. It also explains how the data were collected and managed, the analysis techniques utilized and the ethical approvals obtained for the study, and further provides a summary of the different methods used in undertaking this study.

### Study Population

Participants were identified from a larger study herein referred to as the '**main study**' that comprised of the 6<sup>th</sup> Work Package of a programme entitled "Novel staple food-based strategies to improve the micronutrient status for better health and development of children in sub-Saharan Africa" abbreviated to INSTAPA, Project n°. KBBE-211484 funded by the EU. (For an overview of the programme in Kenya, see <http://www.euronews.com/2012/10/03/micronutrients-against-malnutrition/>). In Work Package 6 (WP6), the investigation focussed upon the effect of iron on the nutritional status and neurobehavioural development of infants and young children in malarial areas. This thesis is based on a study that was nested in the main INSTAPA study and shall herein be referred to as the 'sub-study'.

Three hundred and eighty five (385) infants living in the Kikoneni area of Msambweni District in South Coast Kenya were recruited at six months of age into the main study. According to the 2010 strategic plan, the total population of Msambweni District was estimated to be 211,011 and that of Kikoneni location was estimated to be

44,647. The geographic location of the region where both the main and the sub-study took place is shown in Figures 2 and 3. This is a rural community with 86% of the labour force being engaged in agricultural related activities. Msambweni lies within Kwale County in the southern coastal plain and low plateau area inland from the Indian Ocean. The main port of Mombasa is to the north and the Tanzania border to the South (see the rectangle on the right in Figure 3).

Figure 2: Map of Kenya showing the study location (in the grey rectangle).

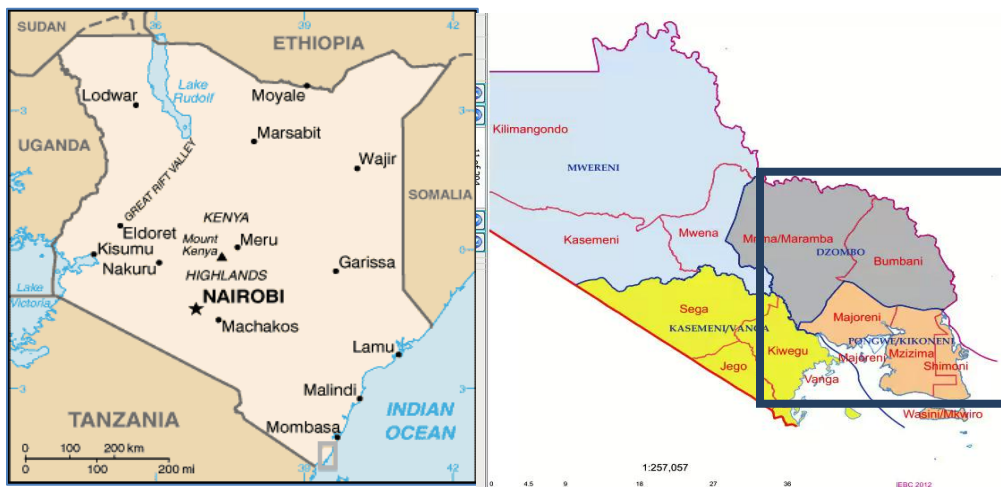


Figure 3: Map of Kwale County showing the study area

The culture of the people in the study area is comprised of a blend of people who practise both the Islamic way of life and the Bantu language and traditions. This blending occurred during the pre-colonial period when the Arabs moved to the Kenyan coast for trade. However, as a result of globalization, the area has experienced frequent immigration of people from other parts of the world due to the development of the international tourism industry and the settlement schemes established after the colonial period.

Some of the consequences which have emerged as a result of the immigration include the exchange of different ways of life which were previously uncommon among the communities in the South Coast Kenya. They include the economic activities where the Mijikenda people were introduced to agricultural related economic activities and the land tenure system changed from communal to private. These factors have definitely affected the family structure, the gender roles and the health practices which have been described in this study.

### Sample population for the sub-study

The initial aim of the study was to target 60 families in the ratio of 1:1 from both the rural and the urban areas. This would allow a comparison of social-structural differences in the attitudes and patterns of paternal participation in child health care services between the two settings. Due to regulatory issues which are described in the sub-study ethics below, only families from the rural site of WP6 were interviewed.

Families were selected through multi-level purposive sampling from a pool of 180 eligible families so as to represent the nine different villages within the WP6 study catchment area. The parents were interviewed at their homes within the period between July and September 2014. From initial pool of 180 families 61 couples - fathers and mothers were interviewed from the nine different villages.

### Inclusion and Exclusion criteria for the sub-study

From the initial pool of 180 families, those whose children had completed the micronutrient supplementation programme, attained 24 months of age and where both parents (father and mother of the index child) shared a primary residence and were willing to provide informed consent and were available for the interview, were

included. Out of the 180 families, those families where one parent disagreed to participate in the discussion after administration of the informed consent were also excluded.

Out of all the parents approached, none of them directly declined to participate in this sub-study after the administration of the informed consent. However, there were two cases of fathers who could not be available for the discussion on the agreed appointment dates. One was a teacher in a distant primary school and the other was a peasant farmer. The former reported that he could not make it because of the tight schedule at his place of work and the latter was not there although meetings were rescheduled on three occasions. This study targetted those parents who had partners and were staying together. Families not meeting the above criteria were excluded from this study.

### The sub-study design

Details of paternal involvement in child health care were elicited through two types of interviews which were undertaken with both parents: a structured questionnaire on parenting stress and a semi-structured questionnaire on the roles and attitudes of both parents towards parenting. Factors potentially contributing to variability in responses were drawn from the main study database.

These background factors or characteristics were selected to represent elements of the conceptual framework of father involvement with their children which identifies child, parental and contextual characteristics in a manner similar to that of the 'Bio- psychosocial model of health'<sup>[22]</sup>.

Health is conceptualized as an inter-relationship between psychological, biological and sociological influences [46, 47]. Each of these influences are further conceptualized as being proximal (immediate to the child) or distal (where the influence on the child is filtered through the family) as illustrated in Figure 4 and 5.

Figure 4: Proximal vs. distal factors influencing child health

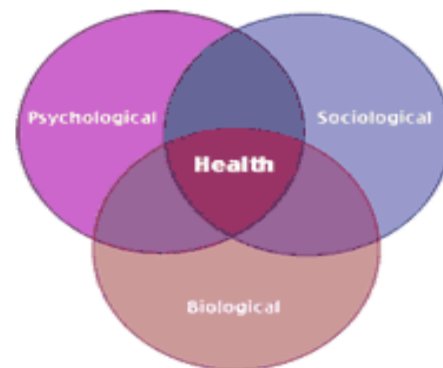
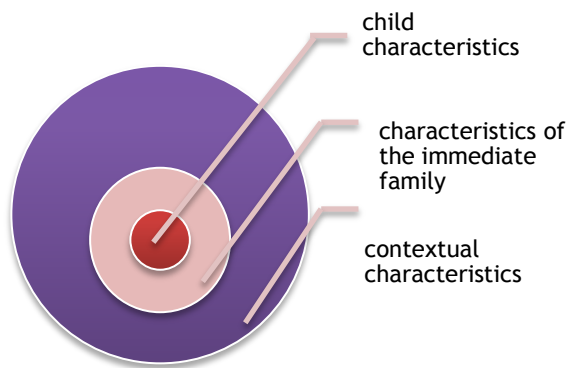


Figure 5: Bio-psychosocial model of health

The concepts under investigation in this sub-study were paternal involvement with their child's or children's health. The indicators used to explain the concept of child health were anaemia status, measured by use of the child's haemoglobin levels), vulnerability to diseases (measured through the recorded number of the child's sick visits), stunting (measured using the child's height-for-age -hfa) and underweight (by measuring the child's nutritional status using the child's weight-for-age -wfa). These indicators were measured in the INSTAPA study.

The constructs used in understanding the concept of paternal involvement included father's experience in parenting, measured by the duration they have stayed in the marriage, knowledge measured by their level of education, beliefs and attitudes towards parenting measured using their religion, and the cultural effect measured using their ethnicity. The other indicators included their accessibility to the health care

services which was measured using the distance between their homesteads and the local child health Centre (Kikoneni Health Centre).

The families' poverty levels or their accessibility to resources was measured using their level of income, and their self-competence and their confidence in parenting were measured using their stress scores collected using the section F of the *Parenting Stress Inventory (PSI)*, in the structured interview mentioned above. The marital effect was measured using their marital status (married or unmarried but cohabiting). However, there was no method used to directly measure the level of paternal involvement with their children.

### Data collection instruments for the sub-study

From the main study database, some examples of the proximal and distal factors were selected. These were adapted (as shown in Table 1) and used in this sub-study to measure components of child and maternal health.

Table 1: Proximal and distal factors that measured child and maternal components of health selected from the main study

Category		Social	Biological
Proximal factors	Child		<ul style="list-style-type: none"> <li>• Vaccinations</li> <li>• Haemoglobin</li> <li>• Illness episodes</li> <li>• Weight</li> <li>• Height</li> <li>• Age</li> </ul>
Distal factors	Maternal	Education Income Religion	
Distal factors	Family	Ethnicity/Cultural origins Distance from home to the health Centre.	

The child indices obtained from the main study (collected during their visit at 24-months) were used for the calculation of the child’s health constructs as shown in Table 2. Generally, all the child’s biological variables in Table 2 were used as the dependent variables in this sub-study. Moreover, the parents’ background characteristics which were collected by the sub-study were used as the independent variables for the sub-study.

Table 2: The independent and the dependent variables used in this sub-study

Independent variables (Parents)	Dependent variables (child)
<b>Social</b>	<b>Biological</b>
<ul style="list-style-type: none"> <li>• Paternal education</li> <li>• Paternal income</li> <li>• Paternal religion</li> <li>• Roles in parenting (both parents).</li> <li>• Attitudes towards parenting (both parents).</li> <li>• Duration in marriage (both parents)</li> <li>• Marital status (both parents)</li> </ul>	<ul style="list-style-type: none"> <li>• Number of recorded sick visits for the last 6 months (from the date of data collection)</li> <li>• Vaccination status (records)</li> <li>• Stunting</li> <li>• Underweight</li> <li>• Anaemia status (haemoglobin)</li> </ul>
<b>Psychological</b>	
<ul style="list-style-type: none"> <li>• Stress in parenting</li> </ul>	

Classification of parental indices: Given that both parents of the focal child had to be available for the interview to be included in this study, it was assumed that they were either married or unmarried but cohabiting. The relationship between the parent and the focal child was also classified into two groups: biological or caretakers to include study participant children who did not have their biological parents but had father figures.

Parents’ level of education was classified into three groups: None, Incomplete and Complete primary school.

Their income level also was divided into three groups: those who earned KES 5000 and below, between KES 5001-10,000 and those who earned KES >10,000 per month. Remarks were then made on whether the income was regular or irregular.



Since all the parents claimed to be practising subsistence farming in one way or the other in their lives, the extra jobs they did to sustain their families were classified into three groups: market vending or own enterprise, domestic work and physical labour.

The distance from their homes to the local health facility was classified into two groups: those living within a 5 km radius and those living in areas outside the 5 km radius. As a result of the immigration, there is a mixture of the Mijikenda communities (known to be the original occupants of the study area) with other non-Mijikenda communities. Subsequently, it was assumed that there would be cases of intermarriage between newcomers and the original residents. Therefore, the families were classified either as from Mijikenda or non-Mijikenda, based on the community from which the father of the focal child came. This was based on African culture which holds that the father is the head and breadwinner of the family.

The study area was originally dominated by the Islam religion. Also, as a result of immigration, it was assumed that other religions such as Christianity were introduced and in the process some people converted from Islam to other religions and vice versa. Surprisingly, both partners in all the couples interviewed were either Muslims or Christians and none of the couples had mixed religions.

However, there were cases of three cases of mothers who had changed their religion to that of their husbands. All of the three were mothers who were previously Muslims but had been converted to Christianity on getting married to Christian husbands. Therefore, religion was grouped into two main categories (Islam and Christianity). No other religious group was identified through-out the entire study sample.

The total expected PSI score was 55 and it was divided into three categories such that 0-18 was described as a low score, 19-36 as an average score and 37-55 as a high score. The direction of the scores for each item in the PSI questionnaire was corrected such that the lower the scores, the better the parents' condition and vice versa.

The duration of the time that the parents had spent together either in marriage or cohabiting was classified into two groups: those who had been married for 10 years or less and those who had been married for more than 10 years. It was assumed that those who had stayed together for less than 10 years were less experienced in managing the health of their children than those who had stayed together for more than 10 years. However, it was difficult for some parents to state the number of years they had in marriage. This was associated with the high illiteracy levels in the study region.

## Interview Schedule and Questionnaire

Two interview formats (qualitative and quantitative) were organized for each family. The in-depth interview collected data in a narrative form from the parents about the structure of their family, their perceived roles, responsibilities, beliefs and attitudes towards parenting as they related to the health, growth and development of their child. Fathers were asked to state their perceived roles, while the mothers were asked to state the roles their partners performed in promoting child health. The in-depth interview began with the collection of personal information such as the age bracket and level of education.

This was followed by a conversation which focussed on how the parent felt “as a parent” such as, “How would you describe how you feel as a parent?” Although the aim was to follow the order of the items as they appeared in the questionnaire, it was sometimes unachievable especially when the respondents provided answers for the other questions which would come later in the interview guide, but not the way the questions followed each other, during the discussion.

Both the fathers and mothers were asked to report about their own roles in parenting and those of their partners. They also reported what they thought should

have been the role of their partners and which they never did. Therefore, the mothers reported about the father of their child or children and the fathers could also report about the mothers of their child or children.

Other socioeconomic data were also collected with the help of a five-point scale that was designed to help the parents in the rating of their monthly income levels (*Appendix I: Income rating card*). The assumption was that, the shorter the bar, the lower the monthly income and vice versa. The responses would be summarized to explain paternal involvement as described by the mothers and by themselves. The outline for the items used in the in-depth interview is summarized in interview guide (*Appendix II*).

In addition, in order to better understand the communities' beliefs in the area where the study was undertaken, an interview was conducted with a Mijikenda clinical officer at the Kikoneni Health Centre. Information on the potential role of Community Health Workers was obtained during the course of an interview with one of the mothers who was also a Community Health Worker.

The second instrument was a brief questionnaire based on the '*Parental Stress Index*' (PSI)<sup>[48]</sup>. The PSI, was originally designed as a self-report instrument to screen for, and identify, parent and child systems that are under stress (*see Appendix III*). Section F of the PSI was adapted in this sub-study and it consisted of 11 items concerning the '**feelings of the parents about being a parent**'. Respondents were required to select a rating from a five-point scale that describes the extent to which they agreed or disagreed with the content of the statement.

## Modification of Questionnaires to Meet Local Requirements

Questionnaires needed to take into account the local vocabulary, the level of literacy of the respondents and their lack of familiarity with rating systems. The adaptation and modification process followed guidelines as set out in Holding et al (2010)<sup>[49]</sup>. The adapted section of the PSI was modified to develop the final instrument used to measure the parenting stress, which was then used to determine parents' self-confidence and self-competence in parenting. The changes made in this data collection instrument were logged as shown in Appendix IV.

Eventually, a PSI questionnaire suitable for the local population under study was developed (*see Appendix X*). A five point scale rating card was also designed to help the parents to select the levels of feelings for all the 11 items (*see Appendix VI*). The responses would be checked for directionality prior to analysis. All high scores would denote lower confidence or competence and greater stress, while all low scores suggested greater self-confidence or feelings of more competence and less stress in parenting. A summated score would be generated to provide a measure of overall confidence/competence/stress in parenting.

## Piloting for the sub-study

Several pilot studies were carried out in the process of developing the questionnaires to attain the local standards that would derive reliable information from the study sample. The pilot studies, the purpose, the number of people involved in that pilot study and the changes made within the data collection instruments were summarized in the PSI development table (*see Appendix IV*).

## Data collection process

The Master's student developed the tools and conducted the data collection in fulfilment of an internship programme in behavioural studies' research methods, and to contribute towards completion of a Masters in Medical Sciences (M.Med.Sci) at the University of Kwa-Zulu Natal (UKZN) with the assistance of Dr. Penny Holding. The interviews were conducted in the local language, Kiswahili and then translated into English. The parents were interviewed separately at their homes.

The recruitment process started with the identification of the homes where the targetted parents (study participants) lived. This was done with the help of a well-known Community Health Worker (CHW) from the main study, who was familiar with the study catchment area. During this initial visit, the purpose of the study was introduced to the parents.

They were then informally asked about participation in the study. If they indicated consent and upon agreement to participate in the sub-study, they were requested to sign the informed consent form (*Appendix VII and VIII*) and provide a date when they could both afford to be available for the interviews. The duration of the interviews per parent was estimated to last for thirty minutes. Telephone contact numbers for the families were obtained to help in reminding them about the appointment, a day before the actual interview date.

Those families who did not have telephone numbers had to be followed up physically to confirm or remind them about the appointment. However, there were some cases of families where the interviews had to be rescheduled for another day because one of the parents, especially the father, could not be available on the proposed interview date because they reported that they had to deal with unexpected family

activities. Since the sub-study participants came from nine villages, the interviews for a day were organized to take place in areas near each other to maximize the use of time.

The main points were taken in the form of short notes when both the PSI and the in-depth interviews were being conducted. The short notes were supplemented with a digital tape recorder which recorded the entire interview for each parent to ensure that all the information given was captured. Both the hand written notes from the answer booklets and the audio tapes were used during the data entry into the PSI database and in the transcription process of the in-depth interviews, in readiness for data analysis using SPSS version 21 and NVIVO10 soft-ware, respectively.

## Data management

The data were managed and are being stored by the International Centre for Behavioural Studies (ICBS) where security and confidentiality is given the first priority. Data are kept in locked cabinets and access to this data is permitted only to the authorized persons especially those working on data entry, cleaning and analysis.

Some of the available strengths in ensuring that the outlined ICBS data management requirements are adhered to include that (1) the masters' student who is the research assistant in the organization (2) both the logistical and administrative components for this sub-study were organized and managed by the ICBS (3) ICBS already has a well-established and working data management system with proper practical policies and regulations and it has previously managed other studies carried out within this and other regions.

## Data analysis

The demographic information of the families which participated in this study has been summarized into two tables. The first table contains the characteristics of the families (parents and children). This table comprises the parents' level of education, monthly income, occupation and overall stress levels. The sex, age, number of recorded sick visits, vaccination status, anaemia status, height-for-age and weight-for-age for the children is also captured. The second table contains the overall description of the characteristics of the sub-study participant families. Included in this table are home location, religion of the families, marital status of the parents, duration in marriage and the ethnic communities of the families.

## Qualitative data

Analysis focussed upon providing a detailed description of the dependent and independent variables that contributed to the themes of this study, and the observable structure of paternal participation in child health care systems. Paternal responses about their roles in parenting were compared to those provided by the mothers, and to those from other populations drawn from the available literature.

The tapes were transcribed and translated into English. I read through the recorded tapes several times while noting the information that I had written during the interviews. Analysis of the narratives from the in-depth interviews was carried out using NVIVO10. It was first summarized into themes and trends to reflect parenting roles, attitudes and beliefs towards parenting. The sources of child health information, and recommendations on ways of improving the circulation of child health information among the parents were also summarized into themes.

The summaries were then compared between fathers and mothers and each group of parents was compared against their family background characteristics.

## Quantitative data

The PSI questionnaire was used to explore differences between parents, the association between their responses with their background characteristics and the relationship between their stress levels and child health outcomes. The PSI item scores were first analyzed individually while comparing between the means and standard deviations of the fathers and mothers. These were then summarized in a single table for all the items.

Finally, independent t-tests were carried out to check if the paternal and maternal PSI mean scores were statistically significant. The cut-off point used to divide the mean for each group was 2.5 because the lowest score was 1 and highest score was 5 for each item. Then, the information (mean difference, standard deviation, two-tailed level of significance, equal variances assumed) was summarized and reported in Table 6. The parental psychosocial characteristics and how they relate to the child's health outcomes were explored.

Bivariate analyses were carried out to find out the effect of the parental background characteristics on the child health variables. The results from both the quantitative and qualitative data have been combined to support each other in discussing and explaining the parental components and how they impact on child well-being specifically within the study region.

