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# The Nutrition Environment Among Young San Children in Oshandi: A Case Study

Evelyn Ndinela Breuer  
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# Walden University

College of Education and Human Sciences

This is to certify that the doctoral dissertation by

Evelyn Ndinelao Breuer

has been found to be complete and satisfactory in all respects,  
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the review committee have been made.

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Walden University  
2022

Abstract

The Nutrition Environment Among Young San Children in Oshandi: A Case Study

by

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MPhil., Walden University, 2020

MSc., Cape Peninsula University of Science and Technology, 2018

MBA., Steinbeiss University, 2016

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Health Science

Walden University

August 2022

## Abstract

Undernutrition among young San children under the age of five remains prominent in Namibia, despite nutritional intervention programs. Guided by the model of community nutritional environment conceptual framework and social-ecological model, this case study involved exploring perceptions of San parents and local nutritional service providers regarding the nutritional environment of San children in Oshandi Village. Semi-structured interviews and observations were used to conduct this research with 12 participants, five local nutritional service providers and seven San parents who had children under five. Irregular and unreliable nutritional support was a factor leading to not explicitly addressing needs of the San people, and programs were few in terms of quantity. Other issues included lack of dietary offerings and cultural acceptance, lack of knowledge regarding nutritional and health-related issues among the San, unavailability of resourceful land to produce foods, inaccessibility of healthcare due to service fees and distance issues, and lack of policies explicitly involving nutritional issues related to the San. This study will lead to positive social change via its suggestions for innovative approaches that are people-focused as opposed to program-focused, are tailor-made for the community, and involve using a bottom-up approach when designing and addressing nutritional-related issues for the San people.

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## Dedication

I dedicate this research to the marginalised parents/guardians especially many San women of Oshandi village whose many children never reached their full potentials in life or have lost their children from nutrition specific and nutrition sensitive issues or related complications because they never had the choice of what to feed their children with. I also dedicate this research to my Son, Keanu, while he never really understood why Mommy needed time away from him, I am sure he will now be able to read this research one day and feel proud of me.

## Acknowledgments

I would like to say thanks to God for his mercies and blessings and for giving me the strength to make it through this journey. Without God, it would never have been possible. I would also like to thank my dear husband Oliver and my lovely son Keanu for allowing me the space and time to pull this through. I am grateful for your patience, support, and assistance at all times. I would also like to thank my supervisor and chair, Dr. Carol Spaulding. Dr Spaulding, you are a real mentor and supervisor. Thank you very much for the guidance, help, assistance, and advice throughout my journey. Thank you to my committee member, Dr. Nicole Hare- Everline for your kind inputs and information throughout this journey. I would also like to thank all the Walden University staff for your support. I have been truly blessed to have your support.

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## Chapter 1: Introduction to the Study

### **Introduction**

Undernutrition continues to affect the health of many Namibian children and adults, despite the Namibian government's efforts to provide food rations and develop policies, strategies, and plans to address the problem (Namibia Ministry of Health and Social Services [MoHSS], 2019). Through this case study, I explored and understood the nutrition environment for children under 5 in the San community (an indigenous population of Southern Africa) of Oshandi Village in Namibia's Ohangwena region. I explored how San parents of children under the age of 5 perceived the nutritional environment and nutritional intervention programs that were available to them. Moreover, I attempted to understand how community nutrition service providers perceived the nutrition situation of the San children and their use of nutritional intervention programs in Oshandi Village.

In most cases, undernutrition is associated with high poverty levels, poor nutrition environments, lack of dietary diversity, and poor feeding practices (Agbadi et al., 2017; Govender et al., 2017). These conditions are prevalent among communities in rural areas such as the San people (Dieckmann et al., 2014; Hoddinot, 2016). Understanding the nutritional environment of San children and negative and positive impacts of available nutritional intervention programs is necessary to equip service providers, parents, and caretakers with better knowledge of the San people's nutrition situation. Currently, the lack of specific data and reliable information regarding the nutrition environment for the San people in Oshandi Village renders it challenging to create improvements. I hope to

contribute to positive social change by describing the nutrition environment for young children under 5 among the San people and factors contributing to improved nutrition and reduced undernutrition in this community.

In this chapter, I describe the background of the proposed case study and presented the study's problem statement, purpose, and research questions. I also presented the theoretical and conceptual frameworks of the study, provided definitions of key terms, and described the study's delimitations, limitations, and significance.

### **Background of the Study**

According to the World Health Organisation ([WHO], 2020), the Millennium Development Goals 4 and 5 (MDG-4 and MDG-5) specify targets of reducing the under-5 mortality rate by two thirds and reducing the maternal mortality ratio by three quarters by 2015. Namibia has been unlikely to meet these targets because progress in terms of reducing mortality due to undernutrition among children under 5 has been plodding (Ministry of Health & Social Service [MoHSS]), 2014; WHO, 2018). Food security and good nutrition are elusive for the majority of Namibia's rural population and a significant proportion of those living in the country's urban areas. About 29 percent of the Namibian population is categorised as poor (World Bank, 2011) while 24 percent of children under the age of five are classified as stunted (Namibia Statistic Agency, 2013). The high stunting rates in Namibia are associated with nutritional environments and conditions characterized by high poverty levels, poor dietary diversity, and poor feeding practices more prevalent among marginalized communities and those living in rural areas (WHO, 2018).

Namibia has 14 political regions, and Oshandi Village is located in the Ohangwena region, one of the five regions with the highest proportion of stunted children (34%) compared to the national average of 24% (UNICEF, 2020). According to the report of the Namibian census data from the MoHSS (2011), the Ohangwena region is home to the third-largest population of San. By understanding the nutrition environment among the San people, it may be possible to understand factors contributing to ethnic and socioeconomic disparities involving nutrition and health outcomes for San children (Namibia Statistics Agency, 2013).

There has been limited research on marginalized communities' nutrition environments, especially among those living in rural areas. Various nutritional intervention strategies and investments have been made to improve the child nutrition situation for rural communities in Namibia (M. van Wyk (personal communication, September 10, 2020) However, there has been little or no success despite these efforts of improving the nutritional status of the young children. In this context, unknown factors that might influence nutritional and environmental conditions tend to lead to more profound food insecurity and undernutrition situations for children.

Furthermore, available programs generally suffer from administrative bottlenecks and exclusion errors (Chiripanhura & Nino-Zarazua, 2019). For example, there are no registries or databases involving nutritional assistance programs for San beneficiaries of community nutrition service providers across the country. The gap in the literature that I sought to address in the proposed study was lack of information involving the nutrition environment for San children.

The nutrition environment on San children under the age of 5 has not been researched. This study may thus be beneficial in terms of providing insights involving community nutritional environments related to children under the age of 5.

Understanding the nutritional environment of the San community may yield much-needed information that can be used to address undernutrition conditions for San children and lead to communicate solutions involving needs of the San community. This study may aid in the development of programs to overcome problems involving undernutrition among the San community. Study findings may add to local nutritional service providers' knowledge regarding promoting better use of nutritional intervention programs among the San people.

### **Problem Statement**

Undernutrition continues to be a significant burden among San children in Namibia despite many nutritional intervention programs being available to them (Namibia Statistics Agency, 2013). Shikongo (2020) said “reports of acute malnutrition among the children of a San community living in the Ohangwena region have been on the increase and one of the major factors contributing to undernutrition among San children is lack of nutrition information specific to affected communities” (p. 5).

There is little information about the nutrition environment among the San community within existing literature and the few reports that have been published on San people's dietary intake involving nutritional intervention programs and Namibian government assessments report on nutrition did not specifically identify San children in communities such as Oshandi Village as a demographic category. There was, therefore, a



need to explore the nutrition environment in the San community of Oshandi Village. This problem was worthy of study because the most available resource documents that refer to the San people have not specifically addressed San children's nutrition environment. Hence, this study will fill a gap in existing research by focusing specifically on San children's nutritional environment in the Ohangwena region.

Currently, there is limited information or research involving San communities in Oshandi Village regarding residents' nutrition environment. I could not find any studies on the San people in Oshandi Village focusing on San children's nutritional environment, childhood undernutrition, parental perceptions, or general nutrition environments in these communities. There is also no information from local service providers regarding their perceptions of nutritional intervention programs and child undernutrition among the San people. This study will increase understanding about perceptions of undernutrition among San children concerning nutritional intervention programs and the nutrition environment of this community. It is expected that the study will lead to positive health education and health promotion efforts that are relevant in terms of nutrition among San children.

### **Purpose of the Study**

I aimed to explore the nutrition environment for young children in a rural San community in Oshandi Village. I employed a case study approach to examine this environment at the individual, family, community, and organizational levels of the nutritional environment.

### **Research Questions**

One primary question and six subquestions served to guide this study.

*RQ1:* What is the nutritional environment for children under 5 in the San community in Oshandi Village?

*SQ1:* What are the perceptions of San parents regarding their children's nutritional status in Oshandi Village?

*SQ2:* What are the perceptions of San parents regarding nutritional intervention programs available for their children?

*SQ3:* What are the perceptions of local community nutrition service providers regarding children's nutritional status in Oshandi Village?

*SQ4:* What are the perceptions of local community nutrition service providers regarding nutrition intervention programs available to San children in Oshandi village?

*SQ5:* What are the perceptions of local community nutrition service providers regarding challenges and barriers faced by nutritional programs in Oshandi village?

*SQ6:* What are my visual observations regarding nutritional environments among the San community in Oshandi Village?

### **Theoretical Foundation**

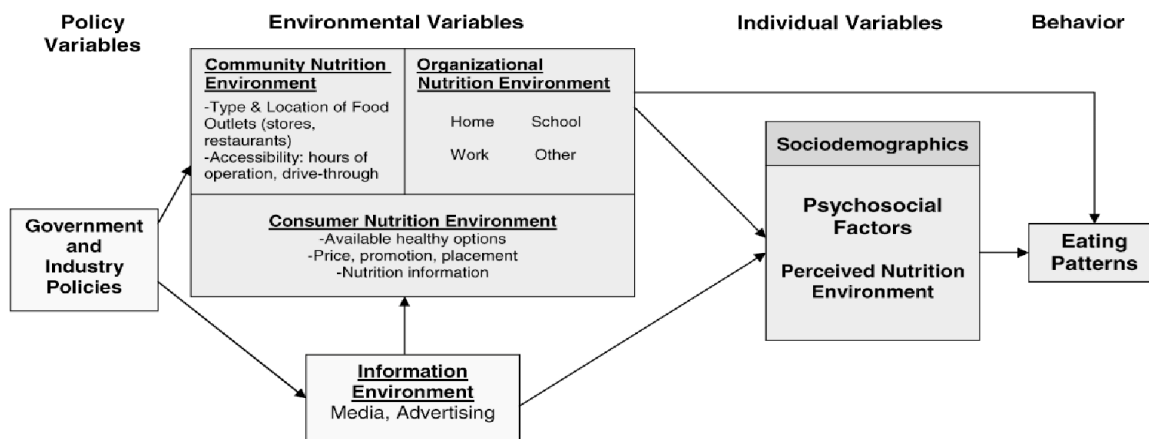
I used the social-ecological model (SEM) to understand potential factors influencing the nutrition environment of San children in Oshandi. The SEM conceptualizes health broadly and focuses on multiple factors that might affect health. Urie Bronfenbrenner initially proposed the SEM in 1970, which was later recognized as a theory in 1980. The model was later adopted by the Centers for Diseases and Prevention

(CDC) for health promotion endeavors related to community and policy (Kilanowski, 2017). In addition, the initial model was revised to represent multilevel approaches to public health promotion, violence prevention, healthy college campuses, geriatric preventive health, and colorectal cancer prevention (CDC, n.d.).

The SEM is based on interactions and interdependence between factors involving a health problem, where factors at one social ecological level influence factors at another level. This involves interactions with physical and sociocultural environments and recognizing individuals and their affiliations with people, organizations, and communities (Mehtälä et al., 2014). As a theory-based framework for understanding the multifaceted and interactive effects of personal and environmental factors, I chose the SEM to understand factors that influence and contribute to nutrition conditions of the San children and nutritional intervention programs. I used the SEM to frame discussions of factors influencing the nutrition environment and nutritional intervention programs because it related with the study approach and main research question. Using the SEM allowed me to incorporate factors contributing to the nutrition situation of the San people.

### **Conceptual Framework**

In addition to the SEM, I used the model of community nutrition environment (MCNE) as the conceptual model to observe the nutrition environment of the San people in Oshandi Village. According to Heim & Pyhälä, (2020), the MCNE has rarely been employed in rural communities; however, its use might be helpful in identifying nutritional resources and gaps in the San community (see Figure 1).

**Figure 1***Model of Community Nutrition Environments*

*Note.* The model identifies four types of nutrition environments that need to be studied, and those environments are affected by policies of governments and other organizations. Adapted from Glanz et al., 2015, *Health Nutrition Environments and Measure*, 19(5), p. 330-333 (<https://doi.org/10.4278/0890-1171-19.5.330>)

The model of community nutrition environment (see Figure 1) has many potential variables that could be measured (Glanz et al. 2015). There are four types of nutrition environments that are affected by policies of governments and other organizations: the community, organizational consumer, and Information nutrition environments. However, this study focused the community the community level of the nutrition environment. At the community nutrition environment, I observed quantity, type, and location of food within this community. From this study the main focus was the home food environment, because food sources at home may be affected (Borland et al., 2010; Glanz et al., 2015; Sallis & Green, 2012).

The relevant characteristics of food include quantity, range of choices, freshness, and nutritional information. In homes, the categories of food of broadest interest would be those most closely involved in a balanced diet characterized by price, range of choices, freshness, placement, and nutritional qualities (and are consistent with the Dietary Guidelines for Americans (California Center for Public Health Advocacy, 2002; U.S. Department of Agriculture & U.S. Department of Health and Human Services, 2020).

### **Nature of the Study**

Case study research involves investigating a problem among specific individuals, groups, or institutions by getting the best possible answers to research questions and using observational methods (Yin, 2014). For this research, a qualitative case study design was used to explore the nutrition environment for San children in Oshandi Village. Data were collected from San parents and community nutrition providers via interviews, observation guides, and five data collection instruments (interviews guides for local nutritional service providers and the San parents, an observation guide, a voice recorder, and a camera. Semistructured probing interview questions were developed to gather data from participants (see Appendixes B & C). The focus of these questions was information from the perspective of community nutrition providers and the San people themselves regarding their perceptions of the nutritional environment for children under 5 and use of and access to nutritional intervention programs. Community nutrition providers include a nutrition administrator from the national government, the local authority councilor, civil

society officer, and San traditional leader. An observational guide (see Appendix B) was also used to guide my observations of nutrition-related practices and activities in San homes and community nutrition provider settings to gain a better understanding of the nutrition environment for San children.

### **Definitions**

*Community nutrition provider:* Those who plan, assess, implement, administer, direct, coordinate, and supervise delivery, in addition to evaluating nutritional intervention delivery programs (Institute of Medicine & Committee on Nutrition Services for Medicare Beneficiaries, 2000).

*Nutrition environment:* Environment with proximity to food store locations, distribution, food services, or any physical entity in which food may be obtained, or a connected system that allows access to food (CDC, n.d.; National Academy of Sciences, Engineering and Medicine, 2020).

*San people:* The San are the oldest inhabitants of Southern Africa, where they have lived for at least 20,000 years and are now considered a marginalized community in Namibia. They are also referred to as the first inhabitants of Ohangwena region (National Planning Commission [NPC], 2003). The San are also referred to as Bushmen—a designation given by Europeans—or Basarwa—a designation given by Tswana people, which etymologically means people of the south (Brown, 1979).

*Stunting:* Impaired growth and development that children experience due to poor nutrition which results in diminished height compared to children of similar age (Chowdhury et al., 2020).