The subsequent data form the basis of this thesis.



## Ethical issues

A field worker known to the main study participants was involved in the recruitment process of the sub-study participants. Families were approached and the purpose of the sub-study explained during the initial contact. Appointments were made and the parents were reminded through either a phone call or a second visit made one day before the interview date. The prospective study participants were given the opportunity to choose for themselves the most convenient interview date and time of day.

Confidentiality of the data collected was highly maintained by ensuring that the participant names were not used and instead participant identification numbers were used. Also, the collected data were kept under lock and key data cabinets. The families were assured that although the data would be presented as a summary, no individual would be identifiable.

Ethical approval for the study site, instruments and study procedures, was obtained through the approval of the main study protocol (WP6) by application to the Ethical Review Board, Kenyatta National Hospital (P167/6/2009), and has been reviewed annually since then. The procedures in this sub-study were listed in the protocol for the main study. Families were informed of the procedures, and the purpose of the study, and signed informed consent was elicited for both the main study, and participation in any sub-study.

All study participants came from this site. Also, permission from the national administration was obtained from the Provincial Director of Medical Services (PDMS) Coast Kenya, and the District Medical Officer for Health (DMOH) based at Msambweni

District Hospital. This was to ensure that the administration was aware and understood the nature of the public health information to be collected.

The urban families were to come from another study sample, not described here. Permission was requested to add the procedures not already covered in the main study protocol, namely the parenting stress questionnaire and the in-depth interviews with fathers, from the KEMRI Ethics' Review Committee (ERC), the regulatory body for the urban study - the main study protocol. The committee reviewed the application, and granted approval-pending consent from the university in the USA through which the main study funds were channeled.

Permission from that latter authority was not granted, for the reason that funds for the sub-study were not being channeled through the same institution. KEMRI-ERC suggested that a separate application be made, for which they would provide approval, but time limitations for this meant that the period for data collection would have passed before approval could be cleared. Thus, the urban sample was not included in this sub-study. The study was also ethically approved by the Biomedical Research Ethics Committee (BREC), which is a requirement by the University of Kwa-Zulu Natal (UKZN), Durban-South Africa (*see Appendix IX*).

## Conclusion

This chapter introduced and explained the procedures that were followed to obtain the data to be analyzed. It has also included how the study participants were identified and recruited from the main study population, and the inclusion and exclusion criteria for the sub-study. Finally, the chapter has also highlighted the sources of the tools used in this sub-study, ethical approvals obtained from the regulatory

bodies, the steps as to how the instruments were developed and modified to meet the local standards, and how the data was collected, entered, analyzed and managed.

## Chapter 4: Results

### Introduction

This chapter provides a comprehensive description of the study sample and the results of the statistical analysis of the modified 11 question Parental Stress Inventory. The results of the analysis of the qualitative and the quantitative data will be presented and then triangulated. The data that are reported in this chapter refer to 61 couples and their children (males: 26, females: 35) who participated in the main INSTAPA WP6 study.

### Section 1: The socio-demographic profile of the sub-study participants.

Tables 3 and 4 provide a descriptive summary of the sub-study families (children and parents). Since all the parents claimed to be practising subsistence farming in one way or another, the extra jobs they did to sustain their families were classified into three categories: market vending or own enterprise, domestic work and physical labour.

Table 3: Characteristics of the children who participated in this study, (n=61)

Variables	Children		
	n(%)	Mean (M)	Standard Deviation (SD)
Males	26(42.6)		
Females	35(57.4)		
Age in months		29.93	3.78
No. sick visits	34(55.7)		
1 or more sick visits during the main study (6-24 months)	27(44.3)		
Partial vaccination	40 (65.6)		
Complete vaccination	7(11.5)		
Unknown vaccination status	14(23.0)		

Anaemic children (cut off 7g/dl)	1(1.6)
Non-Anaemic children (cut off 7g/dl)	60(98.4)
Anaemic children (cut off 11g/dl)	39(75.0)
Non-Anaemic children (cut off 11g/dl)	13(25.0)
Underweight children	19(41.3)
Normal weight children	27(58.7)
Stunted children	25(54.3)
Non-stunted children	21(45.7)

Table 4: Characteristics of the parents who participated in this study

Variable	Fathers n(%)	Mothers n(%)
No education	11(18.0)	16(26.2)
Incomplete primary school	19(31.1)	31(50.8)
Complete primary school	31(50.8)	14(23.0)
Income/month KES 5000 and below	29(47.5)	50(82.0)
Income/month KES5001-10,000	25(41.0)	11(18)
Income/month KES10,001 and above	7(11.5)	-
Market vending & own enterprise	18(29.5)	7(11.5)
Domestic work	10(16.4)	39(63.9)
Physical labour	33(54.1)	15(24.6)
Low stress	-	-
Average stress	40(65.6)	54(88.5)
High stress	21(34.4)	7(11.5)

## The parents

The results indicated that the fathers had schooled for more years than the mothers with fewer mothers than fathers completing the primary school level. As hypothesized, the fathers have a higher income than the mothers with none of the mothers having an income more than KES 10,001. As far as occupation is concerned, unlike mothers who are highly involved in domestic work, fathers were more involved in occupations outside the home such as market vending and other “own enterprises”. None of the parents, according to the stress classification used in this sub-study had low

PSI scores. However, more fathers than mothers had a higher PSI scores suggesting that fathers had higher stress in parenting than the mothers.

## The children

There were more females than males and the overall average age in months was 29.93. More children had no recorded sick visits which had been reported in the previous six months from the date of the interview. Although the vaccination records for some children (14%) were unknown to their parents, the results suggest that only 11.5% of the children had successfully completed the national vaccination programme.

According to WHO, the haemoglobin cut-off point which is used in calculating the anaemia status for children living in areas at the coast is 7g/dl according to which, only 1.6% of the children were found to be anaemic. When the cut-off point for calculating the anaemia status for children living in others areas (11g/dl) was used, only 25% of the children in the sub study were not found to be anaemic. When their weight-for-age (wfa) and height-for-age (hfa) were calculated, fewer children were found to be underweight while the majority was found to have stunted growth.

Table 5: Description of the other overall characteristics of the families studied

Variables	n (%)
Households within 5km radii from health Centre (1)	35(57.4)
Households outside 5km radii from health Centre (2)	26(42.6)
Christian families (1)	23(37.7)
Islamic families (2)	38(62.3)
Couples married for or less than 10 years (1)	34(55.7)
Couples married for more than 10 years (2)	27(44.5)
Mijikenda families (1)	39(63.9)
Non-Mijikenda families (2)	22(36.1)
Legally married couples (1)	43(70.5)
Unmarried cohabiting couples (2)	18(29.5)

## The families

Using the local Health Centre as a reference point, the majority of the households from which these parents came, were situated in areas within a 5km radius. The majority of the families from which these parents were drawn were of the Islamic religion. There was no couple where partners had different religion. Although the majority of the couples were legally married, the results suggest that most of them had been married for less than 10 years. Despite the fact that there is intermarriage among the people, the families were classified using the community from which the father came from and the results showed that the majority of the families were from the Mijikenda communities.

## Section 2: Qualitative data analysis of the in-depth interviews

### 1. Roles of parents in the study area

Both parents reported to have played different roles. These included making decisions on what is the best for their children, cooking and feeding children, washing them and doing their laundry and finally taking them to the hospital when they were sick, so as to promote the wellbeing of their children. All these roles were summarized into four themes, namely: decision making, provision of daily needs, financial support, and provision of care to the child when sick. Fathers were asked to state their perceived roles while the mothers were asked to state the roles that their partners performed in promoting child health.

The majority of the mothers agreed that fathers participated in supporting their children financially, in decision making and in the provision of their daily needs. This was almost to a greater extent than the mothers. However, maternal reports suggest

that fathers did not support their children when they became sick despite the fathers' claims as shown in Figure 6 below. Unlike mothers who felt that their roles and responsibilities for their children reduced as their children grew older, fathers felt that their roles and responsibilities as parents increased as their children grew older because their needs increased with their age.

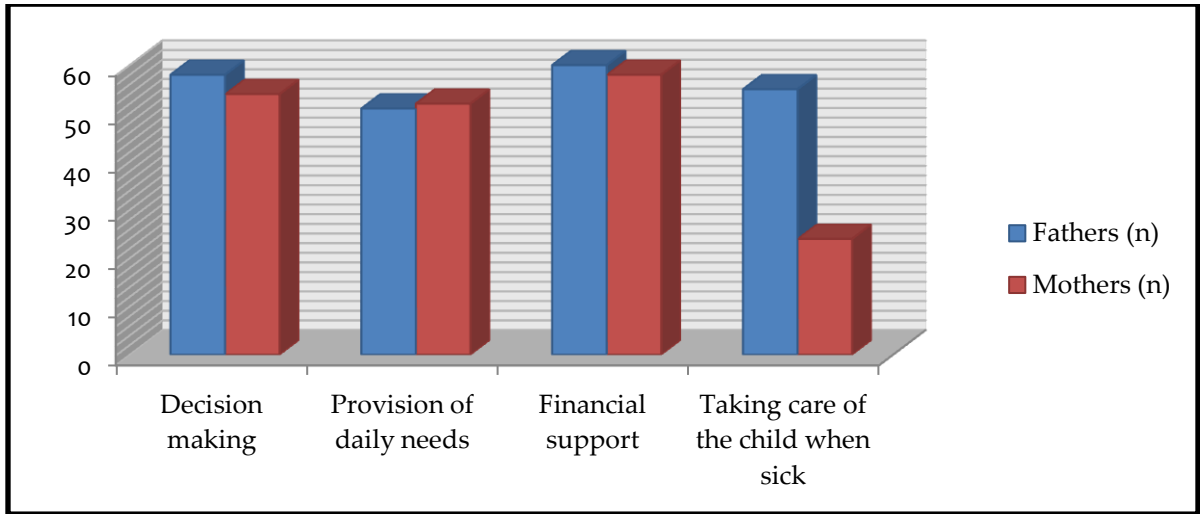


Figure 6: Mothers' (n=61) and fathers' (n=61) reports on the roles of fathers in promoting child well-being

To obtain a deeper understanding of this phenomenon, I interviewed a clinical officer from the Mijikenda culture who worked at the Kikoneni health Centre and she had the following to say,

*".....according to our culture, the man is the breadwinner and is supposed to provide everything for his wife and children. He is supposed to provide them with food, clothes and shelter".*

When I asked her what the culture says about the role of the women in their families she said, *".....as the wife, I am supposed to cook and take care of my husband and children. Since I work here at the hospital, I have to look for somebody to take care of the children when I am at work.*



*I am supposed to pay the housekeeper or the baby sitter and buy anything for myself with the money which remains. My husband is not supposed to budget for my salary but I can help him if he requests me to do so."*

## 2. Attitudes of parents towards parenting in this region

All the parents (fathers and mothers) had a positive attitude towards parenting; they said that they were happy to be parents. However, the reasons cited for their happiness varied between the genders. Fathers reported that as parents they received increased respect within the community while others cited the reason that their children will take care of them when they become old. Mothers claimed that they are happy because their children help them in their day to day activities.

Others claimed that they are just happy to have children because there are many women who have desperately looked for children in vain. Analysis of the paternal reports about their attitudes towards their involvement in child health care, suggested that the majority acknowledged that parenting is a joint responsibility for both parents, and sometimes included those people around them, like close relatives in extended families. However, there were some fathers who still believed that mothers are supposed to stay at home and take care of their children while the father goes out sourcing money to provide for the basic needs of his family.

## 3. Sources of child health information available to parents in this setting

The parents reported various sources through which they obtained information about child health, but although there was an overlap of responses, variation was also noted between maternal and paternal sources of information about child health. Both mothers and fathers reported receiving child health information mainly from the health

facilities. However, community meetings organized by local leaders were reported less by mothers than fathers, while television was the least reported source of health information by fathers and it was never reported by the mothers.

The mothers reported that they obtained the information when they visited the facilities at different times, such as during their pregnancy, when their children became sick, or during the normal Mother and Child Health (MCH) clinics. The other sources of child health information included radio programmes, Community Health Workers (CHWs) from the government and private health facilities, and the community meetings organized by the village elders in the community and by the head teachers at the local schools.

One of the mothers interviewed happened to be a CHW and she agreed that CHWs were a resource that could be used to improve children's health status. She emphasized the problem of the lack of funding for transport to reach the distant areas.

*".....some of the areas where we are supposed to go and educate the parents are very far and we do not have the means to get there, also, we are not given money to hire a motorbike into such areas because most of us are just volunteers. I am sure if we would be given adequate support we would reach very many people in the village and we would have improved health of the children and the population at large", she reported.*

#### 4. Parental recommendations to improve the provision of child healthcare education to the public

Door-to-door campaigns and the community meetings organized by the local leaders were some of the ways most suggested by both parents. They perceived these as some of the unexploited means to increase parental knowledge about child health.

Other suggested ways to improve the provision of child health information included education at religious meeting points (churches and mosques), through health awareness campaigns and posters/stickers containing health information written in local languages to be stuck in the households.

More Community Health Workers (CHWs) to reach more people were suggested, especially those living in less accessible areas because amongst some parents living in the areas far away from the health facilities, their 4 year old children were reported not to have received any vaccination. Fathers reported that the current health information systems have not considered the availability of fathers and the nature of the day-to-day activities for the fathers in this region.

The health Centres and dispensaries within this region operate actively during the weekdays and passively over the weekends when most of the fathers are free to visit them. Therefore, parents suggested that there is need for a change in the way the health information is communicated to the parents. Since mothers were found to be more united in women self-help groups than the fathers, there were suggestions from the mothers that fathers need to be motivated to join groups where they can be easily accessed and helped.

## 5. Parents' suggestions to promote the well-being their children

Most of the fathers reported that, since mothers stay at home most of their time, they should ensure that food is cooked for the children and ensure that they are well fed, and that their sleeping places and clothes are clean. The fathers also reported that mothers should monitor the health of the children so that changes are noticed within the shortest period possible, and that they should take the children to the hospital when sick.

Although reports from most of the fathers suggested that they fully supported their families financially, some suggested that the mothers should also start some small businesses to help in raising the family's income. On the other hand, the majority of the mothers reported that fathers should find themselves better jobs with a good income, in order to be able to provide the basic needs for their children and also to be able to put aside some savings for emergency purposes.

The mothers also suggested that fathers should start accompanying them to the health Centres. They reported that fathers can only better understand child health and what is required of them to improve the wellbeing of their children, by listening to what is being taught by the nurses in the health Centres. Some mothers added that the fathers should not leave all the domestic work including children to them but instead, they should find some time to help them for better parenting results. For instance, a mother said that the fathers should create some quality time to stay with their children and not go on drinking sprees after work.

## 6. Fathers' willingness to be involved in child health care

Given the reports from mothers and the fathers themselves, it was clear that fathers are willing to be involved in parenting. However, the nature of the fathers' day-to-day socioeconomic activities and the limited employment opportunities in this region have been highlighted as some of the main challenges facing actual paternal participation in activities promoting child well-being. Some fathers reported that they would have wished to actively and directly take part in some of the responsibilities such as taking the child to the hospital when sick, but they could not do this because there is always insufficient money to cater for all their family needs.

Fathers indicated that they needed to share responsibilities with their partners, so that when the mothers took care of the children at home, they, the fathers, were doing some economically productive activities to generate income to support their children. "There is no need for both of us to take the child to the clinic and we come back home to stay without food. What I as a father need to do is to look for money, give them to go to the hospital and if by bad luck they are admitted, then I have to look for more money to support them and clear the hospital bill later, the amount of income I get cannot be saved, it is very little", a father reported.

## 7. Religious factors

Polygamous marriage, especially among the Muslims, reduces paternal involvement with their children. This is demonstrated by a woman I will call MJ. MJ is a mother of two girls, she was supposed to be interviewed in this study but it was not possible because the husband could not make the appointment even after several reschedules. MJ reported that she is the second wife to this man who was staying with his third wife at that moment.

She reported that she has become used to such responses even when there is an urgent issue involving the children. She added that the last time she saw him was three weeks before and they only communicate through the phone. In such a scenario, the children do not spend quality time with their fathers and according to a number of research findings; this may affect the well-being of the children. No religious factor among the Christians was associated with poor child health and low paternal involvement with their children in this study.

## 8. Cultural factors

Although common among the two groups of families studied, the belief in traditional medicine was stronger among the Mijikenda than among the Non-Mijikenda parents. This is because out of those parents who reported to have used traditional medicine to treat illnesses of their children or themselves, majorities were from the Mijikenda culture.

For instance, a Mijikenda Muslim mother said that, *“according to our culture, we believe that the ropes which we are given by the witchdoctors to tie our children around their arms, neck or waist, protect our children. For instance, they protect them against evil spirits and from people with bad eyes from seeing them. Sometimes, when a child looks like s/he is sick we don’t rush to the hospital but we observe and if the signs persist, we start by consulting a witchdoctor/herbalist. He or she gives us some special herbs to give to the child and if it doesn’t work, then we can start thinking of taking the child to the hospital.”* Although facilitated by other factors such as limited resources and by the fact that traditional medicine is locally available, this is a major obstacle in utilizing the modern medicine at health Centres.

She also reported that they use the traditional methods because mostly these worked, were cheaper and easy to access rather than going to the hospital. Some people do not like going to the hospital because of the other costs that one has to incur like the means of transport, motorbikes are mostly used here and they call them *‘boda-boda’*, and are very expensive.

She also pointed out that mostly, people spend a lot of money to get to the health Centre and then they are told that there is no medicine at the hospital. They end up buying the drugs from the chemists/pharmaceutical shops in the market where they are

very expensive and they cannot afford some drugs. However, these are some practices by the two ethnic groups studied, that might either positively or negatively affect the child well-being.

Although it was not always clear, there are different approaches used by the two communities in dealing with their day-to-day activities which may have an impact on child health. However, this was not confirmed by the quantitative data analysis since when the effect of ethnicity on the parents' PSI scores was explored, no associations were found to be statistically significant. This is described further in Section 3.

## 9. Potential roles of the community health workers

According to an interview conducted with a mother who worked as voluntary community health worker (CHW), they (CHWs) can be very resourceful especially in managing child health. She reported that their main target groups are expectant mothers and the children who are less than five years. They (CHWs) educated mothers on better nutrition for themselves and for their children, ways to prevent themselves from certain common illnesses, management of diseases like TB and HIV/AIDs, and about ways of administering first aid in case of certain common accidents and illnesses. If well supported by community and health Centres, they can really help in managing child health and assist the general public.

## Section 3: Quantitative analysis: Fathers' vs. Mothers' PSI responses

This was carried out by running frequency tables for each item on the Parental Stress Inventory (PSI) questionnaire as illustrated in the following tables. The tables display the scores (1-5), the percentage of parental responses, the mean and the standard deviation (SD) for each of the 11 items.

## 1. PSI item 1: Parents' level of doubt in their ability to provide for their children

(Low PSI scores: low level of doubts about parenting: better parenting and vice versa)

When the parents were asked to rate the level of their doubts in their ability to provide for their children, the majority of them used their past experience in parenting to express their level of doubt. Unlike those parents who reported lower levels of doubts, those who reported higher levels of doubt mostly cited unstable sources of family income as the main source of their doubts about parenting.

PSI Scores	Overall n (%)	Fathers' n (%)	Mothers' n (%)
1	36(29.5)	16(26.2)	20(32.8)
2	20(16.4)	9(14.8)	11(18.0)
3	27(22.15)	17(27.9)	10(16.4)
4	24(19.7)	12(19.7)	12(19.7)
5	15(12.3)	7(11.5)	8(13.1)
Mean	2.69	2.75	2.62
SD	1.401	1.350	1.451

Overall, the parents reported more than an average level of doubt regarding parenting, with fathers reporting higher levels than mothers. However, amongst both fathers and mothers few chose the highest PSI score.

## 2. PSI item 2: Parents' rating of the level of challenges they have faced in providing for their children

(Low PSI scores: low level of challenges in parenting: better parenting conditions)



When parents were asked to rate the challenges they had faced in parenting, they reported frequent illnesses among the children coupled with poverty. The illnesses struck when parents did not have any savings to take the children to the hospital for medical attention. High illiteracy levels and unemployment are the other factors which parents reported as having contributed to their level of poverty.

Scores	Overall n (%)	Fathers' n (%)	Mothers' n (%)
1	11(9.0)	5(8.2)	6(9.8)
2	30(24.55)	11(18.0)	19(31.1)
3	28(22.95)	19(31.1)	9(14.8)
4	28(23.0)	14(23.0)	14(23.0)
5	25(20.5)	12(19.7)	13(21.3)
Mean	3.22	3.28	3.15
SD	1.2765	1.213	1.340

Generally, the table shows that more parents reported more than average levels of challenges in parenting with fathers reporting higher levels than mothers. However, amongst both the fathers and mothers few reported the lowest PSI score, indicating better parenting conditions.

### 3. PSI item 3: Parents' confidence in addressing the challenges they have faced in parenting

(Low PSI scores: low confidence level: poor parenting conditions).

Some parents felt that they were confident in meeting the challenges they faced in parenting while others reported a lack of confidence because of the financial problems they were experiencing. They reported that the income they get is not adequate to meet the needs of their families. They claimed that they did not have savings to deal with any emergency situation which may occur in their families.

Those who reported having confidence in parenting reported a better financial situation through the personalized mechanisms they had developed to help them in

dealing with some of the common life threatening emergencies in their families, such as the common diseases. For instance, some parents, especially mothers have enrolled themselves in self-help groups where members are supported financially through the funds accumulated from their weekly or monthly contributions.

Scores	Overall n (%)	Fathers n(%)	Mothers n(%)
1	8(6.55)	5(8.2)	3(4.9)
2	19(15.6)	7(11.5)	12(19.7)
3	44(36.05)	25(41.0)	19(31.1)
4	40(32.8)	20(32.8)	20(32.8)
5	11(9.05)	4(6.6)	7(11.5)
Mean	3.22	3.18	3.26
SD	1.036	1.008	1.063

Generally, the majority of the parents (both mothers and fathers) felt that they had more than the average level of confidence in parenting, with more mothers than fathers rating themselves to be confident in handling their children. However, few fathers chose the highest PSI score while few of mothers chose the lowest PSI score.

#### 4. PSI item 4: Level of help parents think they need in making decisions for their children

(Low PSI score: Low level of help needed: Better parenting condition)

When parents were asked to rate themselves about the amount of help they need in parenting, some said that it mostly depended on the urgency of the issue and the affected level within the family. For example, some mothers reported that they require help from the fathers in making decisions on matters affecting their children and requiring financial support.

Unlike fathers who did not necessarily need help from the mothers in making decisions on issues about family management, the mothers also reported that they needed help from the fathers in making decisions on family management issues. However, fathers reported consulting the mother in making decisions about the health of their children.

Scores	Overall n(%)	Fathers n(%)	Mothers n(%)
1	18(14.75)	5(8.2)	13(21.3)
2	41(33.6)	21(34.4)	20(32.8)
3	26(21.31)	15(24.6)	11(18.0)
4	25(20.49)	13(21.3)	12(19.7)
5	12(9.84)	7(11.5)	5(8.2)
Mean	2.77	2.93	2.61
SD	1.211	1.167	1.255

Generally, the level of help required by both parents (fathers and mothers) in making decisions for their children was above average although fathers required more help than mothers. However, few fathers chose the lowest score while few mothers chose the highest score.

## 5. PSI item 5: Parents' level of extra challenges experienced in parenting

(Low PSI scores: Less extra challenges experienced in parenting: better parenting condition)

Item 5 was closely related to Item 2 of the PSI questionnaire. When the parents were asked to rate the additional challenges they felt they have faced in providing for their children which were greater than they expected, they reported a lack of adequate basic needs for the children as the main challenge they have faced in parenting. However, some parents especially the mothers, reported that these problems have been

exacerbated by the insufficient and unreliable sources of family income and the lack of cooperation between the parents.

Scores	Overall n(%)	Fathers n(%)	Mothers n(%)
1	14(11.48)	5(8.2)	9(14.8)
2	31(25.41)	9(14.8)	22(36.1)
3	30(24.59)	20(32.8)	10(16.4)
4	24(19.67)	13(21.3)	11(18.0)
5	23(18.85)	14(23.0)	9(11.4)
Mean	3.09	3.36	2.82
SD	1.268	1.225	1.310

Overall, the parents had experienced more challenges in parenting than they had expected, with fathers reporting higher levels than mothers. However, the least number of fathers chose the lowest PSI scores while the least number of mothers chose both the lowest and highest PSI score.

## 6. PSI item 6: Parents' level of happiness in parenting

(Low PSI score: Low level of happiness in parenting: poor parenting conditions)

When the parents were asked to rate their level of happiness in parenting, they reported the increased respect accorded to them by the other community members as one of the main factors contributing to their happiness in parenting. The other elements which they associated with their happiness in parenting included the availability of children who help them in their day-to-day activities and they expected that their children would take care of them in old age.

Scores	Overall n(%)	Fathers n(%)	Mothers n(%)
1	1(1.6)	1(1.6)	-
2	5(4.1)	2(3.3)	3(4.9)
3	17(13.93)	8(13.1)	9(14.8)
4	19(15.57)	8(13.1)	11(18.0)
5	80(65.57)	42(68.9)	38(62.3)
Mean	4.41	4.44	4.38
SD	0.937	0.958	0.916

Overall, the parents reported more than 80% level of happiness in parenting with fathers reporting higher levels than the mothers. None of the mothers chose the lowest PSI score which was chosen by the least number of fathers.

## 7. PSI item 7: Parents' level of ability to handle their children

(Low PSI score: Low level of parents' ability: poor parenting conditions)

Item 7 aimed at rating the parents' ability to handle or manage their children. When the parents were asked to rate how successful they felt they were as custodians of their children, the majority of the fathers reported that children below 2 years were mostly handled by their mothers. They felt that they could not succeed in handling their children when they were below the age of 2 years. Generally, the parents reported that they did not succeed in everything they wanted their children to do. However, the father was mostly perceived as the head and the main disciplinarian within the family.

Scores	Overall n(%)	Fathers n(%)	Mothers n(%)
1	2(1.64)	-	2(3.3)
2	7(5.74)	3(4.9)	4(6.6)
3	23(18.85)	12(19.7)	11(18.0)
4	46(37.70)	21(34.4)	25(41.0)
5	44(36.07)	25(41.0)	19(31.1)
Mean	4.01	4.12	3.90
SD	0.962	0.896	1.028

Generally, the parents reported more than the average PSI scores/level of ability in handling their children with fathers feeling more able than mothers. None of the fathers chose the lowest PSI score which was chosen by a few of the mothers.

### 8. PSI item 8: The level at which the parents feel that they have succeeded in parenting.

(Low PSI score: Low feeling of success: poor parenting condition)

The parents were asked to rate themselves on how successful they felt they were in parenting, by evaluating how well they felt they had taken care of their children. Some parents reported that they were not as successful as they thought they would be, mainly due to the financial problems. They reported that the needs of their children and families required more than their family income. Parents acknowledged that it was difficult to be a perfect parent in this region with limited resources, and lack of adequate and reliable source of income.

Scores	Overall n(%)	Fathers n(%)	Mothers n(%)
1	14(11.48)	3(4.9)	11(18.0)
2	27(22.13)	14(23.0)	13(21.3)
3	51(41.80)	31(50.8)	20(32.8)
4	24(19.67)	10(16.4)	14(23.0)
5	6(4.92)	3(4.9)	3(4.9)
Mean	2.84	2.93	2.75
SD	1.021	0.892	1.150

Generally, the majority of the parents felt that they had performed and succeeded in their roles as parents up to above average levels, with fathers feeling slightly more successful than the mothers in parenting. However, the least number of fathers chose both the lowest and the highest PSI score while the least number of mothers chose the highest PSI score.

### 9. PSI item 9: Level of parental feeling that they cannot handle everything well about their child

(Low PSI score: low feeling: better parenting conditions)

The parents were asked to rate the extent to which they feel they can handle everything well about their children. The majority of the parents argued while reflecting on the things they worried that they would not deal with comfortably if they affected their children. Others argued reflecting on what they had previously experienced in parenting.

Scores	Overall n(%)	Fathers n(%)	Mothers n(%)
1	31(25.41)	11(18.0)	20(32.8)
2	27(22.13)	13(21.3)	14(23.0)
3	23(18.85)	13(21.3)	10(16.4)
4	22(18.03)	13(21.3)	9(14.8)
5	19(15.57)	11(18.0)	8(13.1)
Mean	2.76	3.00	2.52
SD	1.400	1.378	1.421

Generally, the majority of the parents reported a more than average feeling that they cannot handle everything well about their children, with fathers feeling more unable than mothers to comfortably deal with anything affecting their children. However, the least number of fathers chose both the lowest and the highest PSI score while the least number of mothers chose the highest PSI score.

### 10.PSI item 10: Parents' rating of their overall ability to be a parent

(Low PSI score: Low overall ability: poor parenting condition)

The data collected by item 10 was more or less like the data collected by item 7. The difference between the two items is that, item 7 assessed how parents felt about their ability to control their children while item 10 evaluates the parents' overall ability in parenting. Therefore, item 7 can be referred to as an element of item 10. In response, the parents used their socio-economic status and cooperation in parenting to choose the score for this item. The majority of the parents felt that their overall ability to be parents would improve if both parents joined hands to boost the family income.



Scores	Overall n(%)	Fathers n(%)	Mothers n(%)
1	4(3.28)	1(1.6)	3(4.9)
2	16(13.11)	7(11.5)	9(14.8)
3	47(38.52)	28(45.9)	19(31.1)
4	35(28.69)	16(26.2)	19(31.1)
5	20(16.39)	9(14.8)	11(18.0)
Mean	3.42	3.41	3.43
SD	1.020	0.938	1.102

Generally, the majority of the parents reported their overall ability to be more than average, with mothers feeling slightly more able than fathers. The least number of fathers and mothers chose the lowest PSI score.

### 11.PSI item 11: the type of parent they imagined their children would grade them

(Low PSI score: very low grade: bad parenting)

The parents were asked what grade they thought their child or children would give them, if they were asked to base their grading on how good they feel they have been taken care of by their parents. The majority of the parents considered that they have been average parents to their children.

Scores	Overall n(%)	Fathers n(%)	Mothers n(%)
1	16(13.1)	8(13.1)	8(13.1)
2	28(22.95)	9(14.8)	19(31.1)
3	51(41.80)	32(52.5)	19(31.1)
4	18(14.75)	7(11.5)	11(18.0)
5	9(7.38)	5(8.2)	4(6.6)
Mean	2.81	2.87	2.74
SD	1.083	1.056	1.109

Overall, although parents felt that they have been average parents to their children, fathers felt slightly better than the mothers. However, the least number of fathers and mothers chose the highest PSI score.

## 12. Summary of the PSI scores for both the mothers and fathers

This section contains the information obtained after conducting an independent sample t-test. The information presented includes Mean PSI scores, Standard Deviations (SD), t-tests and 2-tailed significance at 0.05. This was carried out to find out if the PSI mean scores for the two groups of parents (fathers and mothers) differ and whether any differences are statistically significant.

Table 6: A summary of the PSI (Items 1-11) results after Independent Sample t-testing.

<b>PSI items</b>	<b>Fathers Mean(SD)</b>	<b>Mothers Mean(SD)</b>	<b>Overall Mean (SD)</b>	<b>t</b>	<b>Sig. (2-tailed)</b>
Item 1: Parents' level of doubt in their ability to provide for their children	2.75(1.350)	2.62(1.451)	2.69(1.401)	-0.517	0.606
Item 2: Parents' rating of the level of challenges they have faced in providing for their children	3.28(1.213)	3.15(1.340)	3.22(1.340)	-0.567	0.572
Item 3: Parents' confidence in addressing the challenges they have faced in parenting	3.18(1.008)	3.26(1.063)	3.22(1.036)	0.437	0.663
Item 4: Level of help parents think they need in making decisions for their children	2.93(1.167)	2.61(1.255)	2.77(1.211)	-1.494	0.138
Item 5: Parents' level of extra challenges experienced in parenting	3.36(1.225)	2.82(1.310)	3.09(1.268)	-2.355	0.020
Item 6: Parents' level of happiness in parenting	4.44(0.958)	4.38(0.916)	4.41(0.937)	-0.386	0.700
Item 7: Parents' level of ability to handle their children	4.11(0.896)	3.90(1.028)	4.01(0.962)	-11.547	0.000
Item 8: The level at which the parents feel that they have succeeded in parenting	2.93(0.892)	2.75(1.150)	2.84(1.021)	-0.968	0.335
Item 9: Level of parental feeling that they cannot handle everything well about their child	3.00(1.378)	2.52(1.421)	2.76(1.400)	-1.875	0.063
Item 10: Parents' rating of their overall ability to be a parent	3.41(0.938)	3.43(1.102)	3.42(1.020)	0.088	0.930
Item 11: the type of parent they imagined their children would grade them	2.87(1.056)	2.74(1.109)	2.81(1.083)	-0.669	0.505

[2-tailed test, p=0.05]

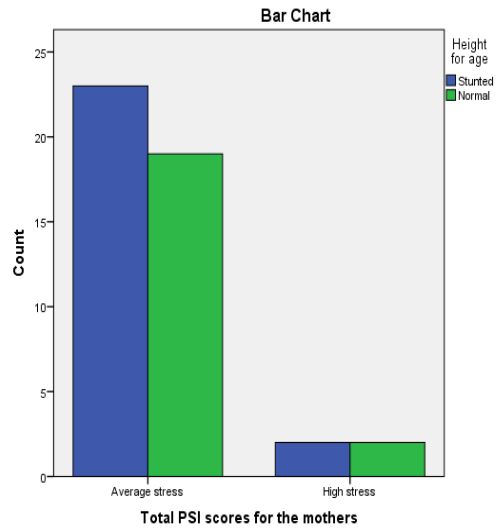
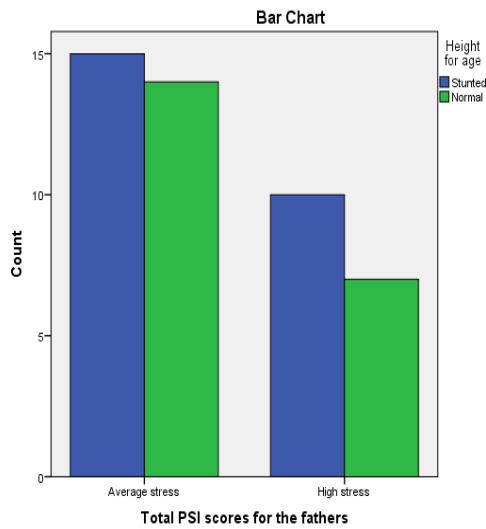
Both the mothers and the fathers had their highest scores for item 6 (mean=4.38, SD=0.916) and (mean=4.44, SD=0.958) respectively. This suggests that they were very happy to be parents. The lowest score for the fathers was for item 1 (mean=2.75, SD=1.350). This suggests that the fathers had an average level of doubt in their ability to provide for their children. The lowest score for the mothers was for item 9 (mean=2.52, SD=1.421). This suggests that mothers had on average the feeling that they could deal with their children fairly well. Overall, the parents' mean scores for all the PSI items were above average.

An independent sample t-test, for assumed equal variances, was then performed to check if the means scores for each PSI item for two groups (fathers and mothers) differed and this was statistically significant. The degrees of freedom (df) for all the 11 items was 120. Out of the 11 PSI items, only item 5 (Fathers: Mean=3.36, SD=1.225; Mothers: Mean=2.82, SD=1.310,  $p=0.020$ ,  $t= -2.355$ ) and item 7 (Fathers: Mean=4.11, SD=0.896; Mothers: Mean=3.90, SD=1.028,  $p=0.000$ ,  $t= -11.547$ ) were found to differ statistically significantly. However, the direction of the parents' association for the two items was opposite as denoted by a negative  $t$ .

#### Section 4: Graphical representation of the parents' PSI scores against the child health variables

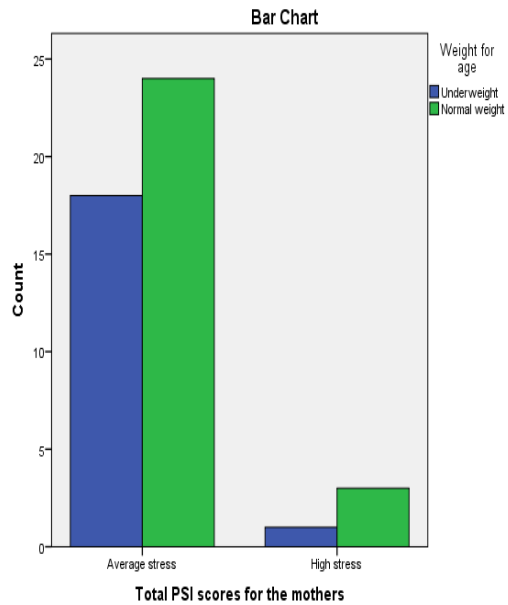
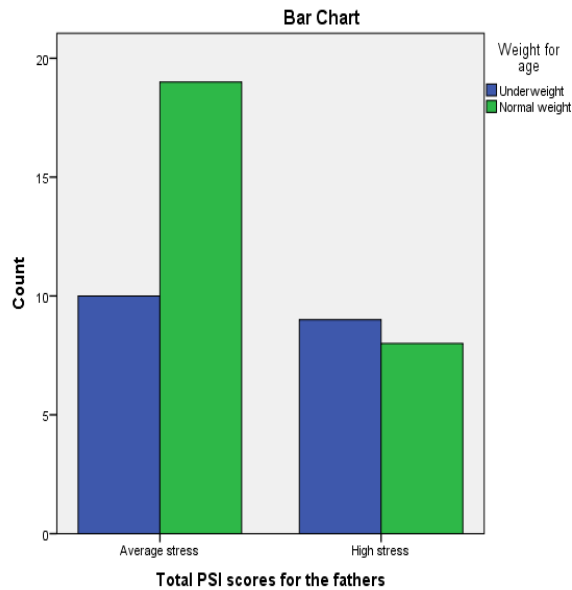
The procedures used to investigate this relationship involved bivariate analyses which were carried out to find out the relationship between parents' total PSI scores and child health outcomes. The results were compared between the fathers and mothers as displayed in the figures below.

a. Parents' PSI scores vs. child's height-for-age (hfa) status



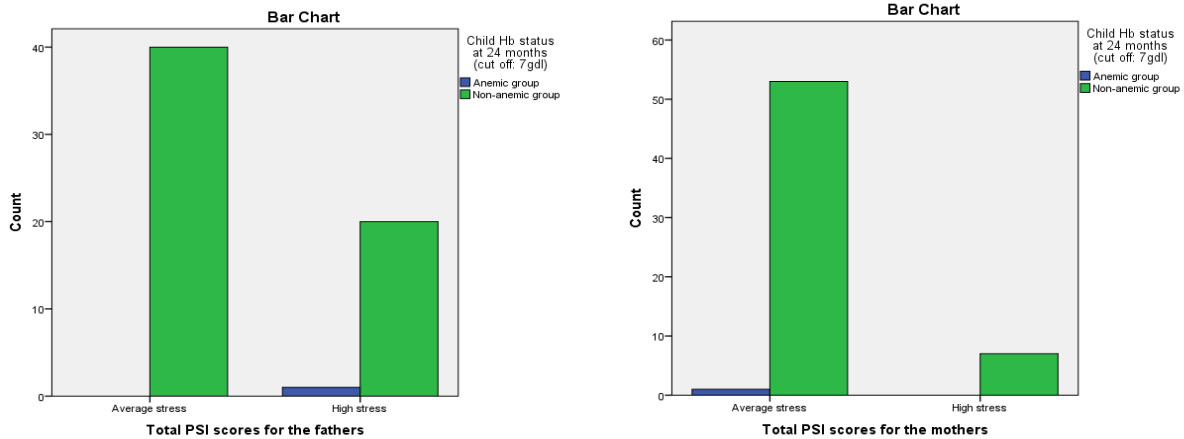
There were more children with stunted growth among the fathers who scored high on the PSI than in the mothers.

b. Parents' PSI scores vs. child's weight-for-age (wfa) status



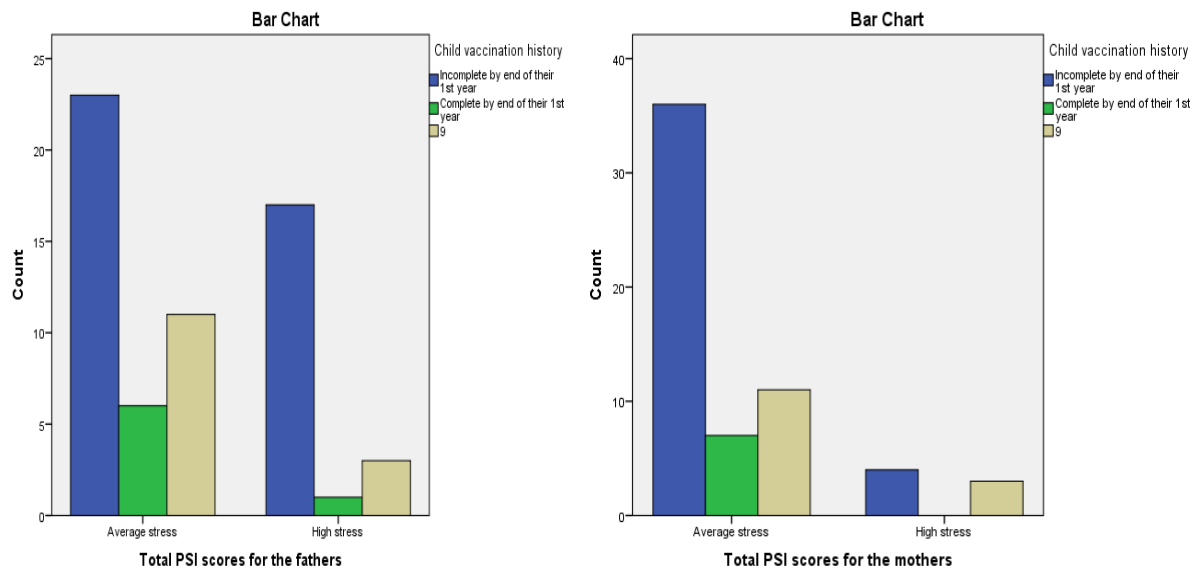
Generally, more fathers than mothers had high PSI scores. Among the fathers who had high PSI scores, the majority of their children were underweight while the majority of the children among the mothers who had high PSI scores were of normal weight.