*Underweight:* Below a normal or desirable weight compared to other children of the same age. (Chowdhury et al., 2020). This may include severely or moderately underweight children. Severely underweight children are those whose weight-for-age z score (used to compare a child's weight to the weight of a child of the same age and sex to classify nutritional status is a -3.0 standard deviation below the mean according to WHO child growth standards that are used to identify how children should grow when provided optimal nutritional conditions. Moderately underweight means children whose weight-for-age z-score is -2.0 standard deviations below the mean (WHO, n.d.). The outcome of insufficient food intake or infectious diseases, which leads to underweight, stunting, and wasting is undernutrition (Chowdhury et al., 2020).

*Wasting:* Low weight-for-height ratio where a child is thin for their height but not necessarily short (Chowdhury et al., 2020).

### **Assumptions**

This study had several assumptions. I assumed that this study would assist in identifying problems associated with using nutritional intervention programs and ways to remedy them. I also assumed that I would have access to target participants (e.g., chosen San parents of children under 5 living in the Ohangwena region and service providers of nutritional intervention programs). Further, I assumed participants were willing to participate in the study. I also assumed that San children in Oshandi Village, Ohangwena region were experiencing undernutrition problems. I further assumed that results of the

study would accurately reflect conditions of the San people in Ohangwena regarding perceptions of their children's nutritional status and use of intervention programs. Finally, I assumed that reported perceptions and my observations were accurate depictions of San children's nutritional status.

### **Scope and Delimitations**

I explored the nutrition environment for young children in the Ohangwena region. San people live across the entire country, but due to budgetary constraints, I only focused on San parents residing in Oshandi Village in the Ohangwena region to better understand their perceptions when it comes to their children's nutritional status. Only San people between 18 and 49 years who were parents to at least one child under 5 were considered for this study. Community nutrition service provider participants were adults over 18 working with San communities in Oshandi Village for at least 3 years. These providers included administrators from the national government, officials from the local authority office, and individuals working for a civil society organization for the San people in and outside Namibia.

This study was intended to develop an understanding of the nutrition environments of San children residing in Oshandi Village and determine factors related to accessing and using available nutrition intervention programs. I observed food sources as well as quality and quantity in family homes in addition to food storage facilities in Oshandi Village. I considered using frameworks such as the health belief model and UNICEF conceptual framework. However, after careful consideration, I realized that the



SEM framework could aid me in understanding how each of the five social ecological levels (intrapersonal, interpersonal, institutional, community, and policy) may influence health behaviors and choices and address how these behaviors and choices ultimately impacted health outcomes.

### **Limitations**

The COVID-19 outbreak was a limitation, as I was not able to enter the interview site. Additionally, I have held various senior positions in the health and nutrition field, and as part of my job, I have been overseeing the utilization of community - based health and nutritional programs countrywide, but not necessarily where the research study took place. Although it was not likely that participants knew me personally, it was possible they could be aware of my previous position and reluctant to answer questions about nutrition programs. This could harm trustworthiness of data. However, respondents were assured that research was used for study purposes and that I was acting in my capacity as a student.

Finally, I hail from the Ohangwena region; I speak Oshiwambo, the language spoken and understood by the San people, and was familiar with local government structures and systems. As a researcher, I used knowledge and experiences to help address potential challenges and problems that might arise during the research process. A further potential threat of researcher bias (my oversight responsibility for various health and nutritional programs countrywide) is discussed in Chapter 3.

### **Significance**

The study has the potential to contribute to knowledge about how to reduce child undernutrition and its associated health effects in Oshandi Village, Ohangwena region. Gaining an understanding of how San parents and service providers perceive the nutritional status of their children and how they perceive the role of government intervention programs could be instrumental in terms of addressing undernutrition among these children. Findings might be used to reduce the burden of morbidity and mortality among San children under the age of 5. The intention was also to improve San parents' and their children's nutritional status by informing service providers and stakeholders about key barriers affecting uptake and use of these nutritional intervention programs among San communities, as well as provide credible evidence to inform policies and future program designs. The study may also provide knowledge that may be used to address future awareness and promotional campaigns related to uptake of government nutritional intervention programs, especially among the San people. The proposed study has the potential to provide information that could support strengthening current nutrition intervention programs that can improve child nutrition, leading to improved health outcomes and positive social change. This study will contribute to generation of reliable knowledge about what works and in which circumstances when it comes to undernutrition among San children, thereby promoting positive social change.

### **Summary**

Undernutrition is a childhood problem, particularly among San children in Oshandi Village. However, the nutrition environment among this group has not been

studied yet. A case study design was used to help address a knowledge and information gap involving nutritional environment situations of the San community in Oshandi Village. The SEM and MCNE were used to guide the study to find factors related to nutrition conditions of San children. The study is expected to contribute to the fight against undernutrition among children under 5 in the San community.

Chapter 2 includes literature involving undernutrition among children under 5 in developing countries, as well as globally and among the San people. The chapter also includes information about parental perceptions, use of nutritional intervention programs in Namibia, community programs, and the San people and their social problems (e.g., food security, undernutrition, and economic dependency) in Namibia.

## Chapter 2: Literature Review

### **Introduction**

Child undernutrition is an epidemic that has largely impacted Namibia as well as other countries within the African continent (United Nations [UN], 2020). Namibian undernutrition figures among children under the age of 5 have remained high since 2002 (UN, 2020). It is estimated that around 71,000 children under age 5 in Namibia will not meet their development potential due to nutritional deficiencies that affect their learning outcomes and earning capacity as well as economic prosperity of their communities and the nation due to undernutrition (Adepoju & Allen, 2019; United Nations Children's Fund [UNICEF], 2019).

Ohangwena, one of the regions in Namibia and a home to many San families, has a 37% incidence of undernutrition, cases and it ranks highest among affected regions in the country (Namibia Ministry of Social Services, 2015). Cases of undernutrition are associated with high poverty levels and poor dietary diversity and feeding practices (Govender et al., 2017), which are more prevalent among communities living in rural areas such as the San people.

In addition, one out of every three Namibian children under the age of 5 are too short for their, age and one out of every five Namibian children are too thin for their age (MoHSS, 2015). Despite many reports about child undernutrition in general, the nutrition environment of the San community in Oshandi Village, Ohangwena region remains unknown. The purpose of this study was to explore the nutrition environment for this

group and examine the nutrition environment at the individual, family, community and organizational levels of the social ecological model.

I focused on the Oshandi Village San community's nutritional environment, factors influencing nutrition conditions, parents' and service providers' perceptions regarding child undernutrition among children who are under the age of 5, and use of nutritional intervention programs by San families.

According to the Legal Assistance Centre ([LAC], 2014, 70% of the Namibian San community are dependent on erratic state-run food-aid programs. However, apart from receiving food aid as part of the government assistance, the majority of San do not show that they have benefited from Government Republic of Namibia (GRN) initiatives in any substantial way (LAC, 2014). While hunger continues to be a common factor of San life, and the San in poorer areas sometimes go several days without food, the nutrition environment situation of the San children remains unknown (LAC, 2001).

The San population is spread out through Namibia, with a presence in all 14 regions. They are the oldest inhabitants of Southern Africa, where they have lived for at least 20,000 years in Southern Africa (LAC, 2014). The San are an indigenous ethnic group, with distinct physiques and light-skinned complexions, and have a hunter-gatherer lifestyle. Since 2002, fencing of land has become more common and has limited the ability of the San people to move from one area to another as in the past. The San people are categorized by the Namibian government as a marginalized population/community (LAC, 2014). This has made them more vulnerable in terms of poverty, food insecurity, and diseases due to static ways of living.

As the San people came to be further integrated into the capital economy, they suffered a decline in dietary variety: where they once enjoyed a diverse diet of tubers, nuts, vegetables, and meats, maize porridge, beans, sugar, tea, and oil now account for most of their caloric intake (Heim, 2019). This new way of living has made them more vulnerable to poverty, food insecurity, and diseases due to this static way of living as they became heavily dependent on government food handouts.

According to the MoHSS (2015), 24% of children under the age of 5 years are stunted, 6% are wasted, 13% are underweight, and 13% are born with low birth weight. There are many underlying contributing factors that lead to undernutrition, such as poverty, inability to access nutritious food, poor access to proper sanitation, poor feeding practices, and lack of exclusive breastfeeding (Alemu, 2020; Goudet et. al., 2016).

Despite the limited peer-reviewed scholarly articles published since 2018 about the San people and undernutrition, I reviewed and synthesized peer-reviewed research articles on this topic. I focused on factors that may contribute to nutrition conditions of the San community.

This chapter includes a review of literature involving child undernutrition in Namibia, parental perceptions, use of nutritional intervention programs, and general social status of the San people in Namibia. It includes the literature review strategy, conceptual and theoretical framework, nutritional intervention programs, parental perceptions, and an overview of what undernutrition means as well as causes and prevalence in Namibia. This is followed by a literature review involving the status of the San people in Namibia and community programs in general.

### **Literature Search Strategy**

A list of peer-reviewed articles related to child undernutrition, parental perceptions, causes of undernutrition in children, the SEM, and the MCNE as obtained from the Walden University Library. I also searched MEDLINE, Research Gate and PubMed databases and used Google Scholar search engine to find articles on child undernutrition and nutrition environments. Sources were published between 2015 and 2022. In this study, I used the following search terms: *social factors, indigenous food, rural food, food environments, nutrition environments, perceptions, attitudes, opinion, food choices, food preferences, marginalised communities, San people, government food aids, nutrition intervention programs, experience, view, reflection, and beliefs*. Literature primarily published between 2015 and 2020 were selected. Literature published before 2015 were only considered if there was a significant contribution they represented to the field of study or conditions of my study. Books and peer-reviewed articles, studies, and notes from experts related to nutrition environments to understand nutritional-related issues in selected communities were also reviewed.

Additional reading materials were fact sheets, personal communications, books, and governmental or organizations reports, such as reports from the Namibian government, WFP, UNICEF, FAO, and the UN. I addressed the San people in general, food choices among the San, undernutrition intervention strategies, socioeconomic and demographic information about the Namibian people, and undernutrition perceptions among parents.

### **Theoretical Foundation**

The SEM was used to better understand the various levels of factors that might influence the nutrition situations of the San people and provide theoretical basis to guide available nutritional intervention programs particularly within the San community population in Oshandi village. The SEM is a conceptual framework, a power-base of influence over human behavior that has been applied in public health settings for almost 50 years (Golden & Earp, 2012). The core principles of the SEM are based on multiple influences over an individual's behaviors, the interactions of those influences, and the multilevel approaches that can be applied to interventions intended to modify behaviors (Owen & Fisher, 2018; Stokols, 1992). The model, developed by sociologists in the 1970s, studies how behaviors form based on characteristics of individuals, communities, nations and levels in between (Bronfenbrenner, 1977). Each level overlaps with other levels. The model has five different variations of organizational hierarchies namely; individual, interpersonal, community, organizational and policy/enabling environment that can be used in any given society (McLeroy et al., 1988). According to McLeroy et al. (2003) the model is useful in the creation of sustainable solutions for at-risk individuals and societies.

The SEM is a commonly used model especially in health education and health promotion to explain change and maintenance of health-related behaviours and as a guiding framework for health behaviour interventions. It can thus be used to explain and predict health behaviours through focusing on the attitudes and beliefs of individuals.



This study was conducted with the aim to determine the perception of the nutritional intervention programs and how child undernutrition condition was viewed among the San people in Ohangwena region. The use of the SEM assisted me in my attempt to explain and predict health behaviors and factors influencing such behaviors through focusing on the attitudes and beliefs of individuals in question.

By using the SEM to understand the participant's behaviors, belief, and challenges, it enabled me as the researcher to provide recommendations that can reduce existing barriers and mitigate adverse effects of undernutrition in San children. Moreover, participants may change their attitudes, and the range of positive behaviors will increase with regards to combating undernutrition amongst children.

### **Conceptual Framework**

The MCNE was used to conceptualize the nutrition environment and guide the method used to support observation of the study's nutritional environment among the San community in Oshandi village, Ohangwena region. According to Glanz et al. (2018), "the nutrition environments are widely believed to contribute to the increasing epidemics of childhood and adult nutritional conditions" (p. 330-333). The MCNE is based on an ecological model of health behaviour (Glanz & Rimer, 2018). The model incorporates constructs found or hypothesized to be related to the healthy eating outcomes from the fields of public health, health psychology, consumer psychology, and urban planning (Glanz & Rimer, 2018). The Model in Figure 1 identifies four types of nutrition environments that need to be studied and those environments are affected by policies of governments and other organizations. Food environments are shown as having two

pathways of influence on eating patterns. The environmental effects can be moderated or mediated by demographic, psychosocial, or perceived environment variables (see Figure 1). Environmental, social, and individual factors influence eating patterns, which in turn affect risk of many chronic diseases. Because of the large number of potential variables that could be measured, the researcher had identified the community nutrition environment, Organizational nutrition Environment and the consumer nutrition environment as highest priority because they have been less studied for the San community and could have broad effects.

At the general community environment level, the researcher could observe the distribution of food parcels, that was the quantity, type, and by whom. At the organizational nutrition Environment level, the researcher could observe and draw knowledge from local service providers such as the civil society organization, government, and regional local authority offices. In addition, data could be obtained from limited existing government reports.

Lastly, the consumer nutrition environment, the researcher could observe from homes of the participants, that was looking at the food availability, cooking patterns, and eating patterns for the children. The availability of food and parental influence has a strong impact on the children. The approach has been used by other authors in examining food practices among San people in Namibia. Heim (2019) has done extensive research among San people in Namibia and explored new approaches to food security of rural people in developing countries.

### **Use of Nutritional Intervention Programs**

In this study, the researcher sought to gain insight into the perceptions of parents and service providers on undernutrition and utilization of nutritional intervention program among San children who are under the age of five. The following section will address key factors targeting San children, utilization of nutritional intervention programs, parent perceptions about child weight and nutrition, and the background about San people themselves. It will also help to establish the views of the Service Providers when it comes to nutritional intervention programs designed to fight undernutrition among the San people.

Utilization of the nutritional intervention programs aimed at tackling undernutrition will reduce the burden of undernutrition faced by the San children especially during the initial crucial stage of a child's life before the age of five years (Kraemer et. al, 2018). This critical period of time has an enormous, short and long term, impact on the health and well- being of the unborn babies, infants, and young children, as well as lactating mother women (Izumi et al., 2017). Good nutrition before the age of five years can have a positive effect on a child growth, brain development and immune system (Kraemer et. al, 2018). Conversely, undernourished children are more prone to disease, poor cognitive and physical development and poor school performance (Black et al., 2019). This results in failure to achieve their full potential in life and reduced physical and economic wellbeing. Therefore, devising nutritional intervention programs aiming explicitly at dealing with nutrition problems facing specific communities have shown to be beneficial (FAO, 2016). However, M. van Wyk (personal communication, September

10, 2020) stated that the government Republic of Namibia's policy does not have nutritional programs only dealing with nutrition problems facing the San communities and the absence of such programs reflect the extent to which San nutrition issues need special attention. Woodhouse et al. (2016) also confirmed that programs that are personal and tailor-made to include aspects of a certain community especially when dealing with vulnerable communities have proven to be more effective in the long run. F. Nashandi (personal communication, September 10, 2020) , said unless efforts are focussed on assessing where and how interventions may be inappropriate and examining where and how existing interventions that ought to benefit San communities, current programs will continue to fail and will become costlier in the long run. It could be concluded from the above information that tailor made intervention programs aimed at specific groups might yield more positive results on the current utilization of the programs and the effectiveness of them within the San community.

Saldana (2015) reported that a lack of planning and consultation with community members who the program is designed for in the beginning, will make them less enthusiastic about participating in the designed program. Service providers mostly have a responsibility of planning, designing and implementing community programs; however, the lack of communication with families, and communities to improve the healthcare systems that serve their children will result in failure in many programs (Saldana, 2015). Several authors Heim, 2019; Heim & Pyhälä, 2020; Lee et al., 2017), suggest that significant improvement in rural communities can be achieved if targeted interventions are developed on principles of participatory from those they are developed for.