### c. Parents' PSI scores vs. child's haemoglobin (hb) levels



Based on the WHO recommended Hb cutoff point for this type of population; 7 g/dl; the majority of the children were non-anaemic and they belonged to parents who had scored average PSI scores. The fathers of the anaemic children had high PSI scores while their mothers' PSI scores were average.

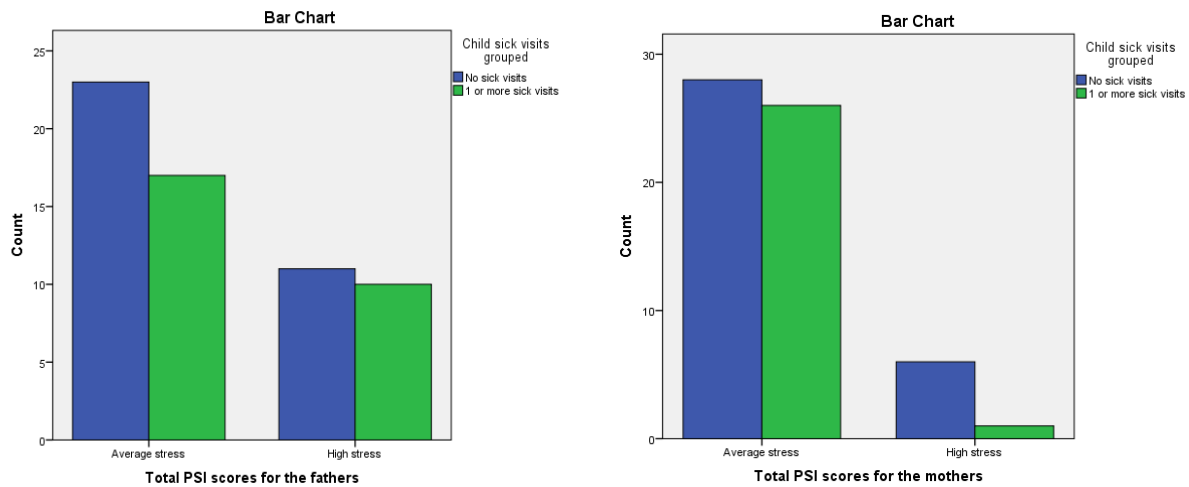
#### d. Parents' PSI scores vs. child's vaccination status



KEY: 9 = unknown

Generally, the majority of the children had not completed the national vaccination programme by the end of their first year. Comparing the fathers and mothers with high PSI scores, there were more children who had not completed their vaccination amongst the mothers. However, there was not a single child who had completed the programme among the mothers who had high PSI scores. The number of children whose vaccination records were untraceable remained the same in both groups.

### e. Parents' PSI scores vs. child's recorded sick visits



When the two groups of parents who had scored high in the PSI were considered, there were more children with one or more reported sick visits among the fathers than amongst the mothers.

### f. Parents' PSI scores vs. parents' background characteristics

The Table 7 below represents the bivariate analysis carried out to find out the effect of the parents' background characteristics and their PSI scores for each item/variable. The Partial Eta Squared was used to understand which parental background characteristics had a significant Effect size on the parental PSI items.

Table 7: The effect size of the parents' background characteristics on paternal PSI items

	in Period marriage	Occupation	Income	Income Regularity	Marital status	Home location	Family ethnicity	Education	Religion	Child gender
<b>Q1</b>	.002	.146	.005	.006	.051	.032	.000	.174	.017	.000
<b>Q2</b>	.046	.098	.022	.052	.034	.138	.001	.197	.049	.028
<b>Q3</b>	.030	.076	.010	.007	.062	.085	.049	.056	.001	.026
<b>Q4</b>	.004	.020	.047	.007	.074	.005	.002	.039	.011	.000
<b>Q5</b>	.012	.014	.077	.001	.034	.015	.046	.073	.048	.007
<b>Q6</b>	.021	.030	.017	.003	.035	.000	.005	.004	.005	.000
<b>Q7</b>	.024	.001	.024	.011	.056	.073	.005	.043	.007	.082
<b>Q8</b>	.025	.003	.037	.036	.010	.020	.000	.082	.005	.006
<b>Q9</b>	.007	.005	.042	.022	.023	.005	.000	.017	.055	.063
<b>Q10</b>	.004	.057	.088	.000	.057	.031	.022	.012	.001	.029
<b>Q11</b>	.155	.116	.041	.010	.041	.016	.023	.002	.002	.000

This summary table provides information only on the highest effect sizes of each background characteristics on the fathers' PSI items. The parents' duration in marriage had an effect size of ( $r=0.155$ ) on item q11 (the type of parent they imagined their children would grade them); occupation had an effect size of ( $r=0.146$ ) on item q1 (Parents' level of doubt in their ability to provide for their children); income had an effect size of ( $r=0.088$ ) on item q10 (Parents' rating of their overall ability to be a parent); income regularity had an effect size of ( $r=0.052$ ) on the item q2 (Parents' rating of the level of challenges they have faced in providing for their children); (Marital status had an effect size of ( $r=0.074$ ) on item q4 (Level of help parents think they need in making decisions for their children).



The household (home) location had an effect size of ( $r=0.138$ ) on q2 (Parents' rating of the level of challenges they have faced in providing for their children); family ethnicity had an effect size of ( $r=0.049$ ) on item q3 (Parents' confidence in addressing the challenges they have faced in parenting); education had an effect size of ( $r=0.197$ ) on item q2 (Parents' rating of the level of challenges they have faced in providing for their children); religion had an effect size of ( $r=0.055$ ) on item q9 (Level of parental feeling that they cannot handle everything well about their child); while the child's gender had an effect size of ( $r=0.082$ ) on item q7 (Parents' level of ability to handle their children).

Table 8: The effect size of the parents' background characteristics on maternal PSI items

Mothers' background characteristics	Period in marriage	Occupation	Income	Income Regularity	Marital status	Home location	Family ethnicity	Education	Religion	Child gender
Q1	.005	.044	.004	.000	.005	.001	.004	.059	.077	.000
Q2	.014	.047	.001	.000	.005	.074	.011	.007	.014	.048
Q3	.002	.011	.037	.000	.026	.000	.003	.004	.001	.000
Q4	.001	.058	.104	.000	.032	.002	.003	.030	.013	.000
Q5	.008	.040	.021	.000	.056	.016	.007	.002	.012	.001
Q6	.000	.115	.053	.000	.041	.108	.011	.015	.011	.002
Q7	.015	.023	.062	.000	.005	.000	.000	.138	.031	.003
Q8	.014	.029	.003	.000	.073	.010	.007	.122	.031	.009
Q9	.077	.017	.000	.000	.041	.008	.004	.060	.059	.000
Q10	.002	.001	.001	.000	.006	.005	.026	.016	.018	.004
Q11	.003	.002	.002	.000	.089	.002	.001	.088	.002	.054

The highest effect sizes of the family background characteristics on maternal PSI items were as follows: their period in marriage had an effect size of (0.077) on item q9 (Level of parental feeling that they cannot handle everything well about their child), occupation had an effect size of (0.115) on item q6 (Parents' level of happiness in parenting); income had an effect size of ( $r=0.104$ ) on item q4 (Level of help parents think they need in making decisions for their children); income regularity did not have any effect size on any of the maternal PSI items, marital status had an effect size of ( $r=0.089$ ) on item q11 (The type of parent they imagined their children would grade them); home location had an effect size of ( $r=0.108$ ) on item q6 (Parents' level of happiness in parenting); family ethnicity had an effect size of ( $r=0.026$ ) on item q10 (Parents' rating of their overall ability to be a parent education).

Marital status had an effect size of ( $r=0.088$ ) on item q11 (The type of parent they imagined their children would grade them); religion had an effect size of ( $r=0.077$ ) on item q1 (Parents' level of doubt in their ability to provide for their children); and finally, child gender had an effect size of ( $r=0.054$ ) on item q11 (The type of parent they imagined their children would grade them). In summary, all the family background characteristics had small effect sizes on all the paternal and maternal PSI scores EXCEPT the regularity of the maternal income which did not have any effect size ( $r=0.000$ ) on any of the maternal PSI items.

## Section 5: Parents' background characteristics vs. child health variables

This relationship was explored through bivariate analysis to obtain a 2-tailed significance level and the correlation between the parents' and child health characteristics was summarized in Table 9.

Table 9: Correlations between parental background characteristics and child health outcomes

Parents' background characteristics	Child health variables				
	Stunting (hfa) Sig. (r)	Underweight (wfa) Sig. (r)	Haemoglobin Cutoff 7g/dl Sig. (r)	Recorded sick visits Sig. (r)	Vaccination status Sig. (r)
Family religion	.887(-.022)	.990(-.002)	.441(-.100)	.538(.080)	.747(-.042)
Paternal education	.815(.036)	.760(.046)	.081(.225)	.199(-.167)	.585(.071)
Maternal education	.817(-.035)	.261(.169)	.169(.178)	.688(-.053)	.479(-.092)
Paternal stress scores	.650(-.069)	.229(-.181)	.169(-.178)	.708(.049)	.201(-.166)
Maternal stress scores	.859(.027)	.499(.102)	.722(.046)	.093(-.217)	.217(.160)
Parents' ethnic group	.887(.022)	.229(-.181)	.457(.097)	.698(-.051)	.482(-.092)
Paternal income	.774(-.043)	.800(-.038)	.599(-.069)	.517(.085)	.996(-.001)
Maternal income	.165(.208)	.203(.191)	.643(.061)	.568(-.075)	.591(-.070)
Parents' marital status	.496(-.103)	.950(-.009)	.332(-.126)	.919(.013)	.298(-.136)
Home location	.291(.159)	.537(-.093)	.393(-.111)	.795(.034)	.210(-.163)
Parents' duration in marriage	.274(.165)	.457(.112)	.265(-.145)	.319(-.130)	.241(.153)

[Sig. 2-tailed]

None of the background characteristics was significantly associated with child health outcome variables used in the sub-study. However, there was either a positive or negative correlation between the parent and child variables. The highest correlation values (positive) were between: hfa and maternal income ( $r=0.208$ ), wfa and maternal income ( $r=0.191$ ), hb and paternal education ( $r=0.225$ ), recorded sick visits and paternal income ( $r=0.085$ ) and vaccination status and maternal stress ( $r=0.160$ ).

The highest correlation values (negative) were between: hfa and marital status ( $r=-0.103$ ), wfa and paternal stress and parents' ethnicity ( $r=-0.181$ ), hb and paternal stress ( $r=-0.178$ ), recorded sick visits and maternal stress ( $r=-0.217$ ) and vaccination status and paternal stress ( $r=-0.166$ ).

### a. Parents' occupation and religion vs. child health

Since all the parents claimed to be practising some form of subsistence farming, the extra occupation provided was used in deriving the classifications shown in Table 10.

Table 10: The parents' occupation vs. child health variables

Occupation	Stunted		Underweight		Anaemic (7g/dl)		1 or more sick visits		Incomplete vaccination	
	Fathers n(%)	Mothers n(%)	Fathers n(%)	Mothers n(%)	Fathers n(%)	Mothers n(%)	Fathers n(%)	Mothers n(%)	Fathers n(%)	Mothers n(%)
<b>Market vending</b>	7(28.0)	2(8.0)	7(36.8)	3(15.8)	0	0	9(26.5)	2(7.4)	11(27.5)	5(12.5)
<b>Domestic work</b>	3(12.0)	14(56.0)	3(15.8)	11(57.9)	1(100.0)	0	3(11.1)	16(59.3)	7(17.5)	23(57.5)
<b>Physical labour</b>	15(60.0)	9(36.0)	9(47.4)	5(26.3)	0	1(100.0)	15(55.6)	9(33.3)	22(55.0)	12(30.0)
	Normal height		Normal weight		Non-anaemic		No recorded sick visits		Complete vaccination	
<b>Market vending</b>	7(33.3)	4(19.0)	7(25.9)	3(11.1)	18(30.0)	7(11.7)	9(26.5)	5(14.7)	2(28.6)	1(14.3)
<b>Domestic work</b>	3(14.3)	12(57.1)	3(11.1)	15(55.6)	9(15.0)	14(23.3)	7(20.6)	23(67.6)	1(14.3)	4(57.1)
<b>Physical labour</b>	11(52.4)	5(23.8)	17(63.0)	9(33.3)	33(55.0)	39(65.0)	18(52.9)	6(17.6)	4(57.1)	2(28.6)
Religion	Hfa		Wfa		Blood hb		Sick visits		Vaccination status	
	Stunted	Normal	Under weight	Normal	Anaemi c	Non-Anaemi c	No. sick visits	1 or more sick visits	Comple t e by 1 <sup>st</sup> birthday	Partial by 1 <sup>st</sup> birthday
Christianity families	9(36.0)	8(38.1)	7(36.8)	10(37.0)	0(o.0)	23(38.3)	14(41.2)	9(33.3)	1(14.3)	16(40.0)
Islamic families	16(64.0)	13(61.9)	12(63.2)	17(63.0)	1(100.0)	37(61.7)	20(58.8)	18(66.7)	6(85.7)	24(60.0)

### b. Parents' occupation vs. child vaccination status (unknown)

Unknown vaccination status-mothers: 14 (1: market vending; 1: physical labour; 12: domestic work)

Unknown vaccination status-fathers: 14 (5: market vending; 2: domestic work; 7: physical labour).

The highest proportion of the children who were found to be healthy by this sub-study were summarized as follows: 57.1% of the children of normal height, and 67.6% of the children who had no recorded sick visits came from families whose mothers were housewives, while 57.1% of the children who had completed their vaccination by their first birthday came from families whose fathers worked as casual labourers and mothers as housewives.

On the other hand, the highest proportions of the children who had certain health problems according to this sub-study were summarized as follows: 60% of the stunted children were from families whose fathers worked as casual labourers, 57.9% of the underweight children, 59.3% of the children who had one or more recorded sick visit and 57.5% of the children who had not completed their vaccination programme by their first birthday came from families whose mothers were housewives, and the only anaemic child in the sub-study came from a family whose mother was a casual worker and the father performed domestic duties.

## Summary of results

This section contains the summary of the results for each of the main objectives after utilizing the qualitative and the quantitative methods to study paternal involvement in the management of child health.

### 1) The associations between parental characteristics and child health outcomes

When the qualitative and the quantitative results were triangulated, the majority of the results obtained using the two methods differed while only a few agreed. Quantitatively, none of the associations between the parents' characteristic and child health variables was statistically significant. There were only weak (*positive and negative*)

associations between parental characteristics and the child health variables used in this study. These parental characteristics included the parents' religion, education level, parenting stress, ethnicity, income, marital status, duration in marriage and occupation.

While the majority of the quantitative results were not as expected, the qualitative results showed that the parents' level of education, being in a marriage, occupation and income were perceived by them to have a positive effect on the management of child health. Parenting stress and being a Muslim in this traditional rural society were perceived to have a negative effect on the management of child health.

## 2) The differences between the parents' roles, beliefs and attitudes of the parents in managing child health

Both the qualitative and the quantitative results found that there were differences between paternal and maternal roles and their beliefs in managing child health with mothers perceived to be more involved than fathers. The mothers performed parenting roles within the home (internal) such as washing the children and cleaning the environment where the children lived, cooking and feeding them, washing their clothes and preparing their sleeping places as well as monitoring them while they played. The fathers were perceived to mostly perform parenting roles outside the home (external) like working in the farms and other places to generate some income for their families.

Both parents played the roles of decision making on what is the best for their children. The mothers provided more care to their children than the fathers especially when sick. On the other hand, the fathers had the role of providing for the daily basic needs of their families and providing financial support more than the mothers. The

fathers believed that it was the role of the mothers to take care of the children at home while they looked for finances. They were also of the belief that the mothers should try income generating activities to boost the family income and help them in dealing with the ever increasing cost of living.

The mothers believed that the fathers should set aside some time to get involved with their children because they believed that they have a major role to play as fathers. They also believed that children would have much better health if the fathers were more physically involved in the management of child health. However, both fathers and mothers had a positive attitude towards parenting and were willing to do anything possible that would improve the well-being of their children.

### 3) Paternal involvement with their children in this community

The fathers were unintentionally less involved with their children. They were willing to be involved in the management of the health of their children but it had not been possible because of their prevailing economic hardships, limited sources of income and the lack of resources in the area. Instead of spending time with their children or participating in child healthcare programmes, the fathers moved around to look for jobs and work to support their families financially. Although the quantitative results did not indicate whether the fathers were willing or not, the reasons they gave for not being involved with their children were supported by the quantitative results.

Parenting was highly perceived by both fathers and mothers as a source of increased self-esteem. Fathers enjoyed fatherhood because of the respect they were accorded by the other community members because they are viewed as responsible persons. A father I will call MD had the following in support of the above statement, *“When I am walking around in the village and when I meet other people in the village, they*

*respect me because to them I am a responsible man. Generally, the respect conferred to adults who are parents is more than that accorded to adults who are not parents”.*

Fear of lack of protection and care in their old age was picked by this sub-study as an existing threat by some of the parents. They reported to be happy as parents because when one becomes a parent is assured, (although not guaranteed), that one will be taken care of by one’s children when old.

Some parents still view children as a kind of investment or resource and source of labour especially in executing the day-to-day activities of the family. Father X said the following in support of the above argument, *“It is very good for one to have a wife and children because when they are below 18 years old, they can help you in the farm and other domestic jobs and when they become adults and start working, they can take care of their old parents. I have also realized that majority of the old people you see around in the village and are not well taken care of, do not have children.”*

#### 4) Factors affecting paternal participation or involvement with their children

When the quantitative and the qualitative results were triangulated, parents’ reported a lack of healthcare information, especially the fathers, since the healthcare system was unfavourable to the fathers’ day-to-day activities and the distance between the households and the local health Centre were found to be the major factors affecting paternal involvement with their children. The fathers lacked the healthcare information which is important in the management of child health. This is majorly as a result of the design and operation of the existing healthcare system.

The healthcare education is provided at the local health Centre to the visiting parents, the majority of whom are the mothers. The fathers rarely visit the local health



Centre because most of them are available only on weekends when the health Centre is closed and only provides first aid services to emergency cases before they are referred to the Msambweni District Hospital.

Financial challenges and the limited resources in the area and the fact that the fathers are viewed as the breadwinners in these communities, negatively affect the amount of time the fathers could spend or get involved with their children.

The distance between the homes and the Kikoneni health Centre has been identified as a major barrier in getting the fathers to be involved with their children especially when they fell ill. It was also associated with low uptake of vaccination programmes. For instance, there was a five-year old boy from one of the villages within the study area, more than 5km away from the local health Centre, who had not been vaccinated against any disease.

## Chapter 5: Discussion, Conclusion and Recommendations

### Introduction

This chapter provides an in-depth argument of the findings based on the objectives of this study and supporting data from other previous studies which have been carried out in the area of paternal involvement with their children. It also provides the conclusions and appropriate recommendations on possible ways to increase paternal involvement in promoting child well-being in the study area.

#### 1) The association between parental characteristics and child health variables

There is adequate literature through scientific research showing that some parental characteristics such as the education level, occupation, parenting stress and marital status have an effect on paternal involvement with their children and the overall well-being of the child<sup>[11, 42, 50]</sup>. This study found only weak (*positive and negative*) associations after investigating the relationship between the parents' characteristics such as income, level of education, stress, occupation, marital status and duration in marriage and child health outcomes. A discussion of how these characteristics impact on level of paternal involvement with their children has also been provided. The studied rural families were mainly characterized by limited access to resources, a common characteristic within the Sub-Saharan Africa (SSA).

*Income:* This study compared both paternal and maternal incomes and the results were as expected. The mothers had much lower income than the fathers. When the relationship between the parents' income and child health variables used was explored, the results suggested that higher paternal income led to increased number of reported

sick visits while high maternal income led to improved child hfa, wfa and blood hb levels. This was an indicator that children in this region usually become sick and parents are reluctant to take them to the health Centres for check-up due to limited access to resources and funds.

Based on the findings of previous studies, the higher the paternal income the more likely that they would be involved with their children and consequently, their children would have better health status and vice versa<sup>[39, 40]</sup>. Rangarajan revealed that paternal involvement is expected to continue even after a divorce or separation<sup>[40, 51]</sup>. However, the fathers were less involved with their children because of their general low income. Previous studies have also found similar results where low-income families were found to have relatively low participation or even completely refuse certain healthcare programmes<sup>[52]</sup>.

Similarly, McLoyd in his study also revealed that better household income has a direct positive effect on paternal involvement which leads to improved child well-being<sup>[36]</sup>. The results of this study showed that increased paternal income led to a drop in the hfa and wfa values, child blood hb levels and complete vaccination cases and high maternal income led to a decrease in the number of recorded sick visits and vaccination cases. These results were unusual and unexpected since it was not clear if there were other factors driving them. Contrary, the findings of another study revealed that fathers assumed more caregiving responsibilities when they contributed lower proportions of family income<sup>[50]</sup>.

Since the cultural norm in the communities studied is that fathers are the breadwinners, when maternal income increases, it boosts the paternal income hence increased household income. This improves the parents' ability to better handle the health needs of their children such as providing better nutrition and medical care. This

implies that increased financial empowerment of both parents would lead to better management of child health in the community.

Fathers suggested employment of the mothers but this must be done with a lot of carefulness because other studies argue that maternal employment is not anticipated to be linked directly to child contact with the father or with child health<sup>[33]</sup>. Previous studies show that maternal employment would have a negative effect on child health because of the reduced time with their children<sup>[33, 53]</sup>. Therefore, it is important to consider empowering the mothers financially without significantly reducing the amount of time they spend with their children.

*Occupation:* Since this study took place in a rural area, limited employment opportunities becomes an obvious challenge especially when coupled with the high illiteracy levels witnessed in this study. This translates to limited access to resources and other basic needs. All the study participant mothers were house wives and majority of the fathers were casual labourers. However, a small group of the mothers either operated small scale businesses or sometimes worked as casual labourers when opportunities emerged around their homes.

This was also reflected national records collected in 2002 to help in strategic planning for the then Kwale District<sup>[54]</sup>. Based on the findings from other studies<sup>[33, 53]</sup>, children whose parents' work around their homes, had better health outcomes than those of parents who work away from home for many hours. Researchers have not only investigated employment status but also the workplace conditions that may shape family relationships under the guidance of role stress theory<sup>[55]</sup> which holds that experiences of stress in the workplace often spill over into the home negatively impacting individuals and families.

Collectively, studies examining role stress in the workplace have suggested that exposure to chronic workplace stressors may be associated with lower quality relationships between workers and their family members, including lower quality parent-child interactions<sup>[56, 57]</sup>. From the maternal reports in this study, fathers showed signs and symptoms of stress as a result of the challenges they face at their places of work. The general characteristics of casual jobs, the main jobs for the fathers in this study, include they are difficult to find and they are extremely tedious, constituting to the major stressors among the fathers<sup>[58]</sup>.

This was indicated by the fathers continuously taking alcohol after work and coming home late in the night when everybody including children had already gone to bed. According to the mothers, this habit has really reduced paternal involvement with their children. This is in agreement with the findings of other previous studies examining associations between work characteristics and parent-child relationships<sup>[59, 60]</sup> which have shown negative effects of work stress on parenting quality.

Fathers had reported feeling overburdened and according to a previous study by Crouter and colleagues, experiences of work related pressure may lead to increased feelings of role-overload, that is, the feeling that there is too much to do and not enough time to do it. The feelings of role-overload, in turn, were related to conflictual parent-offspring relationships and in turn, lower offspring well-being<sup>[59]</sup>.

When crosstabs were run on the different types of occupations against the child health variables, the results showed that the largest proportion of the children with health problems (stunted, underweight, low hb, incomplete vaccination programmes, unknown vaccination status and more sick visits), came from families whose fathers were either casual labourers or mothers were housewives. It was not very clear if this

was definite because majority of the fathers were casuals while the mothers were housewives.

However, these findings were consistent with the findings of previous studies where the fathers' employment hours were linked to paternal involvement. The findings showed that fathers who were employed for more hours were less involved in caregiving than fathers who worked fewer hours<sup>[61, 62]</sup>. The fathers in this study most of the time worked in areas away from their homes for the whole day, weekdays and sometimes weekends thus finding difficulty to spend some time with their children.

As far as maternal employment is concerned, the results of a previous study suggested that maternal employment was linked to child health both positively as a result of increased income and negatively as a result of reduced available time<sup>[33, 53]</sup>. In this study area, there are limited chances for maternal employment to increase the household income because of several factors which include the way the females are socialized by their culture, limited employment opportunities, and high illiteracy level<sup>[58]</sup>. It is important to find ways of creating suitable employment opportunities for the mothers because previous studies in other regions have revealed that father's involvement with children is proportionately greater when mothers are employed<sup>[38, 63]</sup>.

*Education level:* Similar to the study carried out by Goodman and colleagues<sup>[64]</sup>, the results of this study show that fathers had higher literacy level than the mothers. However, there was no significant association between the parents' level of education and child health outcomes measured. Research carried out by Rammohan and colleagues investigating the influence of paternal education status on infants' measles vaccination uptake independent of maternal education status suggests that even if a mother was illiterate, having a father with an education of Secondary (high school) schooling and above was statistically significant and positively correlated with the

likelihood of a child being vaccinated for measles<sup>[65]</sup>. Paternal education of secondary or higher level was significantly and independently correlated with measles immunization uptake after controlling for all potential confounders.

According to another study<sup>[58]</sup>, education is a key indicator of personal resources and is highly predictive of employment in jobs characterized by occupational complexity, low levels of routinization and more formal and informal work supports. High levels of education may shield individuals from negative effects of workplace stressors and conversely, low education may serve as a risk factor, exacerbating the negative outcomes associated with work stress<sup>[66]</sup>. This was consistent with the findings of other studies previously carried out in this region <sup>[1, 2]</sup> and the national records compiled in 2005<sup>[54]</sup>. This is a clear indicator that all the parents studied are at a greater risk of reducing their involvement with their children due to stressors facilitated by their low level of education.

*Ethnicity:* When ethnicity was explored to find out how if the health of the children studied varied between the two communities studied, none was found to be statistically significant. However, there was a weak positive correlation between ethnicity and the child's hfa and blood hb levels and a weak negative correlation between ethnicity and the child's wfa, recorded sick visits and vaccination. These results suggested that the children from the non-Mijikenda group stood a better chance than their equals from the Mijikenda group of having completed their vaccination programmes by their first birthday, to have higher hb levels, not stunted and with less recorded sick visits within the same period of time.

Holding other factors constant, the reduced reported sick visits would have been as a result of completed vaccination programmes which are well known for boosting the immunity system of children. It was not clear what community practice led was

associated with children from the non-Mijikenda group having better haemoglobin, hfa levels and at a higher risk of being underweight. These mixed results are obviously as a result of interaction of multiple socio-economic factors, therefore, there is need for a more detailed longitudinal observational investigation to provide a better explanation.

According to other studies, factors such as lack of knowledge, financial problems, certain religious beliefs and cultural practices(*obtained through the socialization process*) can contribute in not taking the children to the health Centre even when they show signs of illness<sup>[67]</sup>. The ways in which the people are socialized by their culture plays a major role in determining what type of parent one would be<sup>[43]</sup>.

Through the in-depth interviews, this study revealed that the Mijikenda culture socializes women to be primary caregivers to their children while the husbands are socialized to be the breadwinners and take care of the family's financial needs. According to the culture of the two communities studied, the mothers were perceived to be more involved with their children than the fathers who are perceived as supporters to the primary parent, the mother<sup>[68-70]</sup>.

*Parenting stress:* Based of the findings from the other studies, parental stress negatively affects proper management of child well-being<sup>[9, 38]</sup>. This study compared both paternal and maternal parenting stress with child health outcomes and the findings revealed that fathers had higher parenting stress levels than the mothers. These findings were not consistent with previous studies which have revealed many similarities than differences between the two the fathers and mothers. A study investigating parenting stress between mothers and fathers using 36 items of the PSI, found mixed results with few differences in mothers' and fathers' means only on three parenting stress subscale scores<sup>[71]</sup>. It was surprising to find that, when parenting stress



levels were ranked, all the parents who participated in this study had either average or high parenting stress levels.

Unlike the findings in other studies, when the relationship between the parenting stress for both parents and child health was investigated, none were found to be statistically significant. Nevertheless, fathers' parenting stress had a weak positive correlation with the child's recorded number of sick visits which was highly associated with too much worry among the fathers about the well-being of their children and consequently made mothers to take their children for check-ups frequently whenever they showed signs of illness.

Similar to the findings of other previous studies<sup>[71, 72]</sup>, when the potential causes of fathers' parenting stress were explored, more parenting stress was associated with lower family income, too much worry for the unknown and education for the parents. According to a survey conducted in 2002 to help in the strategic planning of the region, the low household incomes in the region were due to their over-dependence on agricultural production which is challenged by several factors such as poor infrastructure (roads and electricity), inadequate production due to poor land tenure system, unreliable rainfall sometimes, poor and underdeveloped agricultural marketing infrastructure<sup>[54]</sup>.

When the parents' responses were tested for significance, the results suggested that the parent's extra challenges in parenting and their ability to handle their children well were statistically significant. The results suggest that the more extra challenges a parent faces in parenting and the more the parent feels unable to handle their child or children well, the worse their parenting and vice versa. Moreover, the above two factors are potential sources of parenting stress and can consequently lead to poor management

of child health and eventual poor child well-being<sup>[73]</sup>. Previous studies have also shown a negative association between parenting stress and poor child wellbeing<sup>[74]</sup>.

*Maternal stress:* The results of this study revealed a weak negative correlation between the mothers' parenting stress and the child's recorded sick visits and a weak positive correlation with the other health variables of the child used in this sub-study (hfa, wfa, and hb and vaccination status). This implied increased maternal stress was positively associated less recorded sick visits for the child and children were more likely to have higher scores for wfa, hfa, hb levels and more likely to complete their immunization programmes by their first birthday. This was in contradiction with the findings of the previous studies which have shown that increased maternal stress negatively and adversely affects the child health<sup>[75, 76]</sup>. Therefore, there is need for more investigation to justify this unlikely phenomenon in this region.

*Religion:* As expected, majority of the families who participated in this sub-study were mainly of Islamic religion. When the relationship between religion and child health variables was explored, the results suggested that there was no significant association between religion and any of the child health variable measured in this sub-study. However, the results showed a weak negative correlation between religion and some of the child health variables used except for the child's recorded sick visits.

These results imply that, the children from the Christian families were at a lesser risk of becoming stunted, underweight, having low hb and not having been vaccinated by the end of their first birthday unlike their equals from the Islamic families. However, this should not be used to suggest that the children from the Islamic families became sick more often than those from Christian families because these records were obtained from the health Centre and they depended on multiple factors.

Some religious practices especially from Islam were however perceived as potential factors affecting child health wellbeing like the compulsory fasting practiced every year, 'Ramadhan'<sup>[77]</sup>. During this month, mostly August, all Muslims undergo compulsory fasting and although the children included, they are indirectly affected. The quantity of milk from the breastfeeding mothers reduces due to the reduced frequency of meals they take per day.

Definitely this has negative impacts on the health of the child such as reduced hb levels, weights, heights and increased chances of becoming ill due to their weakened immunity system. However, there is need to closely investigate this phenomenon to provide a clear and reliable explanation. Polygamous marriage permitted by the Islamic religion is another practice that was associated with reduced paternal involvement with their children. Men end up having children with different wives staying in different locations some of which are very far apart. In such a situation it becomes almost impossible for the fathers to have quality time with their children<sup>[78]</sup>.

*Home location:* The results of this study did not find any statistically significant association between home location and any child health variables measured although it was negatively but weakly correlated with the child's wfa, haemoglobin levels and increased chances of having incomplete vaccination programmes by first birthday. These results imply that, the farther the households from the local health Centre, the more likely that the children from these households would have poor health outcomes than their equals from homes near the health Centre.

According to the findings of the previous studies which have investigated accessibility and utilization of healthcare services<sup>[1, 2]</sup>, distance between homes and the health facilities has been negatively associated with access and utilization of healthcare services. This would imply that those children from the households near the local health

Centre were healthier and their fathers were more involved than those who came from households far away from the local health Centre.

Another study carried out in this region to find out the barriers towards hospital delivery found similar results. It revealed that long distances from the health facilities, poor impassable roads especially during the rainy season and poor geographical terrain, are some of the major obstacles in accessing and utilizing healthcare services<sup>[2]</sup>. When other factors which are associated with long distance are considered like increased cost of transport, lack of means of transport, it becomes a potential obstacle towards paternal involvement with their children especially when they are ill.

*Duration in marriage:* According to other previous studies, the longer the period the parents have stayed in marriage, the more experienced they become in handling their children better than those parents who have stayed in marriage for a shorter period. The results of this study suggested that majority of the sub-study participant parents were less experienced in parenting because they had stayed in their marriage or cohabited for less than ten years. When the relationship between parents' duration in marriage and the child health variables was investigated none was found to be statistically significant.

However, there was a positive but weak correlation between the duration in marriage and the child's hfa, wfa and vaccination status. These results imply that the health status of those children, whose parents had stayed in marriage for more than ten years, was better than that of children whose parents had stayed in marriage for a shorter period (less than ten years). However, it was not clear why the duration in marriage was negatively but weakly correlated with the child's hb and the recorded sick visits.

Having not utilized the best possible methods to explore the relationship between these two variables, this study could not provide a detailed explanation and therefore, there is need for more research to provide more detailed and reliable results. Although marital quality was not explored in this study, majority of the previous studies have focussed mainly on the quality of marriage and have jointly suggested that it has an effect on the quality of paternal involvement with their children [32, 53, 76, 79]. They have shown that when men derive satisfaction from their marital relationship, they are more likely to identify with the role of father and to commit themselves to the care of their children<sup>[80]</sup>.

## 2) The differences between the parental roles, beliefs and attitudes in managing child health

According to a study carried out to investigate mothers' and fathers' childcare involvement with their young children in rural Muslim Malay families, mothers were portrayed as the primary caregivers to infants than fathers. Particularly, the mothers were reported to have spent more time cleaning, feeding and playing with their children than the fathers<sup>[67]</sup>. Similarly, the fathers in this study were less involved with their children than the mothers who were perceived to be the primary caregivers while men were perceived as secondary.

Descriptive analyses of both maternal and paternal reports on their roles revealed that there was a significant difference between the roles of the fathers and mothers especially in providing care to the child when sick. Within the two communities studied, the mothers were more involved than the fathers. These findings are similar to other several cultural groups across the world<sup>[81]</sup>.

Generally, this difference in maternal and paternal involvement was associated with the patriarchal nature of the African traditional societies where the father's role in the family is often linked to his authority and breadwinning capabilities<sup>[81]</sup>. This is also the case in the communities studied whose cultural belief structures stress the importance of women in caregiving and men in economic activities especially among the Muslim families.

Although this study lacks data to explore if this pattern is similar to urban families, a study on sex roles carried out by Noor in Peninsular Malaysia revealed that rural fathers were less involved than their urban counterparts<sup>[82]</sup>. This was associated with adherence to the traditional, hegemonic model in the division of childcare responsibilities in the family. This was presumed to be true in the two communities studied since there is very little if any influence of the traditional ways of parenting by globalization or westernization<sup>[83]</sup>.

### 3) Paternal involvement with their children in the study area

*Paternal willingness:* This study found that the fathers were willing to be involved with their children and to participate in any activity or programme that would help in better management of the health of their children. This was consistent with the findings of a study carried out by Sherriff N. and Hall V. on engaging and supporting fathers to promote breastfeeding. They revealed that the fathers were interested in breastfeeding and wanted to be involved more broadly in preparation for, and supporting of breastfeeding<sup>[23]</sup>. Another study showed positive health outcomes of father's involvement in pregnancy and childbirth paternal support<sup>[84]</sup>.

*Paternal roles:* According to this study, it is true to say that fathers have a key role to play in decision making, provision of daily needs and financial support for their

families. As observed, it could not be concluded that fathers have contributed same as mothers in supporting their children when sick because, in addition to maternal reports, the fathers also reported that they are usually less directly involved in actual provision of care to their children especially when they fall sick.

The few fathers who accompanied their children or the mothers to the health Centres only did so when there was a major problem requiring their physical help like when the patient is so sick to walk or sit in position. Similar to the findings of previous studies, they instead engage themselves in other activities, particularly, income generating activities to pay for their hospital bills and cater for other family needs<sup>[85]</sup>.

*Paternal involvement with young children:* Other fathers reported that children need more maternal than paternal care when they were below two years. This analysis confirms previous research findings that have shown that mothers are, overall, more involved than are fathers in childrearing especially when they are young<sup>[86]</sup>. The fathers however reported that their financial involvement increases as the child grows older because their needs increase as they grow. Previous studies have shown that fathers appear more involved with younger than older children<sup>[32]</sup>. Comparing the reports by fathers in this study and the findings by other previous studies, it is clear the fathers in these communities may never be involved with their children in their entire lives.

In a study where child's health was used as a determinant of paternal involvement, the findings suggested that it is possible that the direction of the relationship between father involvement such as contact or child support and health is the reverse; poor child health leads to less father involvement. This is so because the utility from investment in their union with children reduces when the health of one's child is worse than anticipated<sup>[87]</sup>.

However, this kind of behaviour was not explored in this study because of limited time, but if these findings are applicable in this area, the outcome may be worse considering the existence of the other challenges affecting paternal involvement such as limited resources. Therefore, there is need to carry out a longitudinal investigation to find out the existence of this phenomenon.

#### *Reasons why fathers felt happy to be parents*

The main reasons associated with the fathers' happiness in parenting included 1) parenting was perceived by both fathers and mothers as a source of increased self-esteem. Fathers enjoyed fatherhood because of the respect they were accorded by the other community members for being parents. 2) They perceived children as a way of taking care of the future especially at old age.