Since the issuance of the millennium development goals, innovative approaches for the prevention of childhood undernutrition to overcome key barriers related to the uptake of programs especially at community setups have been developed. One such innovative initiative is an Alliance for Health System Strengthening where a non-Governmental Organisation called Synergos Institute partnered with USAID and Elma Philanthropies supported the Namibian Ministry of Health and Services in Ohangwena Region to fight child undernutrition among the disadvantaged community through high performance embedded units called Regional Delivery Units (RDUs) (Synergos Institute and Elma Philanthropies, 2016). The purpose of RDU was to take overall responsibility for identifying undernutrition bottlenecks, to design and implement projects to address challenges and monitor progress to achieving the expected results. The partnership also engaged service providers with capacity building workshops to improve performance of intervention programs in that region (Synergos Institute and Elma, 2016). It could be concluded that better understanding of the San community situation may yield useful results and information that can be used in the development of interventions program targeted them for, more positive outcomes.

Another example is an innovative initiative called Shape NC, born from a partnership of Smart Start with Blue Cross and Blue Shield of North Carolina Foundation is reported to have shown success when it comes to tackling malnutrition in children between the ages of 0-4 years (Smart Start and The North Carolina Partnership for Children, 2013). Shape NC uses multiple researched-based models to gain a detailed method in childhood prevention in combination with evidence-based models which

increase nutrition and physical activity with an outdoor learning environment (Smart Start and The North Carolina Partnership for Children, 2013). Shape NC agreed that working with the community, to include parents, to gain insight to their experiences and develop strategies from information obtained can help in reducing childhood undernutrition (Smart Start and The North Carolina Partnership for Children, 2013).

The implication of these studies confirmed that utilization of a program can be used as a basis for identifying problem areas and making changes to improve effectiveness. Frieden (2014) also affirmed that utilization of intervention programs can serve as a base for understanding of future tendencies in behaviors. This study might shed some light on the much needed information that may be used to develop specific nutritional intervention programs for the San people that can be utilized and yield positive results when tackling undernutrition among children who are under the age of 5 years.

### **Parental Perceptions**

Parents' belief that their child may be vulnerable to serious life-threatening health issues can influence how they parent, specifically their child's eating habits (Gordo et al., 2018). Hayteler et al. (2015) confirmed that parental perceptions on feeding pre-school children that parental perceptions play an important role in the reduction of child undernutrition. Hayter et al (2015) found that the decisions parents made when feeding young children was very important in determining what type and nature of interventional support may be developed to promote good nutrition. More studies revealed that parents commonly reported differences between how they would like to feed their children and

the reality of what they were able to do in their circumstances (Ruel & Alderman, 2013). Thus, parents have a powerful influence over children's early food experiences and that it is important to understand what drives them to make their food decisions for their child (Woodhouse et al., 2016). These authors (Woodhouse et al., 2016), also emphasized the need for parents' input when designing nutritional intervention programs for their children

Understanding the specifics of one's beliefs and environment is influential in designing a program to implement change. Furthermore, an intervention that takes into consideration how a parent feels about child undernutrition is important when developing strategies to combat childhood undernourishment. This is further discussed in a study a study by Mweemba (2017) on parents' perception of undernutrition in relation to decision making and health care seeking behaviours, causality, signs and symptoms, prevention, treatment, and curability of disease. The researcher confirmed that parents' understanding about nutrition, their beliefs, attitudes, and practices have a bearing on the child's nutritional status. Mweemba (2017) further stated that the success of interventions aimed at reducing the levels of undernutrition in children will also depend on strengthening behaviour change programmes, particularly those targeting parents. The study concluded that health education interventions should be anchored on a good understanding of the parents' perspective to be effective. The implication of the study above indicates that parents who feel recognized, valued, and respected by their service provider will be more likely to be engaged in a shared goal about an initiative.

As stated in the paragraph above, parental goals and belief on their children's health can play a very important role when it comes to child undernutrition, for example, a study conducted by Carraca et al. (2019) on physical activities and eating related behaviour change of school age children, suggested that eating-related behaviors seem to depend more on the goals and beliefs behind an individual to engage in physical activities or eating healthier for better health outcomes (Carraca et al., 2019). This study focussed on assessing how beliefs have a great influence on behavioral change. The study thus concluded that there seemed to be a link between weight-focused physical activities, healthy eating styles and the quality of motivation given (Carraca et al., 2018).

It could be concluded from these studies that took into consideration the views of whom interventions were designed for or those with influence yielded better results for the program outcome.

### **Child Undernutrition in Namibia**

Nearly half of all countries in the world face multiple serious burdens of undernutrition, such as poor child growth, micronutrient deficiency (Hanson & Gluckman, 2015). Prevalence of undernutrition in children younger than five years old remains higher especially in south Asia and sub-Saharan Africa than elsewhere with sub-Saharan Africa constantly being on the increase (Goudet et al, 2016; Stevens et al., 2016; Abera, et al.,2017).

The last assessment data (2006-2016 demographic and health survey) of child undernutrition obtained through measurement of a child's anthropometry (height, weight), as well as through screening for biochemical and clinical markers are indicative



of the Namibian child's nutritional status (Akombi et al., 2017). According to the supplement report to the 2015/16 Namibia Household Income Expenditure Survey, prevalence of stunting, wasting and underweight among children in food poor households was close to 10 percentage points higher than prevalence among children in non-poor households (37% vs 28% for stunting, 17% vs 11% for wasting, and 29% vs 18% for underweight) (MoHSS, 2019). In addition, these data are gathered from a national perspective rather than targeting a specific population such as the San community and thus does not give a clear picture of the Oshandi San people's nutritional environment. The lack of the nutrition environment information especially targeting the rural poor makes it difficult to understand the phenomena in its all entirety. Understanding the nutrition environment of the San children in Oshandi village and factors associated could strengthen our understanding of the phenomena better.

According to Weber (2018), even in the developed world, an increasing number of people consume nutrient-poor food on a regular basis, especially for those groups whose access to good nutrition is frequently compromised of a multiplicity of factors. Significant effort is required that will support long-term solutions to reduce undernutrition especially among children

Child stunting, which reflects both maternal and child undernutrition, affects about one quarter of the world's children (UNICEF, 2019). One of the top 20 determinants of global deaths, 14 are related to diet and nutrition (FAO, IFAD, & WFP, 2017; Hanson & Gluckman, 2015).

The 2015 Global Hunger Index ranked Namibia 87th out of 120 countries assessed, with an index score of 31.8 indicating a ‘serious food problem’. In 2013, the Emergency Food Security Assessment (EFSA) found 16% of the Namibian population to be severely food insecure while 22% of the population was moderately food insecure. This is further confirmed by Akombi et al. (2017), who narrates that Namibia as a sub-Saharan country in Africa has one of the highest levels of child undernutrition globally.

There are significant variances when stunting is compared against geographical location. An analysis of the consumption patterns in six regions in Namibia based on nutrition security monitoring indicates poor dietary diversity, poor quality foods including poor micronutrient quality, exclusive breastfeeding and suboptimal care practices, for example responsive feeding, early initiation of solid and semi-solid foods (World Food Program [WFP], 2015). According to the WFP (2015), the quality of food received by the children under the age of 5 is in part responsible for their nutrition condition.

According to Musa et al. (2016), improvements in child feeding and better maternal education are needed to maintain the children’s nutritional status. Furthermore, the right community-based intervention programs in place can minimize undernutrition incidents in a child. Breastfeeding is also considered to be an effective, low-cost intervention option, however, only 24% of infants are exclusively breastfed for 6 months (Namibian Demographic and Health Survey (NDHS), 2016; Akombi et al., 2017).

In addition to the above, active allomothering (e.g., maternal care by non-mothers such as fathers, grandmothers, grandaunts, and older children—all collectively referred to

as allomothers is a common practice of the San people and is considered to reduce the burdens of mothers (Takada, 2020). However, in recent years, maternal nursing is affected not only by the number of surrounding allomothers but also by the quantity and quality of available solid food for young children (Takada, 2020). In this respect, hunter-gatherers living in subtropical and tropical forests tend to have more options for appropriate solid foods than the ones who live in the non-tropical areas or deserts (Takada, 2020). Consequently, the period of weaning tends to be earlier in the former societies.

According to a personal communication with M. van Wyk (September 10, 2020), there have been various efforts made by the government to tackle undernutrition amongst vulnerable groups in the country over the past years. Furthermore, the San people have been receiving food aid from the Government Republic of Namibia through three different programmes since 1993, all of which operate under the generic label of “emergency drought relief”. It is further reported that the San populations have been provided with food aid for much of the time since 1993, and Cabinet has reportedly resolved to continue issuing food aid to San on a more or less permanent basis (M. Van Wyk, personal communication, September 10, 2020). Despite all these efforts, malnutrition continues to be prevalent among children in the country (van Wyk, 2020).

### **Nutrition Service Provision to the San People in Namibia**

Data provided by the Emergency Management Unit (EMU) indicates that out of an estimated 38 000 San population in Namibia, between 17 000 and 22 000 San people currently depend on Government Republic of Namibia (GRN) food aid and that the

Cabinet has directed that San people should be supported indefinitely by food for work programmes and other welfare schemes (UNESCO & MoHSS, 2019).

According to Heim (2019), many of the less successful San projects have floundered because their management structures have not been sufficiently flexible or participatory to accommodate the different outlook of San. This has proved to be the case in some GRN-run initiatives where little, or no cultural sensitivity has been demonstrated. This failure to make allowances for differences in outlook and the complexities of the process that San are currently undergoing has led to misunderstandings, conflicts and the squandering of scarce resources (Heim, 2019; Biesele & Hitschcock, 2013).

Although several GRN extension workers and officials working with the San people have developed excellent relationships with them, many others appear “conspicuously inept” in this regard and have demonstrated limited adaptability to move beyond ethnocentric interpretations of San behaviour (Brigg, 2014). The scale and nature of the problems faced by San do not lend themselves to easy solutions. Efforts undertaken thus far by the GRN and various NGOs have not made significant progress in reducing San marginalisation or poverty and it is clear that greater efforts will be necessary to affect any meaningful change to their collective status in the future (Heim, 2016).

In addition to the above, as long ago as 2001, the Legal Assistance Centre stated that the status of San people in communal areas needs further assessment as it is possibly more precarious than that of all San populations residing somewhere else in Namibia (Legal Assistance Centre, 2001). Due to weak community institutions and structures in

Namibia, San people are not well positioned to ensure that their interests are accommodated in any new dispensation or established schemes (National Planning Commission, 2015).

The GRN's policy does not have an integrated program aimed explicitly at dealing with nutrition problems facing the San communities and the absence to such programme reflect the extent to which San nutrition issues need special attention. It can thus be concluded from the above studies that the San people's social inferiority status continues to persist, hence the need for immediate intervention. The study may expose better understanding of some substantial gaps that exist in the nutritional environment of the San children in Oshandi village that need consideration by future health education and promotion strategies.

### **Community Programs**

Ndure et al. (2016) reported that the design of a community nutrition program should be viewed as a learning process in which options are proposed for addressing the nutrition situation. Too often, service providers are program focused rather than people focused, losing sight of the very people they are there to serve. Ndure (2016), stated that "Community development that is only program focussed and does not pay attention to people always fail" (p. 10). Furthermore, the implementation cycle should include repeated monitoring and evaluation exercises to assess program impact, identify obstacles to progress and allow for revision according to the changing needs and lessons learned through operations research, and a flow of information across all levels of the institutional and organizational framework (Ndure, 2016; Grijalva-Eternod et al., 2018).

Poor food choice or limited access to nourishing food, such as fruit and vegetables, is associated with food insecure populations (Butcher et al., 2019), especially those with a lack of economic means, education, food availability, access, and other socioeconomic factors. Support mechanisms, including programs to increase access to healthy food, are paramount for vulnerable communities, and this issue provides evidence of the importance of community perceptions on food interventions (Wright et al., 2018).

Effective rural health programs have key features that help make them successful. According to UNICEF et al. (2018), defeating undernutrition starts at the community and household levels. Community members especially parents at a household level must be fully involved when it comes to good child feeding and caring practices. Parents can also play a major role in the identification of any nutritional problems in a child for early intervention from the health officials (Farah et al., 2019). Similarly, parental perception of undernutrition in relation to causality and prevention can influence decision making and change in behaviours towards nutritional interventions (Gee & Foster, 2019).

Furthermore, educating the mother and the father or guardians in the program will also add to protecting the mother from malnutrition and its effects through the lifespan. Therefore, to be effective, nutritional interventions should be anchored on a good understanding of the mother's perspective (WHO, 2017; Hayter et al., 2015).

Developing countries, are experiencing greater emergence of vulnerable populations, thus requiring health educators to support these vulnerable communities. This workforce needs to identify modifiable factors that can be incorporated into future

schemes and food security interventions in order to efficiently manage food shortages and address drivers in the immediate and broader geographical locations (Haynes-Maslow et al., 2018; Godrich et al., 2019). Therefore, a greater understanding from the workforce is required, as evidence suggests a divergence in views between those who address the problem and those with the lived experience of food insecurity (Butcher et al., 2019).

### **Addressing Undernutrition Among children**

According to the Global Nutrition report (2018), the common cause across all forms of malnutrition is undernutrition, also known as suboptimal diet, and thus considered to be a necessary component of reducing disability and death especially among children. Undernutrition results from eating a diet in which one or more nutrients are not enough such that the diet causes health problems (Abiyu & Belachew, 2020). It may involve inadequate calories, protein, carbohydrates, vitamins or minerals in the body system (Otele et al., 2020).

The following section talks directly about the severity and the factors that have been identified from the literature that suggest nutrition programs used, that might be pivotal in addressing undernutrition among infants.

#### **Breastfeeding**

According to Cusick and Michael (2016), the right nutrients for both mothers and baby within the first 1000 days' of life sets the stage for physical, emotional and intellectual development for a child's entire life. Good nutrition builds strong immune systems, increases the children's chances of survival, and protects them for most of their lives. Furthermore, good nutrition also protects children against illness, infections, and

disease, ensuring better health outcomes throughout their childhood and adulthood (Cusick & Michael, 2016). According to Chinjekure et al. (2018), if the breastfeeding mother gets adequate nutrition, then the infant will also be able to get enough dietary protein and nutrients from the breast milk of the mother. Also, an increase in the intake of the proper nutrient will be able to provide adequate nutrition to their child through breast milk and allow healthier growth of the infants (Sabbahi et al., 2018; Mawa & Lawoko, 2018).

### **Summary and Conclusions**

Since 1992, the main source of data used to estimate national prevalence of child undernutrition was the NDHS. There are no peer-reviewed articles or recent government reports concerning San parents, service providers, or nutritional intervention programs. According to the World Food Program (2017), Namibia lacks innovative approaches to address many causes of malnutrition that are both nutrition-specific and target direct causes, as well as nutrition sensitive, in order to target underlying determinants. There is thus a need to specifically understand the San people and their perceptions about their children's undernutrition conditions. This study will fill a gap in literature involving San parents' perceptions about their children's undernutrition conditions in relation to nutritional interventions that are available to them.

Chapter 3 includes the methodology that was used in the study to understand the nutrition environment of the San people in Oshandi Village. I also elaborate on the methodology used to determine parental perceptions of their children's undernutrition status as well as perceptions about nutrition intervention programs that are available to



them as San people. This chapter also includes information about data collection and sampling methods as well as data analysis strategies. I also discuss potential ethical issues, protection of participants, informed consent, and reliability and validity of the case study qualitative research design.

## Chapter 3: Research Method

### **Introduction**

The purpose of this case study was to explore the nutrition environment for young children in a rural San community in Oshandi Village. I employed a case study approach to examine the nutrition environment at the individual, family, community, and organizational of the social ecological levels.

This chapter includes information about the research design and approach and rationale. I discussed in detail the qualitative methodology, as well as the data collection process, tools, analysis, and issues involving ethical consideration and trustworthiness of human participants.