They reported that they were somehow assured, although not guaranteed, that the children would take care of them when they will be old and unable to do everything for themselves. 3) Some parents viewed children as a source of labour especially in executing the day-to-day activities of the family. According to a study carried out Coleman and colleagues, the above reasons cited by fathers were typical characteristics of a traditional society and would be more common in rural than urban areas. In rural areas there is less influence of the society's culture by other cultures and forces like westernization<sup>[88]</sup>.

#### 4) Factors affecting paternal participation or involvement with their children

*Lack of healthcare information:* Child healthcare information has not been adequately provided to the fathers by the current health system (*health education sessions offered by the nurses at the MCH and by use of the posters*) as it has targetted the health



Centres where majority of the parents who visit them are mothers. The fathers who rarely visit these facilities are largely left out. For instance, the parents of that child who had not been vaccinated reported that they did not see any need to take their children to the hospital when they were not sick.

Previous studies have shown that lack of healthcare information can lead to non-adherence or complete non-participation in certain healthcare services such as vaccination programmes.<sup>[65]</sup> This study associated the reasons cited by the families which dropped out of the main study to of lack of information. They had misconceptions associating the main study with some devil worshipping. In a previous study carried out by Khowaja and colleagues in Pakistan, some of the reasons cited by the parents for refusing polio vaccination included fear of sterility, lack of faith in polio vaccine, skepticism about the vaccination programme and the fear that the vaccine might contain religiously forbidden ingredients<sup>[52]</sup>. To have these parents onboard, there is need to provide them with the relevant information.

Community Health Workers (CHWs), the alternative healthcare education providers to the community members, were reported to be a major strength existing although not fully being utilized. They were reported to have reached some people in the some of the hard-to-reach areas in the community although with a lot of logistical challenges, the major one being lack of reliable means of transport and financial motivation. According to a study carried out in UK, the CHWs can be very useful in educating and increasing paternal involvement with their children<sup>[23]</sup>.

*Biased healthcare system:* The Kikoneni health Centre provides the main healthcare services from on weekdays when majority of the fathers are busy at their various places of work. On weekends, the Centre provides only first aid services to emergency cases before they are referred to the Msambweni District Hospital. This timing does not suit

the fathers since majority of them get time to be at home only on weekends. According to Wells and Sarkadi, creation of father-friendly policies has been found to help increase father involvement in their children's lives<sup>[10]</sup>.

*Limited resources:* Due to the limited resources, the fathers suggested that the mothers should find some domestic friendly income generating opportunities to help them boost their family income. The mothers also suggested that the fathers needed to improve on the performance of their roles as the family breadwinners by looking for better job opportunities with more income to meet the ever increasing needs of their families. These findings are consistent with previous studies which have shown that involvement of fathers in child healthcare programmes, especially from the low-income settings, is difficult and expensive<sup>[89]</sup>.

Some mothers suggested that the fathers should do something about their willingness to be involved with their children. They need to create some quality time from their tight schedules to participate in activities and programmes promoting child health and also time to stay with their children. The suggestion by mothers to involve the fathers in the management of child health and other health related areas were also made in previous studies<sup>[1, 2]</sup>. Others studies have shown a significant improvement in public health areas where fathers were brought onboard<sup>[90]</sup>.

This study found that the farther a household was from the local health Centre, the more likely that the fathers were less involved with their children especially when sick and consequently the worse the health status of their children. This is so because long distance implied high transport costs and became a challenge because of the low family income and lack of sustainable sources of income. The distance negatively affects the fathers' ability to access healthcare information hence their reduced involvement with their children. Distance and poor roads and terrain were also found to be major

barriers towards accessing healthcare services in previous studies carried out in the study area<sup>[2]</sup>.

### Summary of the main study findings

- 1) Fathers in this region have positive attitudes towards parenting.
- 2) The implementation of the current health information system in the region is biased in favour of the mothers. Paternal involvement has not been considered.
- 3) Fathers are willing to be involved in activities aimed at promoting the well-being of their children but the main challenge facing their physical involvement is the prevailing economic hardships and limited sources of income.
- 4) Fathers were more stressed than mothers by the well-being of their children.
- 5) All the parents who participated in this sub-study were happy about the micronutrient supplementation study (main study). Majority of them reported that they had observed a positive difference in terms of cognitive development compared to the other non-study participant children of the same age. When they were asked about how the main study was perceived by the other people in the community they reported that majority of those people who dropped out of the study were superstitious about the supplementation. They could not understand why blood samples had to be taken from their children at different time points. They believed that the project involved some devil worshipping and that is why they were being given free maize meal and their transport to the health Centre reimbursed.
- 6) However, some fathers reported that the way the main study was introduced and the way the recruitment of children into the main study was conducted, did not value the involvement of both parents because only the mothers were contacted in most of the families. Therefore, majority of the fathers felt that their

involvement was neglected from the beginning and they assumed that the main study required only mothers and children. During the interviews for the sub-study, in some families where mothers accepted their children to be enrolled in the main study without the consent of the fathers, some fathers confessed that it led to arguments between them and the mothers with fathers claiming that the index child did not belong to the mother alone but to both of them.

### Study limitations

- 1) The sub-study could not carry out the same investigation about the involvement of fathers in promoting child well-being from an urban population because of ethical issues.
- 2) The study only interviewed those parents who could be available for discussion; mostly those who were staying together. Unavailable fathers were not included.
- 3) It covered a small area and sample size.
- 4) This study has a major shortcoming of not utilizing assessments of the multitude of factors that influence the fathers' involvement in the study area. No specific method was used to directly measure the level of paternal involvement with their children.

### Primary Challenges for this sub-study

- 1) *Logistics*: Logistical problems which include poor terrain and impassable roads in some areas especially after rains and several tire punctures. All delayed the interviews for some time.
- 2) *Lack of cooperation*: Sometimes parents (*mostly the fathers*) failed to turn up for the appointments so that they can attend to other family related issues/demands which were considered more important.

- 3) *Resources*: More time and energy (*than expected*) was invested in explaining the sub-study participants to make them understand the purpose of the data that will be collected and what will happen after the interviews.

## Recommendations for Developing Health Awareness Programmes

- 1) *Modification of the healthcare system*: There is a need for the modification of the design of the healthcare system to create father-friendly environments while considering the nature of the day-to-day activities of the fathers. Identification of venues that maximize participation of fathers: with many services available only at times inconvenient or impossible for working men to become directly involved in the care of their children, creativity is required to bring routine care closer to home.
- 2) *Provision of the healthcare education to the fathers*: Both fathers and mothers suggested that health education among the fathers would be increased and more fathers reached if the providers (*government and the non-governmental organizations*) target the unexploited pathways where fathers are easily found in large numbers. The health education providers should work closely with the different community leaders and make use of such opportunities as religious meetings, community meetings '*barazas*' in the community and at the schools. The attendance of the fathers in such social gatherings was said to be more than that of the mothers. Posters printed in the local languages, vernacular radio stations and the use of self-explanatory pictures were also suggested. The posters would not only be pinned at the health Centre but also at home and at the market places. All these would supplement the clinic based health information systems.
- 3) *Role awareness among the parents*: There is a need to make parents understand their complementary roles and those of other family members. The goal of parenting

programmes should not be to turn fathers into mothers. Rather than having specific duties for specific family members, there is need to encourage and promote shared responsibility between parents to maximize the benefits to the child.

- 4) *Integration of conflict management with health awareness programmes:* There is need to create awareness among the parents to be able to integrate conflict management with health awareness programmes. This will help them in formulating effective solutions to health and socio-economic problems through joint decision-making.
- 5) *Inclusiveness:* Inclusion of all who take a role in child-care: Each parent should be targetted directly by issuing separate invitations to participate in planned events involving their children. In other words the involvement of fathers, and other significant members of the family, should form the basis for planning and the subsequent execution of programmes that support child health.
- 6) *Decentralization of programmes:* Programmes, especially those concerning prevention and daily care, should be decentralized, and should exploit the strengths of informal networks. The specific recommendation is to explore the possibility of developing health clubs for fathers at a location close to home or their work place.
- 7) *Promoting education:* the general public especially the girls should be encouraged to pursue education to at least complete the secondary school level. This would help them in understanding crucial health information to better manage the well-being of their children.
- 8) *Increasing accessibility and utilization of the healthcare services:* To increase the effectiveness of vaccination programmes, the government needs to put up more health facilities in the remote areas or open up these areas by providing them

with good roads while expanding the Kikoneni health Centre to increase their accessibility and the utilization of the available healthcare services.

- 9) *Continuation of research funding on fathers:* Continue research and funding of studies on fathers: it has been proven that the presence or absence of fathers has an impact on emotional, physical, cognitive, and physiological development of children. However, further research is needed in the area of paternal involvement in the management of child health.
- 10) *Men empowerment:* Creation of opportunities for men that allow them to discuss lessons learned, give advice, and share wisdom that can be passed on to others. Men can be instrumental in helping other men become not only healthy men but also healthy and good fathers.

## Conclusion

Fathers have, until recently, been largely overlooked in health programme design despite the recognizable benefits to health care management of involving the whole family network. Current health services and systems for the dissemination of health information are centered on mothers caring for their children. This focus ignores the social framework that is a fundamental part of traditional African beliefs about health; an oversight recognized by the community members consulted by this sub-study.

Furthermore, unless child health programmes directly address the existence of multiple players with different and competing information sources there are potentially negative consequences for children that stem from a lack of co-operation within families and between parents. The active inclusion of the wider family should form the core of health services if we are to see a significant and sustainable improvement in child health indicators in the region.

This will mean taking health care to the family, improving communication channels, changing the attitude of the fathers in parenting to start recognizing the value of their involvement with their children, and reducing the dependence upon clinic-based services like supporting the CHWs and maximizing their capacity in improving child well-being.

Since this was a cross sectional study, future longitudinal-observational family studies that use multiple measures are preferable sources of information for addressing paternal roles, behaviours, beliefs and their involvement in childcare. This method should provide much-needed information on the dynamics of family life and the assumption of caregiving activities by diverse members in the extended family system. Due to the nature and the size of the sample used, there is limited generalizability of the findings across the Kenyan families.



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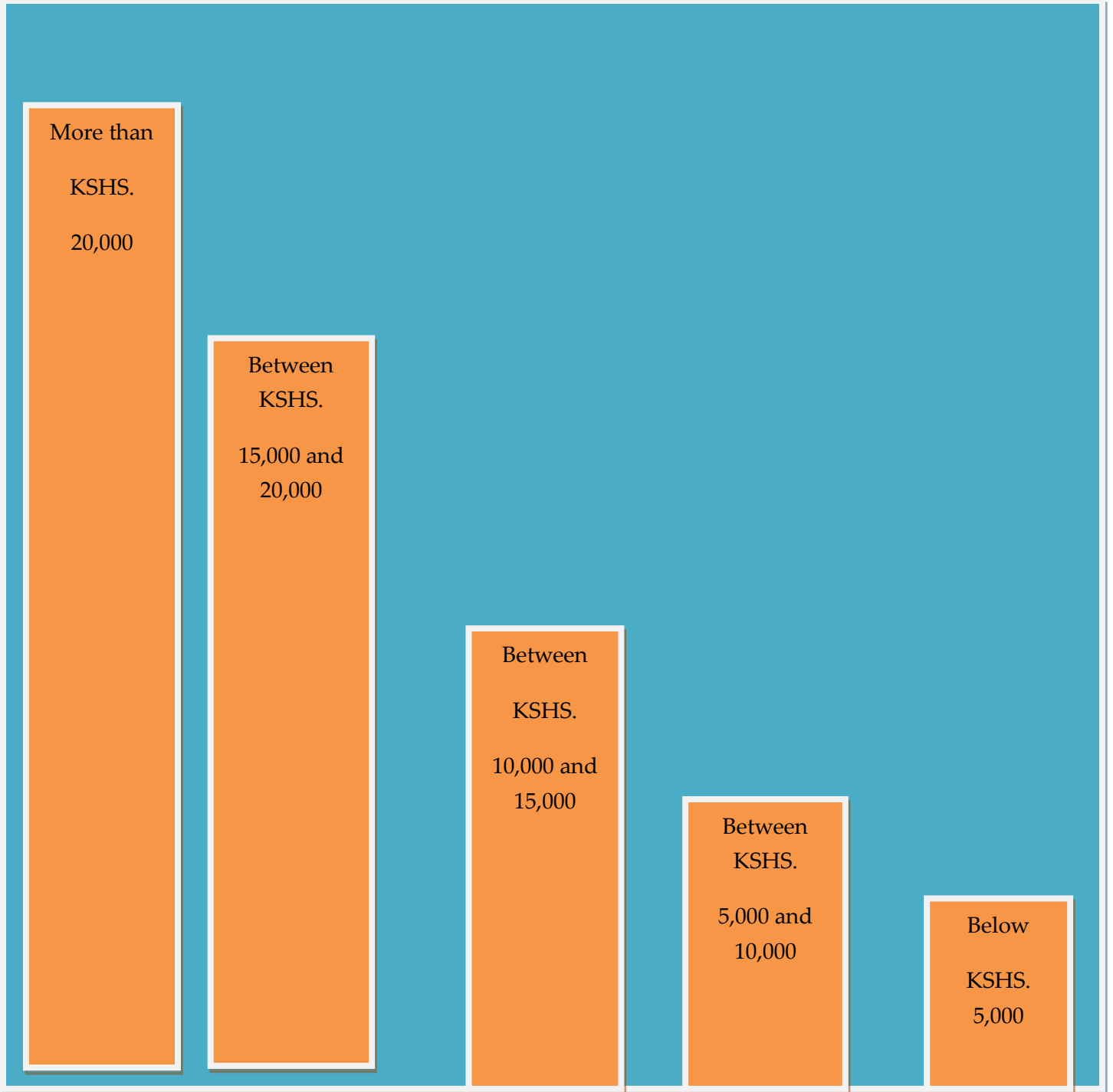
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## APPENDICES

### *Appendix I: Five point scale monthly income rating card.*



*Appendix II: In-depth Interview Guide (English version)*

**INSTAPA WP6: AI Sub-study**

In-depth Interview Guide: Paternal roles in promoting child well-being: What are the challenges facing paternal involvement in child health care in rural South Coast Kenya?

**Child ID:** ..... **PARENT (Mother/Father):** ..... **Date:** .....

1. Umri wa mzazi. *Age of the parent (tick appropriately)*  
 ≤ 20 years                       ≥21- ≤ 40 years                       ≥ 41 years

2. Umri (Age) (use the table alongside)
- |                                 |  |  |              |
|---------------------------------|--|--|--------------|
| <i>Duration of marriage</i>     |  |  | <i>years</i> |
| <i>Duration spent in school</i> |  |  | <i>years</i> |

3. Umesoma mpaka kiwango gani? *What is your level of education?* .....

4. Kazi gani unayotegemea zaidi? *What is your main occupation?*  
 .....

5. Una kazi nyingine ya pili ambayo inakusaidia? *Do you have a secondary occupation or another source of income?*  
 .....  
 .....  
 .....

6. Huwa unafanya nini wakati hauendi katika shughuli zako za kila siku? *What do you do when you are not going to your normal work?*

7. Huwa unaenda kazini kutoka nyumbani ama kazi yako iko mbali na nyumbani? *Do you mostly leave home for work or you work away from home?* .....

8. Kama umeajiriwa, huwa unapewa siku za kupumzika na unalipwa? *(If employed, are you given paid leaves?)*  
 YES [ ] NO [ ]

9. Mapato yako kwa mwezi/ *Can you estimate your your monthly income (use the table alongside).*

10. Unajihisi vipi kama mzazi? *(How do you feel to be a parent (mother/father)?*

Income Class	Tick	Reg.	Irreg.
≤ 5000			
≥ 5001-≤10,000			
≥ 10,001-≤15,000			
≥15,001-≤20,000			
≥20,001			



.....  
.....  
.....

11. Nipe maoni yako kuhusu usambazaji wa habari za afya ya watoto. *Tell me something about the sources of child health information.*

.....  
.....  
.....

12. Njia hizi za habari kuhusu afya ya watoto zinaweza kuboreshwa vipi? *Do you have any recommendations on ways of improving the sources of child health information?*

.....  
.....  
.....

13. Kijiji hiki huwa kinashughulikia maswala ya afya ya watoto? Kama Ndio, vipi? Eleza. *Does the neighbourhood organize itself to deal with health issues? If so, how? (who attends, how frequent?, any health forum you know) Can you tell me something about any health forums about child health that you participate or have ever participated?*

.....  
.....  
.....

14. Katika kijiji hiki hebu nieleze kuhusu majukumu ya akina baba na akina mama/ *Tell me something about the roles of fathers and mothers in this neighbourhood as it concerns the health of your child or children (checked for availability, culture & religion)*

a) Kifedha/*Financially*

.....  
.....

b) Katika kufanya maamuzi/*Decision making*

.....  
.....

c) Kumtunza/kuwatunza/*Provision of care(e.g. cooking, feeding, washing the children etc.)*

.....  
.....

d) Una majukumu mengine? *Any other role like (taking the child to the hospital when sick),*

.....  
.....

15. Hayo majukumu yako ni mengi ama ni kidogo? Eleza. */How burdening are the roles you perform to your family?*

.....  
.....

16. Majukumu yako yanabadilika mtoto anapokua? Eleza. */Do your roles change with the changing age of your child (ren) and if so, why?*

.....  
.....

17. Umepata changamoto zipi kama mzazi? *What challenges have you faced in parenting?*

.....  
.....  
.....

*Appendix III: Parenting Stress Inventory (original questionnaire)*

## PARENTING STRESS INDEX (PSI)

Directions:

When answering these questions, we ask you to think of a child which you are very concerned about.

Questions in the following pages ask you to make a mark on an answer which describes your feelings well. Before getting the specific answer which describes your exact feelings, we ask you to please make a mark on the answer closest to the description of your feelings. Your first reaction to each question should be your answer.

We ask you to please mark the degree of your agreement or disagreement with the following statements by filling in the number which matches your feelings most. When you are not sure please fill in number 3.

1	2	3	4	5
Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
Example 1 2 3 4 5	I enjoy going to the movies (If you sometimes enjoy going to the movies, you would fill in No. 2.)			

When my child wants something, my child keeps on trying to get it.

1. My child is so active that it exhausts me
2. My child looks unorganized and is easily distracted.
3. When compared with most, my child has difficulty in concentrating and paying attention.
4. My child will always be doing something with a toy for more than ten minutes.
5. My child roams about more than I expected.
6. My child is more active than I expected.
7. My child twists around and kicks a lot when dressed or bathed.
8. My child can be easily distracted when looking for something.
9. My child rarely does for me some things which make me feel good.

10. During most of the time I feel that my child loves me and wants to be next to me.
11. I sometimes feel that my child does not love me and does not want to be next to me.
12. My child smiles for me very less than I expected.
13. When I do things for my child I feel that my efforts are not appreciated a lot.
14. Which statement describes your child the best?
  - a. Almost always likes to play with me.
  - b. Sometimes likes to play with me.
  - c. Usually does not like to play with me.
  - d. Almost has never liked to play with me.
15. My child cries and is fussy:
  - a. Far less than I expected.
  - b. Less than I expected.
  - c. Almost as much as I expected.
  - d. It seems as if it is almost going on.
16. My child seems to cry or fuss most of the time than most children.
17. When playing, my child does not often giggle or laugh.
18. My child usually wakes up in a bad mood.
19. I feel that my child is very moody and is easily upset.
20. My child looks a little different and that sometimes worries me.
21. In some other areas my child seems to forget everything it learned previously and goes back in doing things similar to those done by younger children.
22. My child does not seem to learn as fast as most children.
23. My child does not seem to smile like other children.
24. My child does a few things which bother me.
25. My child fails to do as much as I expect.
26. My child does not like to be carried, or to be touched a lot.
27. When my child came home from the hospital, I had doubtful feelings about my ability to handle myself as a parent.