### **Research Design and Rationale**

One primary question and six subquestions were used to guide this study:

*RQ1:* What is the nutritional environment for children under 5 in the San community in Oshandi Village?

*SQ1:* What are the perceptions of San parents regarding their children's nutritional status in Oshandi Village?

*SQ2:* What are the perceptions of San parents regarding nutritional intervention programs available for their children?

*SQ3:* What are the perceptions of local community nutrition service providers regarding children's nutritional status in Oshandi Village?

*SQ4:* What are the perceptions of local community nutrition service providers regarding nutrition intervention programs available to San children?

*SQ5:* What are the perceptions of local community nutrition service providers regarding challenges and barriers faced by nutritional programs in Oshandi Village?

*SQ6:* What are my visual observations regarding nutritional environments among the San community in Oshandi Village?

I aimed to explore and understand the nutrition environment of San children and their parents;’ perceptions of this issue as well as views of local nutrition service providers regarding this. To investigate this phenomenon, I designed the study in the following ways. First, I identified the phenomenon to be investigated and selected the community to be studied (San children in Oshandi Village, Ohangwena region). Second, I selected participants who were most knowledgeable and experienced. According to Creswell (2018), qualitative case study research involves studying a problem in its natural setting. Stake (1995) described a case study as the study of a specific case that is usually preselected, and the aim is to understand that specific case or phenomenon within specific circumstances. Case studies are used to address similar individuals, groups, or contexts (Stake, 1995). This study involved the San people residing in Oshandi Village regarding their children’s nutritional environment, thus making it the right approach for this specific group. According to Yin (2018), a case study may involve using multiple methods of data collection to gather data about a specific group involving a chosen phenomenon. In this case study, I used interview and observation guide techniques to gather data involving the phenomenon. Responses from participants were recorded and analyzed as they related to specific questions and themes in the study. Data results were presented to participants to ensure validity and data accuracy as recommended by Stake.

In addition, I took photographs of surroundings and nutrition situations to supplement written observation reports. These photographs did not include actual pictures of people themselves but only surroundings and food items.

The case study approach was particularly appropriate for this study because it was used to explore worldviews of a specific group of people involving a phenomenon. The two data collection approaches chosen for this study helped me record emotional expressions of participants that otherwise would not be possible to be recorded using a quantitative study approach. The research was carried out in Oshiwambo, a language spoken by the San people (and me) in the Ohangwena region, making it possible for people to interact with freely.

According to Yin (2018), researchers should consider using a case study approach primarily when the study involves addressing how and why questions to understand a phenomenon. Therefore, to better understand child undernutrition among the San people in the Ohangwena Region, a case study design was used to explore of from parents and service providers about this topic.

### **Role of the Researcher**

According to Stake (1995), the case researcher plays different roles, including teacher, participant-observer, interviewer, reader, storyteller, and advocate. As a researcher, my key role was to collect data through interviews and observations. I aimed to advocate for improved nutrition for San children and better use available resources for nutrition programs. My key responsibility was to interact with participants who volunteered for the study. I was responsible for designing interview questions and

observation checklist for San parents and nutrition service providers. Once data collection was completed, I worked to share participant stories and perceptions and advocated for social change to improve childhood outcomes involving nutrition.

As a researcher, I have held various senior positions in the health and nutrition field, and during my job, I have overseen administration of various nutritional programs in Namibia by different communities. It was possible that participants were aware of my previous position. However, I demonstrated my professional integrity, tried to be mindful of how I communicated with the participants, and acted as a scholar learning from the field. Participants signed an informed consent form outlining how confidentiality was maintained. To help maintain confidentiality, participants were not required to provide their names. In addition, the informed consent form specified that research was for study purposes, and that I was acting in my capacity as a student.

According to Yin (2003), researchers should be able to indicate the accuracy of the evidence. In this regard, I used multiple sources to collect data from the participants about the nutrition environment of the San children in Oshandi village. Furthermore, Abusaka and Woelfel (2003) stated that qualitative research might be open to human or researcher bias due to influences such as prejudice and personal beliefs. Because I, as a researcher, hailed from the village where the research was going to be conducted and that I speak the same language spoken by the participants, I tried by all means to avoid biases involving human elements. To avoid possible biases involving a human element, I considered credibility, dependability, confirmability, and transferability to validate the data. Additionally, I tried to not indicate agreement or disagreement with participants

during interviews, act as an active observer, listener, and recorder during the observation stage, record only expressed opinions of participants during the interviews and draw conclusions inductively from observations, and summarize findings, identify pattern, and corroborate all information to form an accurate representation of participant perspectives.

### **Methodology**

The purpose of this qualitative case study was to explore the perceptions of the San parents and the local nutritional service providers regarding the nutrition environment of the San children who are under the age of five. In particular, the study focused on the perception of the San parents and those of the local nutritional service provider's regarding the nutrition environment of the San children.

This chapter includes a summary of the research design, the research approach and the rationale for the selected design and approach. The chapter also includes a detailed discussion of the data-collection process, data – collection tools, data analysis process, the research questions and measures put in place to maintain confidentiality and protection of the human participants.

### **Participant Selection Logic**

The population of the study site is home to about 300 San people in 30 (Hon. Hilaria Ndjuluwa, June 2021, personal communication) households, and it was expected that a minimum of six to ten participants from those 30 households were to be interviewed. This study used a purposive sampling strategy; only parents who met the study inclusion criteria were selected to participate. The purposive sampling strategy is a nonprobability sampling method used when a researcher aims to gather the perspectives

of a particular group of people (Creswell, 2017). Furthermore, Creswell (2017) explains that in the purposive sampling strategy, individuals to be researched belong to the same subculture or have the same characteristics that are chosen to give a picture of a particular phenomenon using a purposive sampling technique. The sample represents a choice of participants based on their knowledge and experience of the phenomena under investigation in the study (Yin, 2018). For example, the study depended on an understanding of the nutrition environment of San children under the age of five, those who have benefited, and those who have not benefited from the nutritional intervention programs. Participants were San people who are parents or guardians to San children who are under the age of five years. In addition to the parents of the San children, I interviewed local nutrition service providers who have worked with the San people in the area of nutrition and who were familiar with the government nutritional intervention programs among the San people in Oshandi village. Lastly, I observed the San children's nutrition environment in Oshandi village based on four selected areas that embodied the nutrition environment at various levels to provide a further better understanding of the nutrition situation of the San children. At the community level: (a) food sources (type and quantity) (b) accessibility (i.e. food obtained from locals, own efforts, churches, civil society); at the organizational level (c) available food earmarked for the San people in Oshandi village (i.e. from civil societies, churches, and government); and at the consumer level (d) available food consumed by San children in Oshandi village.

Gays (2010) stated that sampling in qualitative research is the process of selecting a small number of individuals for a study who will be key informants, contributing to the

researchers' understanding of a given phenomenon (Gays, 2010). Based on the research around case study methodology, the use of purposive sampling was appropriate for my study. The sample size of this study was made up of seven San parents or guardians of children under the age of five years to be interviewed first, followed by interviews of five local nutrition service providers who volunteered to participate in the study to obtain adequate data for the study. Furthermore, as a researcher, I preferred the in-depth study of small, non-random samples of information with rich cases from participants (Blanche, 2012; Guest, et al., 2006)), hence the sample size not exceeded 14 participants interviewed.

Creswell (2018) further stated that selected cases might show different perspectives on the problem, and therefore selection may involve individuals or a program with an array of possibilities for purposeful sampling. The San parents have similar social-economic circumstances. The group has similar characteristics due to living conditions, dependency, language, food insecurity, culture, beliefs (LAC, 2001). Yin (2018) also stated that case studies are used to inquire into similar individuals, groups, and contexts like in this case of San people residing in Oshandi, Ohangwena region on the issue of child undernutrition. The study intended to have a holistic understanding of a similar situation affecting a community with a lot of characteristics such as cultural and economic conditions in common.

The selection criteria for the participants in this study varied based on the participant type – parent or service provider. The researcher recruited the San parent participants based on the criteria of having or not having utilized the nutrition



intervention programs, falling between the maximum ages of 18 years, having and caring for a child under the age of five in the household, and most importantly, willingness to partake in the interview session. In most cases, the participants who are referred to as local nutrition service providers in the study included government administrators, civil society workers, and local authority workers who are 18 years of age or older. The selection criteria for the local nutrition service providers were based on individuals who held senior positions and worked directly or indirectly with San people in the nutrition intervention programs in the Oshandi, Ohangwena region. They must agree to be interviewed. I identified the local nutrition service provider participants based on their resourcefulness and experience from directly being involved in nutritional intervention programs with the San people. This group came from middle management levels and upwards from various entities such as national government, local authority, community leadership, and civil society. The local service providers must at least have worked in the described capacity for at least three years. These criteria enabled me to interview knowledgeable participants in the aspects of nutritional conditions of the San children in Oshandi village. The participants selected for this study have a common characteristic of having worked with the San community in the area of nutritional intervention programs; for example, I excluded local service providers who did not have experience working directly with San people in the area of nutritional intervention programs.

Only those administrators holding a decision-making position or those directly working with nutrition-related activities at a regional level (Ohangwena region) were eligible to participate in the study. In this context, I am of the opinion that this criterion

assisted me with experience and views shared on the nutrition environment of the San community. The required period of at least three years of work with the community also ensured that the participants were long enough in the position and were knowledgeable about the undernutrition aspect of the San children.

Civil society workers came from professional bodies, local NGOs and associations/cooperatives, faith-based organizations. The civil society workers were eligible to participate in the interview by virtue of their organizations' nutrition activities within the San people in the Ohangwena region. Civil society organizations have a vital role in supporting social mobilization, community engagement, and behavior change communication regarding nutritional-related issues. They also support advocacy for more investment and actions on food and nutrition issues and stimulate local initiatives. Civil society organizations are known to hold stakeholders accountable for their commitments. Only those workers from the civil society organization engaged and have experience with the San people Ohangwena region in the area of nutrition were eligible to participate in the interview. The civil society participant would be required to have a minimum of three years of working experience with the San community around the nutrition programs.

Regarding local authority councilors, I collected data from regional councilors that have worked in the region for at least three years. Because the regional and local authority councillors are political appointees and they are usually candidates who have worked in the region but chosen from the regional structures of certain political parties, I only interviewed those that have at least worked with the San community in the Ohangwena region for a minimum of three years and upwards in the areas of nutrition.

Traditional leaders are usually leaders chosen by their respective communities, and they play a significant role in many service delivery and development strategies to be implemented in the rural area for their communities. They are usually elders, respected members of the communities, and in good standing with the community they serve. Their terms are usually long and only get replaced when they pass away. For this purpose, I considered those who are currently serving as traditional or local authority leaders for the community as eligible to participate in the study. This criterion helped me ensure that the participants' recruitment best reflected the local nutrition service providers.

This case was about exploring and understanding the nutrition environment of San children who are under the age of five in Oshandi village by observing the situation and interviewing the San parents and local nutrition service provider. The selection criteria ensured that only participants could respond to the questions based on their lived experience about the government intervention programs and the nutritional condition of the San children. The local service providers reflected various levels of engagement with the San community regarding the provision of the nutritional intervention programs representing various stakeholders. I planned to interview a minimum of six San parents, and a maximum of ten should saturation not be reached; however, seven San parents were interviewed, and saturation was reached as no newer information emerged from the interviews after the fifth participant. According to Creswell (2018) and Sandelowski (2010), the sample size of a qualitative study should not be too large that it becomes difficult to extract thick, rich data or too small that it is difficult to achieve data saturation. As a general rule, Creswell (2018) recommends a sample size between three

and 12 participants for interviews to render highly accurate information with a high confidence level.

Similarly, a minimum of three local service providers from various organizations were anticipated to be interviewed, and a maximum of four should saturation not be reached; however, five service providers were interviewed. I had adequate data for analysis purposes, and no further new data, ideas, and insights were brought to the fore at this sample size. Saturation was thus reached because there was no longer new information coming from the participants. The observation was conducted at four levels of the food environment, as explained earlier in the methodology section of this document.

### **Instrumentation**

I used interview guides and an observation guide to gather data from the San parents and the local service providers (See Appendices B, C, & D). The interview guides enabled me to better structure and organize the way I conducted the interviews to know what to ask about and in what order. Furthermore, a research protocol as an instrument to guide the inquiry was followed (see Appendix E). The interview protocol served as an instrument of inquiry containing specific information related to the aims of a study and an instrument for conversation about the phenomena researched.

The interview guides included questions that helped answer the research questions. Questions were more open-ended in nature to allow participants to provide answers in their own words and raise points they believed were important. It was thus expected that each interview would likely flow a little differently.

The interviews for most local service providers were carried out in English (see Appendix D). I used probing or follow-up questions in the interviews should the answer from the participant not appear clear. San parents do not speak English; therefore, the interviews were held in Oshiwambo, a language widely understood by the San people residing in the Ohangwena region and is fluently spoken by me as a researcher.

The observation protocol was developed to guide the observations. The observation protocol served as a plan outlining how the observation was to be carried out and what was to be observed. The observation guide enabled me to observe what took place at the participant's homes to understand better the nutrition situation, the setting, and the participants' behavior in their setting. The observation protocol also assisted me in ensuring that I collected the best possible data relevant to the research question.

According to Yin (2018), interviews provide insightful explanations as well as personal views such as perceptions, attitudes and meaning. He noted that the researcher should ensure to follow their line of inquiry as guided by their interview protocol and verbalize their conversational questions unbiased. He further explained that interviews are targeted and can focus directly on case topics. They follow guided conversations rather than structured queries (Yin, 2018).

The interview guide for San parents and local service providers focused on their perceptions of child undernutrition, nutritional intervention programs, and challenges/barriers faced in the uptake of nutritional intervention programs and availability. The interviews began with semi-structured open-ended questions followed by further probing and clarification. The use of semi-structured interviews allowed the

researcher to be focused while at the same time allowing participants' reflections and freedom to discuss the different aspects of the problem (Creswell, 2017). The interview was recorded, and memorable messages from the San parents were quoted for reference. The recorded interview was only used for study purposes, and this was stipulated in the consent form signed with the participants. No name or identity of the participant is mentioned in the quote. In addition, photographs of the nutrition environment at various levels and the actual food items were taken to provide visual referencing and strengthen both the verbal and the observation data.

I transcribed the interview and theme identification using handwritten notes immediately after the interviews and each interview data was further typed into a word document. The interviews and identified themes were further entered in an excel sheet for the analysis. Two sets of codes e.g. 1<sup>st</sup> Code and 2<sup>nd</sup> codes, were developed first before the final themes were established. Along with the interviews, I also observed the nutrition environment of the participants.

The observation data helped me to understand the nutrition environment of the San people in Oshandi village, Ohangwena region. The interview question helped determine how parents perceived their children's nutritional status and how they perceived the nutritional intervention programs. The interview questions also helped determine how the local service providers view the nutrition condition among the San people in relation to the nutritional intervention programs.

This research was guided by an interview guide to answer a list of the high-level questions related to the research topic that the researcher wants to answer under each

topic. The use of interview guide was used for the purpose of this research as it not only linked it to the research questions that guided the study but also covered areas that were likely going to generate data that could address the questions. The interview guide was thus used to help me conduct an effective semi-structured interview process comprising of questions to provide answers to the issue surrounding the nutrition situations of the San children in Oshandi village.

The interview questions were semi-structured and open-ended to allow further probing questions when necessary to provide further clarification. The use of semi-structured interviews allowed me to be focused while at the same time allowing participants' reflections and freedom to discuss the different aspects of the problem. The participants were informed that their participation was voluntary, and informed consent was read, discussed, and questions answered before participants signed the consent form.

Finally, as a researcher, I ensured that the Interview guide questions were structured based on the constructs of the Social-Ecological Model, and the questions reflected behavioral attitudes and beliefs of the parents. Social-ecological models that describe the interactive characteristics of individuals and environments that underlie health outcomes have long been recommended to guide public health practice (Golden and Earp, 2012).