28. Being a parent is difficult than what I thought it would be
29. I feel capable and on top of things when caring for my child.
30. When comparing with an average child, my child has great difficulty in getting used to changes in the order of things done or in changes around the house.
31. My child shows strongly when something happens which it does not like.
32. To leave my child with a care giver is usually a problem.
33. My child gets easily upset by small thing.
34. My child easily notices and over reacts to high sounds and bright lights.
35. My child's eating and sleeping schedule was very difficult to form than I expected..
36. My child usually avoids the new toy for the time being before beginning to play with it.
37. It takes a long time and is also very difficult for my child to get used to new things.
38. My child does not look free when meeting strangers...
39. When upset my child is:
  - 1) Easy to calm down.
  - 2) Harder to calm down than I expected...
  - 3) Very difficult to calm down.
  - 4) There is nothing which I do to help calm my child.
40. I found out that making my child to do something or to stop doing something is:
  - 1) Very difficult than what I expected.
  - 2) Somehow difficult than what I expected.
  - 3) Almost as difficult as I expected.
  - 4) It was easier than I expected.
  - 5) Much easier than what I had expected.
41. Think carefully and count the things which your child does that worry you. For example Loiters around, does not want to listen, over active, cries, interrupts, fights, cries for nothing, and others. Please fill in the number which includes the number of things which you counted.
  - 1) 1-3
  - 2) 4-5

- 3) 6-7
  - 4) 8-9
  - 5) 10+
42. When my child cries it usually takes:
- 1) Less than 2 minutes
  - 2) 2-5 minutes
  - 3) 5-10 minutes,
  - 4) 10-15 minutes,
  - 5) More than 15 minutes.
43. There are things which my child does which really worry me a lot.
44. My child has had many health problems than I expected.
45. As my child has grown older and has become more independent, I find myself more worried that my child will get hurt or get into trouble.
46. My child became more of a problem than I expected.
47. My child seems to be harder to care for than most.
48. My child is always hanging on me.
49. My child demands more from me than most children.
50. I cannot take decisions without help.
51. I have had many problems in raising children than I expected.
52. I enjoy being a parent.
53. I feel that I am successful most of the time when I try to make my child to do or not to do something.
54. Since I brought my last child back from the hospital I find that I cannot care for this child as I thought I could. I need help.
55. I always have a feeling that I cannot handle things very well.
56. When I think of myself as a parent I believe:
- 1) I can handle anything that happens.
  - 2) I can handle many things very well.

- 3) I sometimes have doubts but I find that I handle many things without any problems.
- 4) I have some doubts about knowing how to handle things.
- 5) I do not think that I handle things well at all.

57. I feel that I am:

- 1) A good parent.
- 2) Better than an average parent.
- 3) An average parent.
- 4) A person with some trouble in being a parent...
- 5) Not very good at being a parent.

58. What were the highest grades in school or college you and the father /mother of the child completed?

59. Mother:

- 1) Grade 1-18
- 2) Grade 9-12
- 3) Vocational or some college
- 4) College graduate.
- 5) Graduate or professional school.

60. Father:

- 1) Grade 1-18
- 2) Grade 9-12
- 3) Vocational or some college
- 4) College graduate.
- 5) Graduate or professional school

61. How easy is it for you to understand what your child wants or needs.

- 1) Very easy,
- 2) Easy,
- 3) Somewhat difficult,
- 4) Very difficult.

- 5) I usually cannot make out what the problem is.
62. It takes a long time for parents to develop close and warm feelings for their children.
63. I expected to have closer and warmer feelings for my child than what I do and this worries me.
64. Sometimes my child does things which worry me just to be some how bad.
65. When I was young, I never felt comfortable to hold or to take care of children.
66. My child knows that I am its parent and wants me more than other people.
67. The number of children which I have now is too much.
68. Most of my time is spent on doing things for my child.
69. I find myself giving most of my life meeting my children's needs than I expected.
70. I feel trapped with things which are my responsibility as a parent.
71. I usually feel that my child's needs control my life.
72. Since having this child I have been unable to new and different things.
73. Since having a child I feel that I am almost never able to do what I like to do.
74. It is difficult to get a place in our home where I can go and be by myself.
75. When I think of the type of a parent who I am, I usually feel guilty or bad about myself.
76. I am not happy about my last purchase of clothes which I did for myself.
77. When my child misbehaves or fusses too much, I feel responsible as if I did not do something well.
78. I feel every time when my child does something wrong that it is really my fault.
79. I usually feel guilty the way I feel towards my child.
80. There are quite a few things which worry me about my health.
81. I felt sadder and more depressed than I after leaving the hospital with my baby.
82. I end up feeling guilty when I get angry at my child and this worries me.
83. After my child had been home from the hospital for about a month I noticed that I felt sadder and depressed than I expected.
84. Since having my child, my spouse (male/female friend) has not given me as much help and support as I expected.



85. Having a child has caused more problems than I expected from my relationship with my spouse (male/female friend).
86. Since having a child my spouse (or male/ female friend) and I do not do as many things together.
87. Since having my child, my spouse (or male/ female friend) and I do not spend as much time together as a family as I had expected.
88. Since having my last child, I have had less interest in sex.
89. Having a child seems to have increased the number of problems which we have from in-laws and relatives,
90. Having children has been very costly than I expected.
91. I feel alone and without friends.
92. When I go to parties I usually expect not to enjoy myself.
93. I not as interested in people as I used to.
94. I usually have a feeling that some people of my age do not particularly like my company.
95. When I run into a problem caring for my children, I have a lot of people whom I can talk to get help or advice.
96. Since having children I have very less chances of meeting my friends and making new friendships.
97. In the past six months I have been more sickly than usual or I had more sharp pains and pains than I normally have.
98. Physically, I feel alright most of the time.
99. Having a child caused changes in the way I sleep.
100. I do not enjoy things as I used to.
101. Since I have had my child:
  - a. I have been very sick,
  - b. I have not felt that good,
  - c. I have not noticed any change in my health.
  - d. I have been healthier.

---

**STOP HERE –unless asked to do items below**

In the past -12 months have any of the following events occurred to your immediate family?

Please check on the answer sheet any that have happened.

- 102. Divorce.
- 103. Marital reconciliation.
- 104. Marriage.
- 105. Separation.
- 106. Pregnancy.
- 107. Another relative moved to the family.
- 108. Income increased very much (20% or more).
- 109. Went deep into debts.
- 110. Moved into new location
- 111. Promotion at work.
- 112. Income decreased very much.
- 113. Alcohol and drug problem.
- 114. Death of a friend very close to the family.
- 115. Began new job.
- 116. Started new school.
- 117. Trouble with supervisor at work.
- 118. Trouble with teachers at school.
- 119. Legal problems.
- 120. Death of a close family member

## IMPACT ON FAMILY

I am going to read some statements that people have made about living with a child who has an ongoing health condition. Please tell me whether at the present time you would strongly agree, agree, disagree or strongly disagree with each statement.

### HAND RESPONDENT CARD F

	Strongly Agree	Agree	Disagree	Strongly Disagree
a. Health condition causes money problems in the family.	1	2	3	4
b. Time is lost from work because of hospital appointments	1	2	3	4
c. I am cutting down the hours I work to care for my child	1	2	3	4
d. Additional income is needed in order to cover medical expenses.	1	2	3	4
e. I stopped working because of my child's health.	1	2	3	4
f. Because of the health condition, we are not able to travel out of the city.	1	2	3	4
g. People who are neighbours treat us specially because of my child's health condition.	1	2	3	4

h. We have little desire of going out because of my child's health condition.	1	2	3	4
I. It is difficult to get a reliable person to care for my child.	1	2	3	4
j. Sometimes we have to change plans about going out at the last minute because of my child's state.	1	2	3	4
k. We see family and friends less because of the health condition	1	2	3	4
l. Because of what we have shared we are a closer family.	1	2	3	4
m. Sometimes I wonder whether my child should be treated "specially" or the same as any other child	1	2	3	4
n. My relatives have been understanding and helpful to my child	1	2	3	4
o. I think about not having more children	1	2	3	4

because of the health condition.

p. My partner and I discuss about my child's problems together	1	2	3	4
--	---	---	---	---

q. We try to treat this child the same as any other child.	1	2	3	4
--	---	---	---	---

r. I do not have much time left over for other family members after caring for my child.	1	2	3	4
--	---	---	---	---

s. Relative interfere and they think that they know what is best for my child.	1	2	3	4
--	---	---	---	---

t. My family gives us things because of the child's health condition.	1	2	3	4
---	---	---	---	---

u. Tiredness is a problem for me because of my child's health condition.	1	2	3	4
--	---	---	---	---

v. I live from day to day and I do not plan for the future.	1	2	3	4
---	---	---	---	---

w. Nobody understand the burden I am carrying	1	2	3	4
x. Traveling to hospital is a strain to me	1	2	3	4
y. Learning to manage my child's health condition has made me feel better about myself	1	2	3	4
z. I get worried about what will happen to my child in the future (when it grows up/when I am not there)	1	2	3	4
aa. Sometimes I feel as if we live on a roller coaster (changing life) in crisis when my child has a problem, o.k. when things are not changing.	1	2	3	4

## SECTION F: PARENTING STRESS INVENTORY (ABIDIN)

**FUNDA:** Now I would like to ask some questions about your feelings about being a parent. I am going to ask you how much you agree or disagree with the following statements about being a parent. (1) means you strongly agree, (2) means you agree, (4) means you disagree, (5) means you strongly disagree. If you are not sure, give rating (3)

	1	2	3	4	5
	Strongly agree	Agree	Not sure	Disagree	Strongly Disagree
1. I have doubts about my ability to handle being a parent	1	2	3	4	5
2. Being a parent is tougher than I thought it would be	1	2	3	4	5
3. I feel capable, and on top of things when I care for my child.	1	2	3	4	5
4. I cannot make decisions about my child without help.	1	2	3	4	5
5. I have had many more problems raising children than I expected	1	2	3	4	5
6. I enjoy being a parent.	1	2	3	4	5

7. I feel that I succeed most of the time when I try to make my child do or not to do something

1	2	3	4	5
---	---	---	---	---

8. I find that I cannot take care of this child as well as I thought I could do.

1	2	3	4	5
---	---	---	---	---

9. When it comes to my child, I usually feel that I cannot handle things well.

1	2	3	4	5
---	---	---	---	---

**READ: How would you complete the following sentences?**

10. When I think of myself as a parent I believe.....

- |   |   |
|---|---|
| I can handle anything that happens.   | 1 |
| I can handle most things very well  | 2 |
| Sometimes I have doubts, but I find that I handle many things without any problems. | 3 |
| I have some doubts about being able to handle things.                               | 4 |
| I do not think that I handle things well at all.                                    | 5 |

11. I feel that I am.....

- |  |   |
|--|---|
| a very good parent.                            | 1 |
| better than an average parent.                 | 2 |
| an average parent.                             | 3 |
| a person with certain trouble being a parent . | 4 |
| not good at being a parent.                    | 5 |



*Appendix IV: Track of the development process of the PSI questionnaire for this study*

<b>PARENTING STRESS INVENTORY (PSI)</b>	
<b>Original concept</b>	Relative stress levels in parent-child relationship, prediction of the potential for parental behaviour problems and child adjustment difficulties within the family system.
<b>Original methodology</b>	While PSI is a primary focus is on the preschool child, it may be used for parents with children up to 12 years but is primarily intended for parents of children between 0-3 years. PSI has proven useful in programs aimed at early identification and prevention of family problems. It is also helpful in planning intervention and treatment, assessing child abuse, and completing forensic evaluations for child custody. It is a self administered instrument. Available at: ( <a href="http://www.cebc4cw.org/assessment-tool/parenting-stress-index/">http://www.cebc4cw.org/assessment-tool/parenting-stress-index/</a> ).
<b>Current concept</b>	Parents' confidence levels in parenting, predicting potential parental behaviour problems and child adjustment difficulties within the family system.
<b>Current methodology</b>	PSI is being used to find out parents' feelings in different aspects within parenthood. The high illiteracy level within the study population has led to modification and translation of the original PSI into an interview and into Kiswahili respectively, for easier administration. It is being administered on the parents with children aged between 2 and 3 years.

Item Pool Creation			Developing the Procedure		Validation		
Original Item Description	Initial Review Decision (exclude/ Translated/ modify/ use as original)	Changed item description (if applicable)	Pre pilot #'s	Pre-pilot population description.	New item description:  <i>(Helping card in responding was designed, see appendix I below)</i> <i>English version:</i> <i>Responses and scores: [1] Very high, [2] High, [3] Average/Not sure, [4] Low and [5] Very low</i>	Pilot numbers	Final item order number
1. I have doubts about my ability being a parent.	Translated/ Modified	1. Wasiwasi wako juu ya uwezo wako wa kuwa mzazi ni wa kiasi gani?(Concept: Parent's doubts on his/her ability to provide for the child's needs). Mwingi sana [ 1 ], Mwingi [ 2 ], Kawaida [ 3 ], Huna uhakika [ 4 ], Kidogo [ 5 ], Kidogo sana [ 6 ].	Nine (9) times	Three (3) husband-wife dyads 3 married child bearing females,	1. What level of doubts do you have about your ability for being a parent? (Concept: Parent's doubts on his/her ability to provide for the child's needs).	38 people (19 husband-wife dyads)	5
2. Being a parent is tougher than I thought it would be.	Translated/ Modified	2. Tukilinganisha na ulivyofikiria kabla hujapata mtoto huyu, kuwa mzazi ni kazi Rahisi [ ] au Ngumu [ ]? (Concept: The challenges faced by the parent in providing the needs of the child). Rahisi sana [ 1 ], Rahisi [ 2 ], Kawaida [ 3 ], Huna uhakika [ 4 ], Ngumu [ 5 ] Ngumu sana [ 6 ]			2. Compared to how you thought it would be at what level have you found it hard in raising your child? (Concept: The challenges faced by the parent in providing the needs of the child).		
3. I feel capable and top of things when	Translated/ Modified	3. Ukiwa unamchungu mtoto wako, unahisi unaweza			2		

I care for my child.		kukabiliiana na mambo yote kiasi gani? (Concept: Confidence of the parent in meeting those challenges faced in providing for his/her child). Kikubwa sana [ 1 ] Kikubwa [ 2 ] Kawaida [ 3 ] Huna uhakika [ 4 ] Kidogo [ 5 ] Kidogo sana [ 6 ].			for your child? (Concept: Confidence of the parent in meeting those challenges faced in providing for his/her child).	
4. I cannot make decisions about my child without help.	Translated/ Modified	4. Unahitaji msaada kiasi gani katika kufanya maamuzi juu ya mtoto wako? (Concept: Help in deciding the best for the child). Mwingi sana [ 1 ] Mwingi [ 2 ] Kawaida [ 3 ] Huna uhakika [ 4 ] Kidogo [ 5 ] Kidogo sana [ 6 ]			4. What level of help do you need in making decisions about your child? (Concept: Help in deciding the best for the child).	6
5. I have had many more problems raising children than I expected.	Translated/ Modified	5. Tukilinganisha na ulivyotazamia, umekuwa na matatizo kiasi gani katika kulea m(wa)toto wako? (Concept: More challenges in providing for the child than expected) Mengi sana [ 1 ] Mengi [ 2 ] Kawaida [ 3 ] Huna uhakika [ 4 ] Kidogo [ 5 ] Kidogo sana [ 6 ]			5. What level of problems have you had in raising your children compared to your expectations? (Concept: More challenges in providing for the child than expected).	3
6. I enjoy being a parent	Translated/ Modified	6. Umefurahia kuwa mzazi kiasi gani? (Concept: The parent enjoys parenthood). Kikubwa Sana [ 1 ] Kikubwa kidogo [ 2 ] Kawaida [ 3 ] Huna uhakika [ 4 ] Kidogo [ 5 ], Kidogo sana [ 6 ]			6. At what level have you enjoyed being a parent? (Concept: The parent enjoys parenthood).	1

7. I feel that I succeed most of the time when I try to make my child do or not to do something.	Translated/Modified	7. Huwa unafaulu kiasi gani unapojaribu kumfanya mtoto wako afanye au asifanye kitu fulani? (Concept: Perception of parent's ability). Wakati mwingi [ 1 ] Wakati mwingine [ 2 ] Kawaida [ 3 ] Huna uhakika [ 4 ] Mara moja moja [ 5 ] Sifaulu kabisa [ 6 ]			7. At what level do you feel you have succeeded in making your child do or not do something? (Concept: Perception of parent's ability).		7
8. I find that I cannot take Care of this child as well as I thought I could do.	Translated/Modified	8. Tukilinganisha na ulivyofikiria ungeweza, unaona umeweza kumchunga mtoto wako vipi? (Concept: Toughness or difficulty in providing care than expected). Vyema zaidi [ 1 ] Vyema [ 2 ] Kawaida [ 3 ], Huna uhakika [ 4 ] Vibaya [ 5 ] Vibaya sana [ 6 ].			8. At what level do you think you have managed to take care of your child better than you thought? (Concept: Toughness or difficulty in providing care than expected).		8
9. When it comes to my child I usually feel that I cannot handle things well.	Translated/Modified	9. Hisia zako kwamba huwezi kukabiliana na mambo kuhusu mtoto wako vyema ni kiasi gani? (Concept: Parent's stress levels in handling things about the child). Nyingi sana [ 1 ] Nyingi [ 2 ] Kawaida [ 3 ] Huna uhakika [ 4 ] Kidogo [ 5 ] Kidogo sana [ 6 ]			9. At what level do you feel that you have not managed to handle things well about your child? (Concept: Parent's stress levels in handling things about the child).		11
10. When I think of myself as a parent I believe.....	Translated/Modified	10. Kwa jumla, uwezo wako wa kukabiliana na chochote kitokeacho kwa mtoto wako ni kiasi gani? (Concept: Overall perception			10. What levels of ability do feel you have to cope up with anything happening to your child? (Concept: Overall perception of the parent's ability to provide for the needs of		9

<p>a) I can handle anything that happen 1</p> <p>b) I can handle most things very well 2</p> <p>c) Sometimes I have doubts, but I find that I handle many things without any problems 3</p> <p>d) I have some doubts about being able to handle things 4</p> <p>e) I do not think that I handle things well at all 5</p>		<p>of the parent's ability to provide for the needs of the child). Mkubwa Sana [ 1 ] Mkubwa [ 2 ] Kawaida [ 3 ] Huna uhakika [ 4 ] Kidogo [ 5 ], Kidogo sana [ 6 ].</p>			<p>the child).</p>		
<p>11. I feel that I am.....</p> <p>a) A very good parent 1</p> <p>b) Better than an average parent 2</p> <p>c) An average parent 3</p> <p>d) A person with certain trouble being a parent 4.</p> <p>e) Not good at being a parent 5</p>	<p>Translated/Modified</p>	<p>11. Kwa jumla, unahisi wewe ni mzazi wa aina gani? (Concept: Overall type of parent this person feels he/she is). Bora zaidi [ 1 ] Bora kuliko wa kawaida [ 2 ] Kawaida [ 3 ] Huna uhakika [ 4 ] Mwenye shida kidogo [ 5 ] Mwenye shida nyingi [ 6 ]</p>			<p>11. What kind of a parent do you think you are in raising your children? (Concept: Overall type of parent this person feels he/she is).</p>		<p>10</p>

*Appendix V: Final PSI questionnaire developed and used in this study (English version)*