As indicated earlier, I developed guides in advance that can serve as reference during the interview (See Appendix B, C, D). This interview guide consisted of a list of questions covered during an interview. The interview guide was suitable for this study as it enabled the researcher to allow the participants a chance to talk freely about their

experiences and views on the topic. Interview guides can also be used with a range of topics or themes that can be adjusted during the study instead of a rigidly standardized instrument (Creswell & Poth, 2018). The interview questions for the San parents and the local nutrition service providers supported research question one and its five subquestions SQ1 to SQ5.

The observation guide developed served as a guide to the observation process (see Appendix B). The observation checklist focused on the nutrition environment at the community, on what was being distributed by the local nutrition service providers (the quantity of food distributed, the type of food distributed, and where the food was distributed from), organizational level focused on food availability at the household level (food availability, frequency of cooking, and eating patterns) and at the consumer level focused on the behaviors of the San parents and the children regarding the food (available healthy food option, utilization of the food and nutrition information). The observation guide enabled the research to observe the actual nutrition environment and record the actual nutrition situation, which the interview questions might not have been possible to capture. The observation checklist was also used to check and record nutrition environment behaviors of San parents, children's behaviors, and cooking and eating approaches.

To ensure content validity of my interview questions, feedback was solicited from experts in the field of nutrition who have worked with the San people in the rural area to "field test" my questionnaire to make sure they understand/interpret the questions the way



they were intended. I also sought input from experts to ensure that the interview questions were appropriate.

The study's goal was to obtain narrative data in the respondent's own words and gain insight from the participants with regards to how they perceive the topic being discussed. The use of the interview guide was the best collection instrument for this study because of its practical mode and interactive nature that netted the most helpful information to answer the research questions satisfactorily.

### **Researcher-Developed Instruments**

The data were sourced from two main sources, namely the San parents and the service providers. Service providers are those individuals who have worked with the San community, providing nutritional related interventions for at least three years. Those included national government official, regional councillors, traditional leaders and civil society officials.

I recorded the interviews during the interview process. Furthermore, I asked inclusion criteria questions of participants. The aspects of anonymity, confidentiality and the purpose of the study was explained in the email to the local service providers as well as on the flyer to the San parents. Such emails were written in order for me to obtain both research permission and consent from participants prior to embarking on data collection. Photographs of the surrounding areas and those related to the nutritional intervention programs as well as quotes from the San people will be used as complementary information. Only pictures that depict the nutrition environment of the San people and no pictures of individual human beings was taken for the study purposes.

### **Procedures for Recruitment**

After the ethical clearance certificate was acquired from the Walden University Institutional Review Board (IRB), approval number 11-19-0638432, I started the recruitment process by seeking appointments with selected San parents and local service providers to explain the envisaged study (see Appendix F). In addition, I obtained the approval letter from the regional councillor of the Ondobe constituency responsible for Oshandi village (See Appendix A).

To access prospective participants and collect data, the I travelled to Namibia to meet with the research participants and stayed there for at least 4 weeks. I organised in person. A written flyer (see Appendixes I & H) translated in Oshiwambo indicating the date and the time when the interview will be conducted was developed and distributed by the researcher to the parents.

Similarly, the request to some local nutrition service provider (e.g civil society, government official and local authority councillor) was done via email. The appointment with the traditional authority member was arranged in person and via phone. Prior to my travel, an email requesting the local service providers who work for the government, local authority constituency, and civil society organizations for the interview appointment was sent directly to their email addresses and this was followed with a phone call in cases where no responses were received within three days. I also made personal visit to the local service providers' offices when all attempts to secure the appointment failed.

### **Participation and Data Collection**

San parents: Interviews with the San parents was conducted in the native language, Oshiwambo (local language spoken by the San people in Oshandi). The questions for the Oshiwambo speaking participants was translated in Oshiwambo language and the responses in the Oshiwambo language were recorded and transcribed into English Language as well.

Local service providers: Interviews with the traditional leader was conducted in the native language, Oshiwambo (local language spoken by the San people in Oshandi) while the interviews with the rest of the local service providers from the civil society organization and the government were carried out in English. As mentioned earlier, the questions for the local traditional leader were translated in Oshiwambo language and the responses in the Oshiwambo language was recorded and transcribe into English Language for analysis.

Interviews with the local service providers was conducted under a quiet environment with less distraction. Interview sessions with local service providers were conducted after working hours in their offices, so to ensure full participation and less distraction that might arise from office environment.

I planned an hour for each participant. Seven participants from the San parent and up to five participants from the Service providers were recruited. The entire interview process was concluded in 22 days.

It was anticipated to recruit the number of participants as described in the study however, due to a few participants turn out, the researcher had to revisit the recruitment technique which included food incentives.

It was made clear at the beginning of each interview that those participants who wished to withdraw their consent to participate or withdraw their data from the study, the researcher will respect the wish of the participant to withdraw from the study without any repercussions. It was also made it clear to the participants that should a need arise for a follow- up interview, I will contact the participant and explain in detail the question and that part of the previous conversation that stimulated the follow-up. Another informed consent form with the follow up interview question will be signed with all participants should a follow- up interview be required.

### **Data Analysis Plan**

For the current study, I analyzed and interpreted the participants' opinions, thoughts, feelings, and what was expressed through the semi-structured interview questions following the as explained by Yin (2018). This approach does not necessarily follow the theoretical propositions for analytic priorities but may assist the researcher in generating practical concepts from some of the data or developed patterns. Following Yin's approach, codes were assigned to the data, with each code represented a concept or an abstraction of interest. According to Yin (2018), this inductive approach allows the researcher to play with the data and realize some key concepts that may not necessarily have come from prior theoretical propositions. This method has facilitated the process of understanding how I made meaning of the parents' perceptions and understandings of the

nutrition environment at various levels and yielded appreciable benefits demonstrated in the grounded theory below. In addition, this approach enabled me to interpret and describe what was expressed by the participants through themes and linking arguments across the causative factors and their real-life situations to understand and promote better nutrition among the community.

Coding in qualitative studies is based on the most-used words or phrases that symbolize the essence of capturing the most language or attributes being spoken about during the interview (Saldana, 2016). In qualitative research, a code represents and captures the data's primary content and essence through the researcher's own generated constructs (Saldana, 2016). There are six main steps contained in the thematic coding analysis, and that is that researcher will familiarise herself with the data, assign the preliminary codes to the data in order to describe the content, search for patterns or themes in the codes across the interviews, review themes, define and name themes and finally produce the report. The researcher thus used the thematic coding method to analyze the data better and work through discrepancies to ensure trustworthiness and rigor with qualitative data analysis. Coding is an analytical process that aided the researcher in categorizing and facilitating the analysis of data gathered from the interview transcripts and transforming it into a form suitable for analysis (Saldana, 2016).

To interpret participants' feedback, codes were assigned to words and phrases in each response to help better analyze and summarize the entire research's results. Themes were developed using inductive reasoning to create patterns for easier data organization. Nutrition environmental and perception phrases from both participants were

used to better understand the linkage of social causes to the nutrition situation of the community. Themes were determined to get reoccurring codes from the interview answers to help determine the outcome. The themes were devised from the gathered data to better formulate specific ideas from holistic concepts about parents' perceptions of their children's undernutrition condition.

Research questions were reviewed along with the questions that the participants were asked to ensure the connectivity of the data to the research questions. The participants' responses were grouped to ensure similarities or recurring themes of the answers from the participants.

Qualitative data were collected by in-depth interviewing of San people residing in the Oshana region in Namibia. In-depth interview questions were used to collect information related to the nutritional perception and beliefs of the San parents on their children. Demographic data was also collected through interviews, and it included the participants' age, sex, region of residence, history of the nutritional intervention received and utilized.

### **Issues of Trustworthiness**

According to Yin (2018), credibility or internal validity refers to a researcher establishing the causal relationship of events due to more than one factor alone. In this study, the researcher will establish various factors through prolonged engagement with participants from diverse setups. This includes participants from the San parents from various households, participants from the local authority office, traditional community

heads, national governments. These groups provided the researcher with credible data based on different perspectives on the same issue.

External validity or transferability refers to “the extent to which the qualitative study results can be generalized” (Yin, 2018, p.45-46). My study finding is specific to the San people residing in Oshandi, Ohangwena region in Namibia, and thus cannot be generalized to other populations. However, it is expected that other researchers might benefit from the transfer of concepts and theories depicted in my results to other study populations.

Dependability or the qualitative counterpart to reliability refers to where other researchers follow the same procedures as described by an earlier researcher and conduct the same study repeatedly, that the later researcher arrives at the same findings and conclusions (Yin, 2018). While, in reality, opportunities to repeat a case study are rare (Yin, 2018), the researcher will document the procedures followed in this study, including any changes that might occur during the study and how such changes might have affected the data collection and analysis. As mentioned earlier, a case study research protocol was also developed and attached to this study proposal (see Appendix E).

Confirmability, also termed the qualitative counterpart to objectivity, refers to how the study results could be satisfactory to others (Yin, 2018). In this instance, the researcher will have one of the key informants that were not studied participants to review the draft of the case study report. These informants included officials from the ministry of health, civil society organizations, and the local authority government.

### **Ethical Procedures**

Ethical issues are important for both qualitative and quantitative research, but ethical considerations are more important in qualitative research because qualitative research intrudes more into participants' lives (Khan, 2014). This research is based on the qualitative approach, which resulted from interviews and observation work. As a researcher, I upheld ethical standards as required of me by Walden University. Participants were only contacted after a formal approval had been obtained from the University's Dissertation Committee and the Walden University IRB (see Appendix F). Additionally, I obtained an approval letter from the regional councilor of the Ohangwena region responsible for Oshandi village (see Appendix J). Should any ethical issues arise during any stage of the dissertation, I would have notified the Walden University IRB and the University's dissertation committee immediately and stopped all research activities until the ethical concerns were resolved. Finally, I have completed the National Institute of Health web-based training course "Protecting Human Research participants" (see Appendix G).

The research participants were recruited voluntarily, and if the participant agrees to the participant, an informed consent form will be signed. A consent form was also signed in the case of the service providers to ensure confidentiality of the information gained through the interview. I contacted the local service providers directly, and there was no third-party involvement.

The participants were assured that all acquired information would be treated with confidentiality. As a researcher, I further explained to the participants the purpose of the



study and the confidentiality of the respondents. The consent form was in their respective languages, indicating the terms and purpose of the study and what was expected from them. It was explained to the participants that only the researcher would have access to the information. Furthermore, the benefit of participating in the study was indicated, and the compensation that might apply in the study. The contact information of my supervisor from Walden University was made available for the participants should they have questions related to my study. Only participants of legal age to consent were allowed to participate in this study. I administered the interview myself and I was in the position to explain to participants the purpose and the importance of the study.

All information acquired was treated with confidentiality. The information and all sources quoted and cited were acknowledged and indicated in the list of references. Materials like the interview guide, recordings, notes, and pictures were stored securely and kept in a lockable cupboard for at least one year after the completion of the study.

### **Summary**

I used a qualitative approach to explore and understand the nutrition environment of San children in Oshandi Village. Chapter 3 included a review of data collection strategies for the study. Data were collected through interviewing parents and service providers about the issue of child undernutrition. Sample size and instruments used for data collection were also discussed in this chapter. Furthermore, analysis methods were also discussed. Finally, I discussed issues of trustworthiness and ethical considerations when dealing with participants. Chapter 4 includes results obtained from data.

Implications for social change as well as recommendations are also discussed in this chapter.

## Chapter 4: Study Results

### **Introduction**

I aimed to explore San children residing in Oshandi Village, Ohangwena region and their nutritional status as well as nutritional programs from the perspectives of San parents and service providers.

One primary question and six subquestions were used to guide this study.

*RQ1:* What is the nutritional environment for children under 5 in the San community in Oshandi Village?

*SQ1:* What are the perceptions of San parents regarding their children's nutritional status in Oshandi Village?

*SQ2:* What are the perceptions of San parents regarding nutritional intervention programs available for their children?

*SQ3:* What are the perceptions of local community nutrition service providers regarding children's nutritional status in Oshandi Village?

*SQ4:* What are the perceptions of local community nutrition service providers regarding nutrition intervention programs available to San children?

*SQ5:* What are the perceptions of local community nutrition service providers regarding challenges and barriers faced by nutritional programs in Oshandi Village?

*SQ6:* What are my visual observations regarding nutritional environments among the San community in Oshandi Village?

This chapter includes the setting, demographics, data collection procedures, and data analysis processes. A summary of results and evidence of trustworthiness are also presented in this chapter.

### **Setting**

Namibia has 14 administrative regions (Kapuka & Hlasny, 2020). The setting for the present study was a settlement of San people in Oshandi Village in the Ohangwena region of Namibia. Oshandi Village is one of the developing villages in the northern part of Namibia and is governed by a traditional headman. The village has a small health facility and a gravel road which connects the villagers to the nearest town Eenhana, about 30 kilometers away, where the state hospital for the region is located. The San people who live in this village have been relocated after living as roamers to being placed involuntarily in a restricted geographic area where they do not own land or have resources to grow or hunt for their food (H. Ndjuluwa, personal communication June, 10 2021).

There is no public transportation, but villagers use privately-owned vehicles for transportation, and transport fees are very high. Oshandi Village has about 3,500 inhabitants, of which 300 are San people living in nonpermanent structures made available to them by the government (Kapuka & Hlasny, 2020). Nonpermanent structures are constructed with corrugated iron sheets where each family is given one room to use as a house (see Figure 2).

**Figure 2**

*Example of San corrugated iron sheet settlement in Oshandi Village*



Unlike other communal areas in which significant San populations have settled freely, the government has made some efforts and resettled the San in Oshandi Village, where they are also engaged in receiving food aid from the government for their everyday survival (OPM, 2009). The settlement is nonself-governed and has a dedicated administration person from the respective regional government. In this instance, the San people in Oshandi Village constitute a small and highly-marginalized minority (OPM, 2009). From my observations of housing conditions, the San people appear to be deprived of material goods compared to locals in surrounding areas. In addition, the San people in Oshandi Village speak the same native language and have similar socioeconomic situations.

I observed that the San people tended to wake up early to go to the neighboring *cuca* shop, also referred to as *shebeens* or local bars, or work in local houses in return for

food. While my interview appointments mainly were confirmed a day before with San participants, it was challenging to adhere to agreed times, as many prospective participants left the site early to go to cuca shops or find casual work in neighboring houses, or even beg for food. As a researcher, I had to wake up early and catch up with participants before they left the site. While service providers had private offices or boardrooms where interviews could be conducted, San parents had no such private structures or rooms. Many San parent participants suggested a private tree nearby where interviews could be conducted.

### **Demographics**

The study population comprised two groups: San parents and local nutrition service providers. I describe the demographic characteristics of each group.

#### **Local Nutritional Service Providers**

Of the five interviewed local service providers, three were females while two were males. Four out of five service providers have been working with the chosen community for over ten years, while one has worked with the San community for four years. The interviewed participant held senior positions within the local government or national government. This group consisted of high-level government officials with decision-making portfolios coming from the Office of the Prime Minister, Ministry of Gender Equality and Child Welfare, Ministry of Health and Social Services, Office of the Regional Council, and the United Nation's bodies. All of the interviewed participants have cared for over 30 000 San people in the past.

**San Parents**

Four out of the six interviewed San parents were females, while two were males. Only one of the interviewed respondents indicated that she was not married; however, the remainder of respondents indicated that they were married traditionally with no marriage certificates. Two participants indicated that they were living together with their partners while the remaining five were raising their children single-handedly while their partners resided somewhere else and only returned home to their families after some months of being away. Out of the seven participants interviewed, three received additional support from family members, including friends and relatives, while four were solely responsible for feeding their children. All the participants have indicated that they received nutritional intervention programs from the Government in 2021. Only one of the participants interviewed had received a formal education. Two out of seven San parent participants received government pensions, and the remainder did not receive any government financial assistance. All of the seven San parents who were interviewed were above 21 years old.

**Data Collection**

As indicated in earlier chapters, this study included a total sample of 12 participants: five local nutrition service providers and seven San parents of children under five years. In addition to the interviews, additional data were collected using an observation list. All participants were interviewed in their natural settings and their language of convenience. This means that the San participants were interviewed under a tree trunk at the settlement where they lived, and since I am fluent in the local language

spoken by the San people, I did not use an interpreter. The local service providers' interviews were held at their workplaces. The of the local nutrition service provider participants came from various levels of involvement in service provision, while the San parents were from the same settlement with a similar socioeconomic status but different age groups. Appointments with the local nutrition service providers worked according to the agreed appointment time. Because the San people are more mobile and rely on welfare and a broad range of opportunist economic strategies such as piecemeal work, begging, and gathering to survive, appointments with them were made on-site, early mornings. The data were collected from the 25<sup>th</sup> of November until the 16<sup>th</sup> of December 2021. Two local nutrition service providers were interviewed in one day, while the number of San parents interviewed in one day varied. The interviews with each of the 12 participants used interview guides (see Appendixes A & B), an audio recording, and notes of the respondents were also recorded in writing. Probing and follow-up questions were used to better understand the nutrition environment of the San children. The interview sessions were recorded using an audio recorder and a cell phone. The observation guide was used to observe the environment in the San people's homes. An observation list was used to record what was observed by the researcher. Lastly, photographs of the nutrition situations and the surroundings were taken.

Since some of the respondents gave detailed responses during the interview, there was no need to answer the probing question in those cases. Furthermore, I transcribed the recording immediately after every interview session using handwritten notes for each interview at the end of each day and later prepared a complete transcription upon my



return home. All the transcribed data were then transferred into an excel sheet for more straightforward analysis. The excel sheet was organized so that rows represented data collected from the individuals, with columns representing data collected from the individuals, with columns representing responses to the interview questions.

### **Data Analysis**

The social ecological model (SEM) was used to facilitate the understanding of factors that might influence the nutritional environment of the San children. The model of community nutrition environment (MCNE) was used to conceptualize and support the observation of the study's nutrition environment among the San children. The data analysis process followed an inductive bottom-up strategy of working with your data from the ground up (Yin, 2018). No theoretical propositions were required for analytical purposes.

Eventually, various code categories and themes indicative of the interpretive method were developed. The patterns and themes assisted the researcher in interpreting the data and identifying practical concepts that related to the research theory. This approach also enabled me to interpret and describe what was expressed by the participants through themes and link some arguments across that influenced the nutritional environment and their real-life situations using the SEM.

Thematic analysis in this study addressed the research questions to understand factors that contribute to the nutrition environment of the San children. While this method did not only make use of the theoretical proposition for analysis, it was able to explicate contributing factors to the nutritional situation of the San people in Oshandi village.

During the analysis, I studied the data to determine common ideas or phrases stated by the participants and assigned each idea to the appropriate theme. The participants' responses were grouped according to similarities or recurring themes of the answers from the participants. This meant that this process revealed similar patterns and themes across different research questions, and these themes, along with patterns associated with interview data, were then grouped.

The research questions that revealed similar themes and patterns were grouped in particular where similar response content emerged for the following questions. For example, research questions SQ1 & SQ3 revealed similar responses content that emerged from the question on how the San parents and the local nutritional service providers perceived the San children's nutritional status. Research questions SQ2 & SQ4 revealed similar responses from the San parents and the local nutritional service providers regarding the perceptions of the nutritional programs available to the San people. Finally, SQ5 & SQ6 revealed similar responses from the San parents and the local nutritional service providers related to the challenges and barriers faced on the nutritional programs. The researcher's observations were also used to support the respondents' responses.

To validate my findings, I used multiple coders of data sets to determine the reliability of the data, enhanced by detailed field notes, using recording devices and photographs. This process involved observations of the environment, data collections from the participants using an interview guide, field notes, recording devices, and photographs in order to be able to explain the social environment faced by the San children in Oshandi village. I transcribed the data from the field notes and the recording

into an individual data sheet for each participant. Data from both groups (San parents and local nutrition service providers) were later transferred into a final data table using an excel sheet. I created patterns for more effortless data organization from the sample responses, and themes were developed using inductive reasoning. The nutrition environmental and perception phrases from both groups of participants were used to better understand the linkage of social causes to the nutrition situation of the community.

After I familiarized myself with the data, preliminary (first) codes were assigned to the data to describe the content. After that, the second set of codes was created, and similar codes content was combined. I then searched for patterns or themes in my codes across different interviews. Themes were then reviewed, defined, and named before the report was produced. In addition, descriptive field notes and photographs of the environment taken by the researcher during fieldwork were also used to contextualize findings and interpretations.

### **Evidence of Trustworthiness**

As a researcher, I spent enough time with the participants to build trust with them in this study. Through my prolonged engagements with the participant, I was able to build better relationships with them whereas more than one participant took me inside their homes (zinc huts) so to show me their actual living conditions, such as where they slept, where they stored their food items, and where their kids slept as well. Sharing and allowing me in their personal space was a sign of trust for me. Another area of credibility occurred during the data triangulation. While the interviewed participants came from a diverse pool of people, they shared similar sentiments in many instances when it comes

to the issue of child undernutrition and nutritional intervention support programs. Similar patterns of the situation were also observed during the observation process.

This study included only San people from Oshandi village as participants. Data collected from the San parents were specific to the San parents in Oshandi and cannot be generalized to the other populations. However, many of the local nutrition service providers indicated that they were not only responsible for the San people residing in Oshandi village but also those that were not from Oshandi village. The local nutrition service providers indicated that not only did they see the research study as potentially useful for the Oshandi San people, but as a tool that could be used to improve the similar situation in other communities throughout the country.

SP1 said:

I, therefore, think your study is what is needed. Your research can also be used in other communities. It will also be interesting to do a comparative study and try to see the difference between the San communities that have been appropriately resettled and those that are not resettled. We do not understand the San people. That is why all or most of our efforts are failing. Perhaps we need to take a year and live with them, observe them so we can understand their way of living to be able to assist them even if it is just halfway.

The interview guides were used to guide the data collection process. The study participants included parents, guardians, and caretakers of the San children. However, during my interview process with the San parents, some parents relied on the volunteer mothers at the daycare for their children's daily feeding. Community members from the

surrounding area have started a daycare with a feeding program for the San children in Oshandi village. In this regard, I determined that the daycare providers would be a good source of information about what the children were eating hence including their explanations and their opinions in my report.

As mentioned in Chapter 3, I will seek input from the key informants that were not participants in the study. For this purpose, the study report was shared with a high-ranking government official who has been working with orphans and vulnerable communities in the areas of social protection and welfare to review the data. The report was also shared with a University lecturer (Institute of Nutrition) who has worked in nutrition and health for NGOs and UN bodies in various capacities to evaluate the accuracy and whether the data supports the findings, interpretations, and conclusions.

## **Results**

As reported in this section, the results are described without identifying individuals by name to maintain confidentiality. The data collected from the 12 participants are organized and presented below under the combined questions. I followed the interview guides to ask questions and follow-up questions to the parents and the local nutrition service providers. Research questions with similar themes were grouped, and significant responses were organized accordingly. For example, research questions SQ1 was combined with SQ3 (perceptions of San children's nutritional status), SQ2 with SQ4 (perceptions of the nutritional programs for the San people), and SQ5 with SQ6 (barriers and challenges faced on the nutritional programs).

To address research questions SQ1 and SQ3, San parents and local nutrition service providers were asked about their perceptions regarding the Oshandi village San children's nutritional status. Four critical themes emerged from their responses: These themes revealed four levels of how the respondents perceived the nutrition environment of the San people in Oshandi village.

### **Food Restrictions**

All the San parent participants opined that they had received at least some nutritional support for their children from the government irregularly. In addition, all the San parents interviewed indicated that they did not choose the type of food they received. Unlike the locals - the native inhabitants in Oshandi village who own resourceful lands - the San people did not have many sources from which they can derive their food choices. As a result, food gathering from the locals remained every day's chore for the San people in Oshandi village instead of food gathering in their traditional way.

Just as the frequency of food delivery varied considerably, so too the quantities of supplies could be inconsistent, though they tended to include one or two 12.5 kg bags of maize flour and one or two 750 ml bottles of cooking oil per household per month, and possibly (very rarely) tinned fish or beans. All the San parents interviewed indicated that they only received food aids once from January 2021 to December 2022, and they were not consulted on the type of food to be given to them. In addition, those responsible for the distribution of food have the right to determine the quantity and the type of food to be given out to the San families according to the size of the household. However, various

San parents complained that the food provided to them was not fit for human consumption, and if they had choices, they would choose otherwise.

PP5 said:

Sometimes you get food, and you wonder what meal you can make out of it. The last food distributed was only maize meal and salt. How can a human eat maize meal and salt only? You cannot feed a child like you are feeding an animal. ....

My children do not like it. This food is not fit for human consumption.

Government should give us excellent food. Food that is good for our children.

Food with vitamins so our children can grow better.

Furthermore, it was reported that food was not delivered on time, and when it was delivered, it did not constitute a nutritionally complete diet, and it was not a total ration (the not that specific amount that was promised to be given).

PP7 said:

Sometimes the situation is challenging. At the beginning of the year, the government gave us some food but not complete rations. For example, we just got maize flour and salt. So we cooked maize porridge and ate it with salt.

Most San parents have a designated corner in their hut earmarked for food storage (see Figure 3). It was also observed that the San parents did not have any food reserves in their home food storage area, as shown to the researcher. This further indicated that the government did not provide food to the San people to feed their children, and as a result, hunger remained frequent amongst the San children due to the decline in government food support for their children. It was also notably evident that San people were unhappy

with the regulations that prevented them from hunting for food for their children and living as they had in the past, which would allow them choices in the variety of food available in the wild so they could feed their children.

### **Figure 3**

*Example of Food Storage Corner in Oshandi Village*



### **Child Feeding Practices**

During my four weeks of observations on the Oshandi San people's child feeding practices, I have encountered parents with many challenges, especially regarding their children's feeding practices. I have observed inappropriate child feeding and care practices in Oshandi village that did not align with the national guidelines for child feeding (MoHSS, 2003). For example, I have observed mothers introducing many types of solid foods to their children from the ages of three months to six months instead of



exclusively breastfeeding them. When children are introduced to solid food at a very early age coupled with hygiene practices, it compromises their health and subjects them to diarrheal diseases, which again works negatively to the children's nutritional status. In addition to this, the environment these parents are staying in made it clear that there was a need for support at a household level from many angles such as health education.

PP1 said:

My child did not eat with the other kids. Sometimes people here do not work together, but I gave my child a fat cookie (fried bread) that I kept for her last night. Those fat cookies (fried bread) were bought from the shebeen (local Bar) where I was last night. Almost all the kids here did not have anything to eat. The kids are waiting for us to go for our daily work and bring something to eat.

Upon my further interaction with the parents and hearing from them about their child feeding practices, especially from the child's first day up to six months, there were also practices such as introducing children to an alcoholic beverage (Otombo) daily. This could be due to many factors such as social-economic factors and lack of knowledge. All these factors are compounded by lack of knowledge, limited skills, and the poor care of the children from the parents within their households and their community contribute significantly to malnutrition-related conditions that a specific child face.

A child between six months to 24 months is falling in the period where the child is supposed to graduate from breastfeeding to complementary feeding. Again, I saw that mothers or parents were faced with hygiene and sanitation issues.

Participant PP3 said,

“I am breastfeeding, but I often do not have milk because I am also famished.”

I observed no toilet facilities at the settlement, and looking at Ohangwena, where high levels of open defecation are prominent, the hygiene practices were also deplorable, especially among the marginalized communities. The children are prone to infections that are causing anemia because the environment is not that conducive to where they are staying. This is due to a lack of toilet facilities at the settlement (Coffey et al., 2018). Another thing that I observed among the Oshandi San community, more particularly the children under the age of five, was the lack of diet diversity, and as a result, many San parents were not able to feed their children with a variety of foods due to a lack of such food. I observed mothers with limited food choices and restricted food groups to feed their children with.

Another paramount issue is poverty among the San community. As much as the mother may be willing to feed and improve the nutrition condition of her child, she may not have the means to procure the relevant food, or in many instances, the mothers do not have the food at all. The hunter-gatherer culture way of living of the San community has been disseminated and destroyed by modernization. As a result, many San people are trying to adapt to the new way of living, such as cultivating and seeking work, things that are not culturally appropriate for the San community. The San people have been used to living in the wilderness, gathering their food, but now the forest has been cleared, and most of the wild animals from which they lived have been either killed or fenced off. In return, the wilderness cannot sustain them because their dwellings have been converted into commercial farms or national parks. The San people have been forced to move from

their forests and wilderness to urban or semi-urban areas where they find life very difficult to survive. All these factors could affect the feeding practices of the San people.

Finally, my main observation was a lack of food among the San families. Cooking was done when there was food to cook. During my observation, I have witnessed certain families who could not prepare food for their young children due to a lack of food. On some occasions, children were fed with a traditional alcoholic beverage (Otombo) to have something in their stomach.

SP3 said:

The San people tend not to put their children and feed them first. The alcohol has taken over their lives, and in many cases, they would leave their house and leave their children without care to go on a drinking spree. They sometimes return after a few days. I think that is why you hear child death due to starvation in this community. We recently have two child death cases among the same community, but it is due to child neglect.

However, PP1 said, “I have no choice, and I feed my children with anything you can put in the mouth, even Tombo.”

### **Food Quantity and Availability**

Data gathered from all the respondents, and the observation indicated that in the San people's households, what was available was what was consumed by the family, irrespective of its nutritional content. Furthermore, the food consumed did not necessarily match the average diets in the region or any recommended dietary intake (MoHSS, 2003). It was clear from the data that the food availability determined the consumption

within households because food could only be consumed if it was available to the families. In addition to the above, all respondents, both San parents and local nutrition service providers expressed that the San people living in the communal area of Oshandi village were very worse off when it comes to the quantity.

Food availability is the most basic level of the food environment that affects dietary choices. Further, food availability is related to affordability and prices to buy own food. According to the data, the top contributors to the food availability included poor food supply from the government, inability to sustain the nutritional intervention programs, inability to purchase or afford own food, inability to produce own food, and lack of funds to purchase foods.

PP1 said, “You can see all the kids here had nothing to eat today. The kids are waiting for us to go to work for the day and bring what to eat home.”

None of the San people interviewed had access to land for their food production. The San people in Oshandi village are primarily dependent on the locals for food and even alcohol, including other vital necessities such as clothing and toiletries. All the San parents interviewed have indicated that they perceived their children as undernourished, and they have all gone hungry from time to time. The situation of failing to respond promptly to the San community's nutritional needs has prompted them to seek help from sources other than the Government.

### **Social Support**

Data revealed that many locals employing the San people in a piecemeal capacity were considered a charitable gesture with the argument that if the San people were not

given work, they would starve. SP4 said, “only a handful of San people search for food handouts. The rest would rather stay at one place and starve or simply neglect their babies and go for a drinking spree.” However, another local service provider from a government ministry responsible for the marginalized communities argued that all the San people qualified to receive social grants for themselves and their children. However, only two participants received social grants for themselves or their children of all the interviewed parents.

Participants cited that they did not have all the necessary documents to receive financial assistance from the government. The San people find it difficult to travel to the nearest government office (located 25 kilometers away) to go and apply for necessary documents. Four San respondents indicated that they had no idea what to do to apply for social grants for their children and themselves.

In Research questions SQ2 and SQ4, San parents and local service providers were asked about their perceptions regarding the nutritional programs available to the San children in Oshandi village. Three critical themes emerged from their responses: These themes revealed three levels of factors that influence the nutrition environment of the San people in Oshandi village.

### **San Social Norms and Lifestyles**

According to SP6, the situation at the Oshandi settlement is stressful as nobody seemed to understand their worldview. According to him, the San people have been forced to adapt to a completely different way of living, very different from their traditional, social way of living and eating. None of them have access to land to grow

their food. While the situation was not the preferred one, all the San parents interviewed have indicated that they were compelled to adapt their way of living as a survival mechanism or strategy.