**SECTION F: PARENTING STRESS INVENTORY (PSI)-ABIDIN**

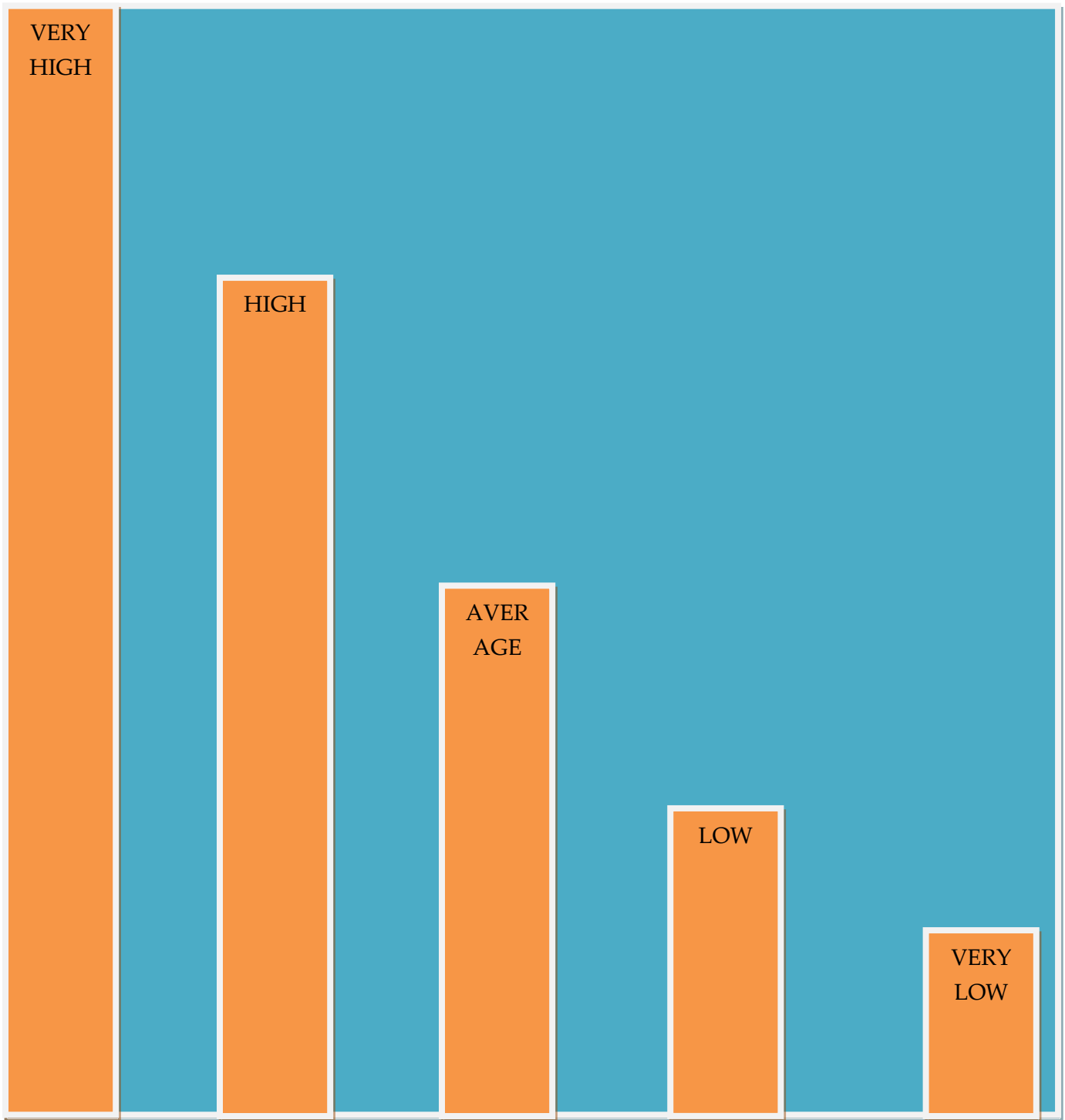
Now I would like to ask some questions about your feelings about being a parent. I am going to ask you how you would rate the following statements about being a parent. (1) Means very high level, (2) means high, (4) means low, (5) means very low. If you are not sure, give rating (3)

**Parent: (Mother/Father):** .....

<b>QUESTIONS/MASWALI</b> <b>Date: .../.../2013</b> <b>Child Study ID: .....</b>	<b>JIBU/ RESPO NSES</b>	<b>1 Very high</b>	<b>2 High</b>	<b>3 Averag e</b>	<b>4 Low</b>	<b>5 Very Low</b>
1. Where or what level would you rate your level of doubts in parenting?		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
2. Compared to your expectations before you got your child(ren), how would you rate the difficulty in parenting?		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
3. How would you rate your ability when taking care of your child(ren)?		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
4. Compared to your expectations before you became a parent, how would you rate the problems you have faced when raising your child(ren)?		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
5. How would you rate the level at which you feel you have enjoyed parenthood?		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
6. How successful do you feel you have been whenever you have tried to make your child(ren) do what you want them to do?		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
7. Compared to how you thought you would, how would you rate your feelings that you are not capable to take care of your child(ren)?		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
8. How would you rate your feelings that you cannot handle things well about your child(ren)?		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
9. How would you rate your ability to handle anything happening to your child(ren)?		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
10. According to your thinking and feelings, how good would you rate yourself as a parent?		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]

**Source: Section F of the Parenting Stress Inventory**

*Appendix VI: Five point scale PSI rating card*



*Appendix VII: Informed consent (English version)*

**INFORMATION SHEET AND CONSENT TO PARTICIPATE IN RESEARCH**

**(Title: Paternal roles in promoting child wellbeing: what are the challenges facing paternal involvement in child health care in rural south coast Kenya?)**

Date: .....

Dear Mum/Dad? How are you today? How is the child?

My name is Kennedy Songola, a Research Assistant from **International Centre for Behavioural Studies (ICBS)** of P.O Box 34307-80118, Mombasa-Kenya, telephone number +254 (0) 738 365185 and email address: intcentbs@gmail.com . This is the organization which runs the day-to-day activities of the INSTAPA study in which the children, whose parents are a target in this study, were enrolled and are currently participating.

Parents of the selected children from the INSTAPA study are being invited to consider participating in a study that involves research on parents and child health. The aim and purpose of this research is to find out the roles of the fathers in south coast Kenya in promoting child well-being.

The study is expected to enrol 61 families (couples) whose children are still participating in the INSTAPA study within the Kikoneni health centre catchment area. It will involve the following procedures: the age of the children should be between 2-3 years and during the study and both parents to the focal child must be present during the study for an interview discussion.

I am aware that, if I decide to participate in this study, the main points said during the discussion of the two interviews, would be recorded in form of short notes. I am also aware that short notes will be supplemented with a digital tape recorder to ensure capture of the all the information discussed.

None of the procedures will be experimental. The duration of their participation if they choose to enrol and remain in the study is expected to be not more than thirty (30) minutes. The study has been funded by the **African Initiative – Centre for International Governance Innovation** based in Canada.

The study may involve the following risks and/or discomforts; disagreement between the parents during the discussion, to avoid such, the interviews will be conducted separately. The study will provide no direct benefits to the participants. The scientific benefits hoped from the study include the use of the collected information in designing better policies to provide better health care services to the people within the study area.



The study will not have any potential risks which may require any compensation. This study was ethically reviewed and approved by the UKZN Biomedical Research Ethics Committee (approval number: BE238/13. In the event of any problems or concerns/questions participants may contact the researcher using the following contact details:

**International Centre for Behavioural Studies,**

P.O Box 34307-80118,

Mombasa Kenya,

Mobile number: +254 731 179323 or +254 715 698662.

Email: kennedysonkolah@gmail.com or the UKZN Biomedical Research Ethics Committee, contact details as follows:

**BIOMEDICAL RESEARCH ETHICS ADMINISTRATION**

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001 Durban 4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604769 - Fax: 27 31 2604609

Email: BREC@ukzn.ac.za

Participation in this research will be voluntary and the participants are being informed that they can withdraw their participation at any point or stage of this research. In the event of refusal/withdrawal of their participation from this research, they will not incur any penalty or loss of treatment or any other benefit to which they are normally entitled. Some of the potential consequences that may lead to their withdrawal include lack of willingness, three consecutive unsuccessful appointments where the participant does not turn up and feelings that the discussion interferes with their privacy.

The researcher will not continue with the discussion for participants who clearly show their unwillingness to talk/discuss and who become sick in the process. Drunken participants will also not be included. Apart from their thirty minutes time requested, there are no potential monetary costs that the participant will incur as a result of participating in the study. There are no travel costs because the interview will be conducted at their respective homes hence there will be no incentives or reimbursements for participation in the study.

To ensure confidentiality numbers rather than names will be used in the participants' answer sheets. After data collection, the answer sheets will be stored in locked data cabinets. When publishing the information, labels such as 'father n' or 'mother q' will be used. The data will be analyzed and reported to help the existing health systems and the policy makers in improving the health care services within the study area.

## CONSENT/Agreement

I (Name of the participant: \_\_\_\_\_) have been informed about the study entitled 'Paternal roles in promoting child well-being: What are the challenges facing paternal involvement in child health care in rural South Coast Kenya?' where we will be discussing, with the help of a Research Assistant (RA) from ICBS, our roles as parents in promoting the health of our children. I have been informed all these by Kennedy Songola.

I have understood the purpose and the procedures of this study. The purpose is to investigating the role of the fathers in promoting the well-being of their children so as to find out the key areas in to improve their involvement in child health care. On the other hand, the procedures of the study include identifying those children participating in the INSTAPA study who will be at the age between 2-3 years during the study, and whose both parents will be available for the interview during the study.

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any treatment or care that I would usually be entitled to.

I have been informed about any available compensation or medical treatment if injury occurs to me as a result of study-related procedures.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at:

P.O Box 34307-80118, Mombasa Kenya, Mobile number: 0731179323 or 0715 698662

Email: [kennedysonkolah@gmail.com](mailto:kennedysonkolah@gmail.com)

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

### **BIOMEDICAL RESEARCH ETHICS ADMINISTRATION**

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Govan Mbeki Building

Private Bag X 54001 Durban 4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604769 - Fax: 27 31 2604609

Email: [BREC@ukzn.ac.za](mailto:BREC@ukzn.ac.za)

**Signature of Participant**

---

**Date**

---

**Signature of Witness (if necessary)**

---

**Date**

---

**Signature of the translator (if necessary)**

---

**Date:**

---

## *Appendix VIII: Informed consent (Kiswahili version)*

**Fomu ya maelezo na ridhaa kuhusu kushiriki kwenye utafiti ambao unatazamia kueleza changamoto ambazo akina baba katika maeneo haya ya vijijini wanakumbana nazo katika kushiriki kwao kwenye matendo yanayoambatana na afya ya watoto.**

Tarehe:

Habari yako mama/baba? Habari ya leo? Mtoto anaendelea aje?

Kwa majina mimi naitwa Kennedy Songola, Msaidizi wa utafiti kutoka kituo cha utafiti kilichoko Mombasa kinachoitwa *'International Centre for Behavioural Studies (ICBS)'*, saduku la posta 34307-80118, Mombasa, nambari ya simu - 0738 365 185 na anuani ya barua pepe: *intcentbs@gmail.com* . Kituo hiki ndicho kinachoendesha shughuli za kila siku za mradi wa Instapa. Mradi huu unatazamia kusajili wazazi wa watoto waliosajiliwa na bado wanaendelea kushiriki katika mradi wa INSTAPA.

Wazazi wa watoto ambao wamechaguliwa kutoka kwa mradi wa INSTAPA wanafahamishwa na kualikwa kushiriki kwenye mradi ambao utakua ukiwashirikisha wazazi wote wawili kwenye mazungumzo kuhusu majukumu yao katika kuimarisha afya ya watoto wao. Mradi huu unatazamia kusajili familia sitini na moja (wanandoa 61 ) ambao watoto wao watakuwa na umri katikati ya miaka (2-3) miwili na mitatu. Cha msingi ni kwamba, ni lazima wazazi wote wawili wawe wanaweza kupatikana kwa siku itakayopangwa ili kufanikisha mazungumzo kuhusu mradi huu.

Wazazi hawa watatoka katika maeneo ambayo yanahudumiwa na kituo cha afya cha Kikoneni. Inatazamiwa kwamba, kama wanandoa watakubali kushiriki kwenye mradi huu, mazungumzo yatachukua muda usiozidi dakika thelathini (30) kwa kila mwanandoa/mzazi. Mradi huu hautausisha taratibu za majaribio yoyote. Mradi huu umefadhiliwa na mpango wa kiafrika kutoka Canada, *'African Initiative-Centre for International Governance Innovation'* kwa niaba ya kukusanya maoni kutoka kwa wazazi kutoka mashinani ili kusaidia kuunda sera zitakazosaidia katika kuwasilisha huduma bora za afya kwa wananchi wote bila ubaguzi.

Mradi huu unaweza kuwa na hatari kama vile, kuzua kutoelewana baina ya wanandoa wakati wa mazungumzo. Kwa kuzuia hayo, mazungumzo yatafanywa kila mzazi peke yake, mmoja baada ya mwingine. Mradi huu hautakuwa na manufaa ya moja kwa moja kwa watakaoshiriki. Kuna matarajio ya manufaa ya kisayansi kupitia kuchapishwa kwa habari itakayokusanywa katika kuunda sera ambazo zitasaidia kuimarisha afya ya watoto katika jamii. Mradi huu hatarajii kuwa na hatari kubwa ambazo zinaweza zitahitaji fidia.

Mpangilio wa mradi huu umepitiwa na kuidhinishwa na kamati kuu ya maadili ya utafiti kutoka chuo kikuu cha *'Kwa-Zulu Natal'* kutoka nchini Afrika Kusini. (Nambari ya idhini/usajili

ya utafiti: REF: BE238/13). Kama kutatokezea shida, wasiwasi au maswali yoyote, unaweza kumpigia mtafiti anayehusika kupitia kwa nambari hii ya simu: +254 715 698662 au +254 731 179323 au, kamati kuu ya maadili ya utafiti kutoka chuo kikuu cha Kwa-Zulu Natal kutoka nchini Afrika Kusini kupitia anuani ya mawasiliano ifuatayo:-

### **BIOMEDICAL RESEARCH ETHICS ADMINISTRATION**

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Govan Mbeki Building  
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KwaZulu-Natal, SOUTH AFRICA  
Tel: 27 31 2604769 - Fax: 27 31 2604609  
Email: BREC@ukzn.ac.za

Kushiriki katika mradi huu ni kwa hiari ya anayesajiliwa, na akishasajiliwa, mshiriki anaweza kujiondoa kwenye mradi wakati wowote. Kama mshiriki atajiondoa anahakikishiwa ya kwamba hataadhibiwa kwa njia yoyote ile au kunyimwa manufaa yake ambayo alikuwa akipata kabla. Mradi huu utakumgharimu mshiriki muda wa dakika sisizozidi thelathini (30). Mshiriki hatasafiri kwenda kwenye mradi badala yake mtafiti msaidizi atakayeongoza mazungumzo shughuli za mradi huo, atawatembelea washiriki manyumbani mwao siku ambayo watapanga kwa pamoja.

Kwa kudumisha usiri wa kibinafsi kwa kila mshiriki, majina ya wanandoa watakaoshiriki kwenye mazungumzo hayo hayatatumika kwenye fomu zao za majibu na badala yake, nambari ndizo zitakazotumika. Baada ya shughuli hiyo kukamilika, fomu hizo zote zitahifadhiwa kwenye makabati ambayo yanafungwa kwa kutumia kufuli.

### **Makubaliono/Ridhaa**

Mimi (jina la mzazi)..... nimefahamishwa kuhusu mradi huu ambao utakuwa ni mazungumzo baina ya wazazi wa wale watoto kadhaa, waliochaguliwa kulingana na mipangilio ya mradi, waliosajiliwa na wanaoendelea na mradi wa INSTAPA, na mtafiti msaidizi kutoka kituo cha afya cha 'International Centre for Behavioural Studies, kuhusu majukumu yetu kama wazazi katika kuimarisha afya ya watoto wetu. Haya yote nimefahamishwa na bwana Kennedy Songola, ambaye ndiye atakayekuwa akituongoza kwenye mazungumzo hayo.

Ninaelewa maana na mipangilio ya huu mradi: Maana ya mradi huu naelewa itakuwa ni kupeleleza majukumu ya akina baba katika kuimarisha ustawi wa watoto ili kuelewa zaidi jinsi ambavyo tunaweza kuongeza ushirikiano na akina baba katika mambo ya kuimarisha afya ya watoto. Mipangilio ya mradi huu pia nimeelewa ya kwamba, kwanza itakuwa ni kujua wale watoto ambao wangali wanaendelea na mradi wa INSTAPA na umri wao utakuwa katikati ya

miaka miwili na mitatu (2-3) wakati wa mradi, na pia wazazi wao wote wawili wataweza kupatikana wakati wa mradi huo.

Nimepewa nafasi ya kujibu maswali kuhusu mradi huu na pia nashukuru nimepata majibu ya kuridhisha kwa maswali niliyouliza. Ninatangaza kwamba, kushiriki kwangu kwenye huu mradi itakuwa ni kwa hiari yangu na kwamba nina uwezo wa kujiondoa wakati wowote bila kuathiri matibabu yoyote au huduma zozote ambazo huwa napokea kama kawaida. Pia, nimefahamishwa kuhusu fidia yoyote au huduma zozote za matibabu ambazo zitakuwepo kama nitaumia katika juhudi zangu za kufanikisha mradi huu.

Kama nina maswali zaidi au wasiwasi wowote kuhusu mradi huu, ninaelewa ya kwamba ninaweza kuwasiliana na mtafiti msaidizi anayehusika (bwana Kennedy Songola) kupitia kwa nambari ya simu: +254 (0) 731 179323 au +254 (0) 715 698662.

Kama nitahitaji maelezo zaidi kuhusu haki zangu kama mshiriki katika mradi huu au kama nina wasiwasi wowote kuhusu mradi ama watafiti wenyewe, ninaelewa ninaweza kuwasiliana na kamati kuu ya maadili ya utafiti kutoka chuo kikuu cha Kwa-Zulu Natal kutoka nchini Afrika Kusini kupitia anuani na nabari za mawasiliano zifuatazo:

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\_\_\_\_\_  
**Sahihi ya mshiriki**

\_\_\_\_\_  
**Tarehe**

\_\_\_\_\_  
**Sahihi ya shahidi**

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**Tarehe**

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**Sahihi ya mtafsiri**

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**Tarehe**

**Appendix X: Final PSI questionnaire developed and used in this study (Kiswahili version)**

Sasa ningependa kukuuliza maswali Fulani yanayohusu hisia zako kuhusiana na wewe kuwa mzazi. Nitakuuliza una kiasi gani cha yafuatayo kuhusu kuwa mzazi ukitumia kadi nitakayokupa. (1) inamaanisha Kiasi kikubwa sana, (2) inamaanisha kiasi kikubwa, (3) inamaanisha kiasi cha kawaida

MASWALI	JIBU	1 Kikubwa Sana	2 Kikubwa	3 Kawaida/ Sina uhakika	4 Kidogo	5 Kidogo Sana
1. Wasiwasi wako juu ya uwezo wako wa kuwa mzazi ni wa kiasi gani?( <i>Concept: Parent's <u>doubts on his/her ability to provide</u> for the child's needs</i> ).		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
2. Tukilinganisha na ulivyofikiria kabla hujapata mtoto huyu, kuwa mzazi ni kazi ngumu kiasi gani? ( <i>Concept: The <u>challenges faced by the parent in providing the needs of the child</u></i> ).		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
3. Ukiwa unamchungu mtoto wako, unahisi unaweza kukabiliana na mambo yote kiasi gani? ( <i>Concept: <u>Confidence of the parent in meeting those challenges faced in providing for his/her child</u></i> ).		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
4. Unahitaji msaada kiasi gani katika kufanya maamuzi juu ya mtoto wako? ( <i>Concept: <u>Help in deciding the best for the child</u></i> ).		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
5. Tukilinganisha na ulivyotazamia, umekuwa na matatizo kiasi gani katika kulea m(wa)toto wako? ( <i>Concept: <u>More challenges in providing for the child than expected</u></i> ).		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
6. Umefurahia kuwa mzazi kiasi gani? ( <i>Concept: <u>The parent enjoys parenthood</u></i> ).		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
7. Huwa unafaulu kiasi gani unapojaribu kumfanya mtoto wako afanye au asifanye kitu fulani? ( <i>Concept: <u>Perception of parent's ability</u></i> ).		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
8. Tukilinganisha na ulivyofikiria ungeweza, unaona umeweza kumchungu mtoto wako vipi?( <i>Concept: <u>Toughness or difficulty in providing care than expected</u></i> ).		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
9. Hisia zako kwamba huwezi kukabiliana na mambo kuhusu mtoto wako vyema ni kiasi gani? ( <i>Concept: <u>Parent's stress levels in handling things about the child</u></i> ).		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
10. Kwa jumla, uwezo wako wa kukabiliana na chochote kitokeacho kwa mtoto wako ni kiasi gani? ( <i>Concept: <u>Overall perception of the parent's ability to provide for the needs of the child</u></i> ).		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]
11. Kwa jumla, unahisi wewe ni mzazi wa aina gani? ( <i>Concept: <u>Overall type of parent this person feels he/she is</u></i> ).		[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]

au huna uhakika, (4) inamaanisha kiasi kidogo na (5) inamaanisha kiasi kidogo sana.