However, SP4 said:

The San people have been used to their way. When one looks at the hunter-gatherer culture way of living of the San community, their dwelling places have been disseminated and destroyed by modernization. As a result, many San people are trying to adapt to the new way of living, such as cultivating and seeking work, things that are not culturally appropriate for the San community.

In addition, PP2 said, “government should deliver on their promise, or they should let us go free and give us a land with animals and fruit trees that we can call our own to feed our children and ourselves.”

Furthermore, my observations revealed that the current government nutrition initiative for the San people in Oshandi does not sufficiently demonstrate flexibility to accommodate cultural sensitivities for the San people. All the San people interviewed frequently complained of being forced instead of coercing into the situation.

### **Access to Health Facilities**

As mentioned earlier, the Oshandi clinic is within walking distance of the San settlement. However, a local nutrition service provider reported that the clinic does not necessarily respond to the nutritional needs of the San people as expected. For example, it was also reported that the Oshandi clinic did not have targets of increasing Antenatal care and a workshop for the San people and any other nutritional health program never got off

the ground. As a result, the immediate needs of the San community, with a particular emphasis on maternal and child health, have been neglected.

Furthermore, it became increasingly evident that the Oshandi clinic did not have sufficient staff to carry out all the activities expected of them. Staff members at the clinic were often occupied with emergency cases and neglected other critical functions. According to SP4, workload, conflicting priorities, competing demands, and staff turnover continue to be critical challenges in implementing nutritional initiatives targeting marginalized groups. In addition, the lack of performance management tools and capacity also influenced the ability to collect reliable data on women and children that benefited from the clinics or whether the clinics provided a complete package of services.

### **Motivation to Use Nutritional Interventions**

The data indicates the lack of motivation to utilize the nutritional intervention. All the San people interviewed indicated that they were highly unmotivated when it comes to the nutritional support programs from the government. Over the years, the San people have gradually lost the means to subsist autonomously. As a result, they have progressively become more dependent on others for their survival. The unfulfilled promises have not rendered their optimistic outlook for the future. As a result, their status is possibly more precarious, and they are faced with many most evident social problems: hunger, low school attendance, and high alcohol consumption.

From my observation, it was clear that due to their current situation, the San people seemed to have drifted back into more poverty were not hopeful for the future

because they have not been able to overcome all the setbacks they have endured for the past years.

PP1 said:

I am reliant on otombo to give my child; oshikundu is not there. As I mentioned to you before, with this Government food, we only received it once this year.

What is there to be motivated about? We rely on our survival. We do not rely on anybody anymore. This has been the trend for the last four or five years. What would kill you the most is the feeling of not knowing where the next meal will come from tomorrow, especially when you have children.

In Research questions SQ5 and SQ6, the local service providers were asked about their perceptions regarding the main challenges and barriers faced by nutritional programs for local communities while the researcher observed the nutrition environment among the San people. Five essential themes emerged from the observations and the local nutrition service providers' responses: These themes revealed five causative factors that influenced the nutrition environment of the San people in Oshandi village.

### **Affordability and Employment**

According to the income and expenditure report of 2016, it was found that in Namibia, food was unaffordable for a large portion of the population because of lower income. The San people living in the communal area in Oshandi village can be seen as a small minority population and highly economically dependent on government's assistance. Out of seven interviewed San parents, only two indicated that they received social grants from the government. All the San parents interviewed did not have any



formal employment. Due to a lack of employment among the San people in Oshandi village, the two San people who received government pension also indicated that they suffered predations from other community members. Besides the occasional government nutritional support, the San people tend to take up low-paid jobs from the locals to support their families.

SP5 said:

San people are perceived as supplicant, highly dependent on others, and largely uneducated means that locals could get away with treating them very poorly. For example, a large number of the San people would work in local houses around Oshandi just to be paid in kind, and inadequate portion.

Data from this research indicated that none of the San people interviewed had any permanent employment where they could earn some income to buy food for their families. They were mainly employed casually, where they received between N\$20 to N\$100 for daily work. In most cases, payments were usually in food or alcohol. Without permanent employment, the San people are dependent on these unreliable sources of income for sustenance. Most of the San people interviewed indicated that the food items such as fish tins were carefully selected based on affordability.

According to PP5, the Oshandi San people do not seem to have benefited in a meaningful way from the government development program.

PP3 said:

I receive money for my two children, about N\$ 250 (about 15 USD) each month. I use this money to feed the children, my husband, and myself. This money is not

enough to feed all of us, but it is better than nothing because most people in this settlement do not get some money like us.

### **Education**

Several service providers interviewed alluded that the provision of formal education to the San people has proved to be very difficult. Only one participant has received a formal education (can read and write) of all the seven interviewed respondents. As a result, six interviewed participants were illiterate and could not read or write. It is further reported that the government has made some efforts to enroll some of the San people in some formal education but to no success. The reason for the inability of educating the San people was reported to be school dropouts or failure to pay school fees for the San by the government. Considering the high rate of school dropouts and unpaid school fees, the San people will likely remain illiterate for an unpredictable time ahead. Furthermore, there are no mother-tongue learning materials, health educational materials, and efficient teachers available any major San languages spoken in Namibia.

A former kindergarten building made out of corrugated iron was deserted. Upon further inquiry, I learned that community members had facilitated the construction of a Kindergarten for the San children in the Oshandi resettlement. Two community members have also availed themselves to educate the children in the fundamental skills and knowledge they would need for elementary school. However, the lack of financial support from the central government and the lack of essential equipment such as chairs and toys for the children have discontinued the Kindergarten project.

When a local service provider participant was asked if there were any training programs for the San people, a local nutrition service provider responded that no specific training programs were designed for the San people in Oshandi village. However, the San parents were encouraged to attend health education pieces of training at the nearby clinic. However, due to various factors – not excluding the top-down approach, the training proved not to have been welcomed by the San people.

### **Government Policies**

However, there seems to be no tangible and meaningful change despite all these commitments. According to SP1, there was no coherent framework that dealt with San people's issues alone, and the lack thereof made it challenging to understand the San people's plight. According to SP3, a local service provider Government has declared and granted the San people a special priority status in terms of development and land distribution due to their social and economic challenges.

SP1 said:

If we were to assist the San people, we need to sit down with them and understand their needs. I mean what they tell you they need but not what you think they need. We also need to think of giving them their land with their natural vegetation and animals back so they can feed their families as they used to do in the olden days. We may also give them the freedom we have taken away from the hundreds of years back.

SP2 said the current government-run projects on nutrition for the San had been designed using a top-down approach, and projects have failed to yield positive results for

the San parents and their children. PP2 further stated a lack of financial and human resources required to implement what needed to be fulfilled effectively.

### **Lack of documentation**

Five out of seven San people interviewed indicated that they did not receive any social grants or pension for themselves and their children due to a lack of legal documents. In addition, the San people indicated that they did not know where or what to do to obtain their legal documents. Those San parents that had the legal documents indicated that they obtained those with the assistance of a retired priest who was assigned to Oshandi Anglican Parish.

Furthermore, many of the San people's children were delivered at home through the assistance of a known traditional midwife. The retired Anglican priest paid particular attention to the spiritual welfare of the San people in Oshandi village before his retirement. The spiritual activities included bible studies, baptisms, confirmations, and sacraments. The Baptism or confirmation documents enabled the San people to apply for the birth certificates and Identification documents needed to register for the social grant. PP7 said:

I was told I did not have an identification card. A generous pastor used to baptize the San community, and with the baptism certificate, you can apply for an identity card and eventually get financial assistance. The pastor is in retirement, and I do not know what to do now, and life is complicated. Maybe somebody from the central (Windhoek Government) can come and help us get ID documents.

### **Access to Resourceful Land**

While San participants stated that they would be far better off at gathering, soldiering than farming, they also indicated that their food security situation would improve if they had access to productive land, they also did not have access to a land where they could hunt, gather or even pick wild fruits and vegetables as they did in the past. All seven PPs confirmed that they are trying to survive under the current conditions they were finding themselves because of no choice; however, they would have preferred a situation where they could hunt and gather food for their families themselves. PP3 said, “For lack of better ideas, I think land cultivation for own crop production will slightly improve our nutrition, but I would prefer hunting forest.”

According to my observations, the Oshandi area is also not suitable for agriculture and livestock farming due to its dryness. While farming remained an activity in the Oshandi area, only drought-resistant crops were grown. The majority of villagers grow crops; however, their success is depended on factors like pests and rainfall, among other things. There are also no efforts made to transform the San people into good agriculturists like many villagers, so they can grow their crops and become less dependent on government food aid.

When it comes to gathering, the San people in Oshandi are troubled accessing resourceful land for their needs. The locals fence off most land, and the san people are chased away like animals when they are found hunting on private property.

PP6, a 32-year-old male San parent on the unavailability of resourceful land for the San people, stated, you know, culturally we relied on hunting wild animals and gathering

foods from the wild, and now we have to rely on food aids because we are settled in this area with no veld-food resources. I further observed that the San people were resettled in an area with sparse veld-food resources, where they had no option to pick veld food, hunting but were entirely dependent on food aid and cuca shop-bought foods that did not contribute much from a nutritional point of view.

Furthermore, the San people lived in customary communal land of San traditional authorities, and this status quo is no longer in existence with the influx of other tribes moving into the former San areas in large numbers. The locals privately own the available large number of land space in the Oshandi area, and hunting is also forbidden by law in Oshandi village, which makes it difficult to obtain food through legal activities. Lastly, gathering remains seasonally essential, but due to a lack of land, the villagers in Oshandi village always have the first access, and the nearby resources are quickly denuded. Participant PP5 narrated,

Government should deliver on their promise, or they should let us go free and give us a land with animals and fruit trees that we can call our own to feed our children and ourselves.

### **Summary**

Chapter 4 included study results and information involving research questions. Results indicated that perceptions of San parents and local service providers indicated that parents were aware their children were malnourished; however, unbalanced dietary foods were made available to them without choice or input. The inability of service local providers to equip, tailor programs, and impart knowledge and engage recipients

regarding designed programs makes it impossible to address undernutrition among San children. Furthermore, San parents and local service providers were asked about their perceptions involving nutritional programs available to the San people in Oshandi village. Interviewed participants responded that the distributed food was not perceived as fit for daily dietary requirements for humans; inherent challenges such as poor funding, logistical challenges, and inadequate regular supplies were addressed. In addition, social norms and lifestyle, access to health facilities, and motivation to use nutritional intervention programs were discussed. Last, respondents were asked about their perceptions involving main challenges and barriers faced by nutritional programs. Observations were also made to support responses of respondents. Issues involving affordability and employment, education, lack of accommodating government policies, lack of national documents, and access to resourceful land were addressed.

Results presented in this chapter involved the current nutritional situation of San children in Oshandi Village as well as current nutritional intervention programs available to them, factors influencing the nutrition environment of the San people, barriers and challenges affecting the nutrition environment, and possible solutions, and the value of community-based research in terms of improving the nutritional situation of San children who are under 5.

Chapter 5 includes interpretations of findings, findings related to theoretical and conceptual frameworks used in the study, and study limitations, recommendations for future studies, implications for social change, and a conclusion.





## Chapter 5: Discussion, Conclusions, and Recommendations

### **Introduction**

I aimed to explore the nutrition environment for young children in a rural San community in Oshandi Village by interviewing San parents and local nutritional service providers. It was necessary to explore perceptions of local nutrition service providers and San parents to understand the nutrition environment of San children under the age of 5. A total of 12 participants were interviewed for this study. Furthermore, observations of San children's homes were done to support responses of respondents. The San settlement in Oshandi Village was chosen for this study because of its semi-formal setup with a designated administrative person, allowing me to collect data from a semi-organized establishment.

I used two data collection methods (interviews and observations) and three data collection instruments (San parent interview guides, local nutrition service provider interview guides, and the observation checklist). I analyzed data using an inductive bottom-up strategy. Eventually, various code categories and themes were developed. This approach also enabled me to interpret and describe what was expressed by participants via themes and linking arguments as well as causative factors and real-life situations using the SEM. I focused on how San parents and local nutrition service providers perceived San children's nutritional status, how these parents and providers perceived nutritional intervention programs, what challenges and barriers were faced by nutritional programs, the current nutritional environment of San children, solutions to overcome challenges and barriers, and the value of community-based research. In

Chapter 5, I summarize results from Chapter 4. Chapter 5 includes interpretations of critical findings from the study related to themes and causative factors.

### **Summary of Key Findings**

#### **SQ1 and SQ2**

*SQ1:* What are the perceptions of San parents regarding their children's nutritional status in Oshandi Village?

*SQ2:* What are the perceptions of San parents regarding nutritional intervention programs available for their children?

Even though the government committed itself to provide nutritional support to the San people, every month this group has to fight undernutrition and its causes. This was the case because food was distributed on an irregular basis or not in full, and sometimes not distributed at all.

San parents were faced with challenges such as food that was not available at all, especially when it was most needed, the insufficient quantity of food distributed when food became available, the inability to have choices on the type of food that was at least culturally accepted and offered nutritional value to the children.

San parents were faced with challenges of child feeding practices because of the inappropriate child feeding practices caused by a lack of knowledge and lack of food types that were fit for children between the ages of zero to five years.

Unless it was made possible for the San people to fully receive available Social Support from the Government, in the form of employment provision and social grants, it

is likely that the life of the San people in Oshandi will remain challenging for the following years to come, no matter what interventions were made for them.

### **SQ3 and SQ4**

*SQ3:* What are the perceptions of local community nutrition service providers regarding children's nutritional status in Oshandi Village?

*SQ4:* What are the perceptions of local community nutrition service providers regarding nutrition intervention programs available to San children?

The San people are traditionally hunter-gatherers. However, since 1990, fencing of lands and resettlement structures have disturbed their traditional ways of living. This has made them more vulnerable to poverty, food insecurity, and diseases due to static ways of living. Few San participants relied entirely on hunting and gathering, and all were at least indirectly dependent on the cash economy and commoditized exchange of labor. Ambitious interventions must be undertaken to break this cycle of GRN-run initiatives where little or no cultural sensitivity has been demonstrated, leading to lack of success.

Although all San participants expressed the importance and value of proper healthcare, the extent to which the San people make use of existing health services can only be determined if contributing factors such as health education, distance to health facilities, lack of transport money, and treatment by the officials is addressed.

The issue of food security must be addressed as a priority as it has led to lack of motivation to use current nutritional intervention programs and will likely permanently lead to greater welfare dependency if not addressed. Given the scale of marginalization,

problems involving existing nutritional intervention programs and lack of developmental programs within the San community will require significant changes.

### **SQ5 and SQ6**

*SQ5:* What are the perceptions of local community nutrition service providers regarding challenges and barriers faced by nutritional programs in Oshandi Village?

*SQ6:* What are my visual observations regarding nutritional environments among the San community in Oshandi Village?

All San participants reported they could not afford necessities, especially food for their families, due to lack of proper employment. In addition, food available in local shops was often expensive, and participants could not afford transport to go to cheaper supermarkets. In most cases, informal employment with locals was either paid out in the form of food or alcohol. When cash payments were made, they were usually small and at a standard rate of N\$1–15 for a day's work. The inability of the government to enforce the minimum wage as proposed by the African Commission on Human and People's Rights has placed the San people in a difficult position when it comes to work and payment conditions.

All San participants expressed they did not have adequate access to formal schooling. While the country has an inclusive education policy, level of school attainment for the San people remains low. Since education is now a precondition for formal employment, lack of formal education has a substantial impact on the food security of San people, in particular given the widespread lack of land and access to natural

resources among this population. Targeted efforts should be addressed to educate the San people.

When it comes to government policies related to the San people, Namibia is a member of the UN and conforms to some international labor organization (ILO) conventions (107 and 169) regarding protection and integration of indigenous people; however, the country has not signed these conventions. Even though the San people are classified as a marginalized group, there was no single nutritional intervention program tailored to address the nutritional issues specific to the San people only. There is a need for interventions contingent on adopting a suitable policy framework that is cognisant of the causes of San marginalization and the factors that reproduce it.

Despite the provision of various financial grants that could benefit the San people, the inability of most San people to register for these grants due to a lack of national documents such as identity cards (IDs) or birth certificates was a challenge. In addition, San respondents cited that because they could not read and write, their national document mostly misrepresented their ages, names when random strangers assisted them.

A dedicated person such as the current caretaker of the settlement or a representative from the Ministry of Home Affairs could be tasked with assisting all the San people in the settlement to acquire necessary national documentation.

All the San people interviewed felt trapped in a self-perpetuating social and economic marginalization cycle. Unlike the locals in Oshandi village, the San people had no access to resourceful land where they could hunt or gather food for their family freely. Given the scale of this problem, it was clear that special initiatives would have to be

implemented to reduce the gap between San and other people in Namibia. Access to natural resources would allow the San people to feed their families from the bushfood as they did in the past. In addition, if capacity-building and meaningful empowerment were made central features of interventions on behalf of San, they would most likely remain a dependent underclass heavily reliant on state resources.

### **Interpretation of the Study Findings**

The key findings of SQ1 and SQ2 are elements of a successful model of community-based nutrition for the San community that works well. These findings also include challenges and solutions to effective nutritional intervention programs for the San people and the importance of cultural sensitivity when designing a San community-based nutritional program (bottom-up approach). Solutions to food insecurity within the San community in Oshandi village (SQ3 and SQ4), the role of education within the San community, access to natural resources for San peoples, the effect of government policy on child nutrition, and the role of capacity building for the San people (SQ5 and SQ6). The interpretations of the findings in Chapter 4 will be discussed in this subsection.

While my study findings confirmed that the current nutrition program did not successfully address the nutritional needs of the San people and their children in Oshandi village, it also provides extensive knowledge gained through the interactions with the participants necessary to expand on various suggestions of other studies. With this study findings, I could provide suggestions on what a good and thriving San community-based nutrition intervention program model that works well would look like.

Currently, Namibia does not have an explicit (tailor-made) nutrition program dealing with nutritional problems facing the San community and their children. The nutritional intervention programs for the San people at Oshandi village did not address the nutritional needs of the San children and their parents. There is a bad reputation built on the nutritional intervention programs among the San people due to a range of factors; the food aid program was not entirely accepted culturally, the distribution of the food was irregular, and only half rations in terms of quantity and diversity were distributed when it happens. Several studies also confirmed that the San Nutritional projects have been less successful and have not created meaningful change to their collective status (Heim, 2019; Hitchcock, 2013; Brigg, 2014). My study findings revealed a need to design a specific program tailor-made to deal with the nutritional problems facing the San people and their children to prevent further floundering of resources as is the case now.

A successful nutrition model for the San people should be people-focused and sufficiently flexible or participatory to accommodate the San people's different outlooks and world views from the onset while still maintaining solid and robust management structures for the program. A successful model is the one that is culturally sensitive and understands aspects related to social and economic complexities faced by the San people. Understanding cultural diversity would mean building relationships with the San people and demonstrating adaptation to move beyond ethnocentric interpretations of the community's needs rather than focussing more on the program. Failure to understand the above will lead to misunderstandings, conflicts, and wastage of resources to design and implement such programs.

The utilization of the nutritional intervention programs for the San people in Oshandi village is faced with numerous challenges. Similar concerns raised by both groups of participants indicated that various challenges and barriers were hindering the utilization of the nutritional intervention programs.

According to the literature, the community is primarily defined geographically in a setting and is the location in which interventions are implemented. Such interventions may occur within the community setting McLeroy et al. (2003), such as the Oshandi settlement. In the case of the San community in Oshandi village, nutritional intervention was employed for individuals and families residing at the settlement. While the nutritional interventions utilized by the San people residing in the Oshandi settlement were designed at a national level through forming an advisory committee established by the central government, it lacked the community input that could assist in tailoring interventions that are specific to the target groups. As a result, there is a lack of community ownership and participation, which is essentially essential to sustain the acceptance of the intervention for better health outcomes. A study by (Saldana, 2015) also confirmed that the lack of proper communication and engagement with families and communities affected when designing or improving the healthcare systems that serve them or their children would fail many programs. Furthermore, Lee et al. (2017), Heim (2019), Heim & Pyhälä (2020) also confirmed that significant improvement in rural communities could only be achieved if targeted interventions are developed on principles of participatory from those they are developed for.



The issue of nutrition awareness also needs to be addressed because the San people are not well mobilized; which will affect how they utilize the nutrition services. The information flow among the San people is feeble as they cannot access vital information regarding their children's feeding practices. There are a limited number of San people who have access to radios, televisions, or cell phones. All those factors hinder the utilization and access to nutrition information. Lee et al. (2017) & Saldana (2015) also confirmed that a lack of communication between the service providers and the parents on improving the health-related services that serve their children would fail programs. Thus, it is fundamental to have programs about Child Care for the San people to solve their nutritional-related issues.

The San people in Oshandi village feel that the nutritional intervention programs did not consider their cultural aspects, and full land-use permission, in particular, was the primary concern. In many instances, the San communities are usually settled along tribal lines in the country's different regions and have to embrace the socio-economic lifestyle of the region in which they live. In Oshandi village, the indigenous/local tribe constitutes their community setup coupled with households that constitutes several family members. The San people struggle to be fully integrated or accepted in such structures. As a result, the interactions and relationships with their neighbors are highly exploitative to the extent that the traditional hunting and gathering culture is highly overwhelmed. In addition, the participants struggled to prove land ownership or any land designated for them to hunt and gather. (Hitchcock et al., 2016) confirmed that failure to have a designated

resourceful land for the San people will further alienate them, compound development-related problems, and ultimately marginalize them.

The lack of formal education has a substantial impact on the food security of the San people, particularly given the widespread lack of land and access to natural resources among the San people. Of all the interviewed San parents in this study, none have reached a high level of education. Only one participant indicated that she could read and write; however, it should be noted that she did not complete primary education. The low levels of attainment are mostly related to poverty, cultural mismatch, language barrier, discrimination, and remoteness (Hays, 2016).

Regarding the role of capacity building, it was noted that the food distribution mainly was done without any training programs or explanation as to why the food was necessary for a child. Furthermore, the language in which most communications are done is also a barrier to the implementers. Significantly, all the San participants indicated little or no knowledge about health and nutrition-related issues. Notably, all the local nutrition service providers interviewed acknowledged that language was a barrier as they did not speak the language spoken by the San and would sometimes use the service of a translator in many instances. According to the San parents' participants, there have been no capacity-building exercises on nutritional-related issues in Oshandi village for the San people. Improved tailored evidence-based interventions are necessary to promote healthy eating behaviors in low-income populations.

Even though the government has made some commitments to granting the San people special attention as far as the land redistribution process is concerned (Legal

Assistance Centre, 2001), all the interviewed San parents in the Oshandi village have indicated that they did not have access to any productive land where they can gather or produce food for their survival. As a result, they do not have a sustained way of generating their food and depend very much on food handouts from anybody. Byerlee and Franzo (2019), highlighted the importance of integrating agriculture and nutrition to combat hunger cannot be forgotten because there is a clear link between agriculture, health and nutrition. According to the San parent's participant, their old way of living in the wilderness has been destroyed by modernization where their former dwellings have been fenced off or converted into commercial farms or national parks with no alternative land available to them. As a result, they were forced to leave their forest and move to resettlement areas where they found it difficult to cope. The San participants also noted that they were unhappy because the locals did not allow them to hunt in their communal farms.

Furthermore, they also disclosed that they were unhappy with the government that prevented them from hunting elsewhere as they did in the past. The limited options for independent subsistence inability required that they sold labor to secure food for their children but often attached themselves as menial workers to local individual households or squatting on the fringes of their settlement and begging for food. Biesele & Hitschcock (2013) stated that failure to make allowances for differences in cultural outlooks and the complexities of the San people has led to misunderstandings.

### **Conceptual Framework**

In this section, I review whether the nutritional environment of the San children in Oshandi village relates to the MCNE.

The food choices and food types environment were not met for the San children in Oshandi village because their parents did not have any sources from which they could derive their food choices. They could not rely on the frequencies of the food deliveries, and the type of food did not always meet the dietary nutritional requirements for the San children.

The food quantity and food availability environment were not met when looking at the nutritional environment of the San children in Oshandi village. Food availability ensures that a sufficient quantity of food of appropriate quality is available to the San children. This can be through own food production, purchasing, or donation. In the case of the San children in Oshandi village, I observed that the family consumed what was available irrespective of the quantity or the quality or any other recommended dietary intake. The level of the healthy environment is not fully met when the delivery of food is only done once a year and what is distributed is in half rations of what was supposed to be distributed. The nutrition situation is suboptimal when San parents do not have access to income, resourceful land to gather and hunt themselves, and the food type lacks dietary requirements for children.

Food accessibility is only met when there are adequate resources made available for the San children to acquire appropriate foods for a nutritious diet. This can be achieved by making resourceful land available to the San community, so they hunt and

gather food for their families. Secondly, social arrangements include child grants, old age grants, and marginalized community grants for the San parents. The lack of proper documentation to register for such income grants is challenging for the San people. Thirdly, accessibility to food can be achieved when the san parents are granted opportunities to participate in the local economy through employment and income-generating schemes. All the interviewed San parents did not have any form of formal employment.

Motivation to utilize nutritional intervention programs dimension is not met.

San participants indicated that they understood the importance of nutrition for their children; however, they struggled to provide healthy and adequate meals for children at home due to unemployment and extreme poverty, and unavailability of food daily. All the interviewed San parents said that they were not getting sufficient food to meet their needs and that the food they got was not balanced nutritionally. The government's food was not appreciated, and the participants said that there were long periods when they did not get any food. Two participants even referred to the food as not fit for human consumption.

Government policies, the level of the nutrition environment is not met when the government policies are not coherent to deal with nutritional related issues of the San people. A policy provides the necessary framework and guidelines for actively addressing the problems of food insecurity and malnutrition over a short and a long term period. Currently, there is no stand-alone policy dealing with the children's nutritional issues.

Acquiring national documents is not met as many San parents have indicated that they did not have any national documents such as identity cards and birth certificates. While the government, through its ministry of home affairs, has representation in all towns throughout the country, all participants indicated that the ministry's outreach is irregular, far, few, and the officials hardly target them for services. During the discussions, there were many cases of children without birth certificates, which was mainly attributed to San parents who do not have identity documents (IDs) themselves. It has to be noted that this problem was more pronounced in rural and remote San communities. However, based on the one-on-one discussions with the participants, it was evident that all of the San parents understood the importance of national documents and entitled them to state-funded benefits like old-age pensions and child grants.

### **Limitations of the Study**

I hail from Namibia, where Oshandi village is located, and I have a personal connection to the country. I tried, by all means, to eliminate personal biases through observations and interviews as well as through purposive sampling. Furthermore, this study was only preliminary research into the participants' perceptions regarding the nutrition environment of the San children under the age of five in Oshandi village. The study was not comprehensive enough to capture all the participants' perceptions in the Oshandi region. Furthermore, I designed all the data collection tools for this research study myself; thus, it may have some shortfalls when collecting data. Due to limited finances, I collected the research data within a short time.

## **Recommendations**

The results of this study indicate that the current nutritional intervention programs for the San people in Oshandi village do not effectively address the nutritional needs of the San children. Many areas need improvements.

One area that needs urgent attention is redesigning the current nutritional intervention program. The study results show that community members were not involved when the programs were designed for them but rather became mere recipients after the programs were designed at the national level. Parents can play a significant role in identifying their children's nutritional needs and problems. The planning committee responsible for planning at the national government level needs to be informed by a committee with representatives from the San community, regional government, local community workers, and non-governmental organizations to ensure that specific programs speak to the needs of the San people. Such a committee will ensure that the inputs of the San people were considered when planning and designing programs aimed to cater to the San people. Finally, planning should happen at the community level.

The second crucial area of recommendation is to make resourceful land available for the San people to hunt and gather food for their families as they did in the past. Such land can also be used to manage their indigenous knowledge of natural resources better to socially and economically support them for a better livelihood. According to Foley (2014), in high-income and rapidly growing low-income countries, the agricultural sector has become or is rapidly becoming a supplier of raw materials for the food processing industry rather than food for direct consumption. This means that, the San people should

fully participate in value chains and value additions which could profit them for a better social change. Existing efforts on commodified forest food and medicines should allow San people to participate fully so they can profit as well.

Government policies should give rights and permits that allow the San people to harvest forest products as they did in the past. Furthermore, Government Policies should consider and recognize the traditional way of living and lifestyles of the San people, just like they have allowed other tribes, more particularly the locals in Oshandi village, to activities such as clearing large areas of land for cultivation and are not held accountable for destroying the environment or hunting illegally.

The third area for recommendation is to provide free health services to the San people who do not have any income. During the interview, most San participants have pointed out that they were being denied health services at Oshandi clinic because they did not even have consultation fees of N\$ 4. Without any provision for the San to receive medical treatments for free, those with worse conditions had no choice but to return home and wait to get better without any medical treatment. Some San participants at Oshandi indicated that they still have some knowledge about traditional medicines, but most of the trees they used to use for medicine have long been cut down and or disappeared.

The fourth recommendation is to develop and provide a health and nutrition education and promotion program that can train communities in their homes. The community workers can be entrusted to provide such training and at the same time promote health and nutrition behaviors among the communities. The program could also create awareness of available health services for the community at the clinic and the



nearest hospital. The training program should be offered in a language that the San people understand.

The fifth recommendation is to support all marginalized groups with a safety net in cash transfer or child grants. The majority of the children failed to access grants because they did not have birth certificates. Regarding knowledge of the child grant access process, more awareness would be beneficial; however, it did not seem to be a huge barrier as most San know about the child grant program. However, outreach activities should be increased to bring the services closer to marginalized communities in remote places. Many participants also indicated that they did not always have transport money to travel to make the necessary applications to start getting the grants. In this way, the San parents can channel this cash transfer/grants towards providing food into their households. The cash transfer/grant will also increase dietary diversity, such as animal source foods and legumes, which did not form part of the distributed food rations.

The sixth recommendation is better coordination at the national, regional, and constituency levels. Government should invest in the multi-sectoral Framework and coordination framework that has not been implemented thus far. Interview results with nutritional service providers revealed a lack of coordination on nutritional activities from various stakeholders in the country. For example, at the constituency level, officials did not know when the San community, what type of food is expected, and the quantity of the food is expected. Strong coordination will also assist in the mechanisms needed to track progress. San communities needed to be placed at the center of conceptualizing, designing, and implementing such interventions.

The seventh recommendation is to create a special stipend to educate the San people. All the participants expressed a positive attitude towards literacy or education. Participants could link the lack of formal education to their poverty. However, due to a lack of funds to pay school fees and toiletries, they have expressed their dilemma of attending formal schooling. One participant who could read and write narrated that while she received a stipend from the government, she was forced to drop out of school due to non-payment of school fees.

The eighth recommendation is to distribute culturally accepted food rations to the San community. For survival, the San communities have been culturally dependent on wild food, known as veld kos. As most parents struggled to provide healthy and adequate meals for their children at home due to unemployment and extreme poverty, the distribution of the food rations was irregular, programs were uncoordinated, and the food distributed was not culturally entirely accepted by the San people.

The ninth recommendation is to review the birth registration process and other registration requirements for national documents such as national identity documents so the San parents can receive social grants. There is a need for a consultative review of the birth registration process and requirements. There is a need to revisit and change the requirement, such as that both biological parents must be available before a child can be issued with a birth certificate. Secondly, for marginalized communities, fees payable for an application for renewal of lost documents or amendments to errors on existing documents need to be waived. There is also a need to increase outreach services to assist communities in far and remote places to access the services efficiently. The use of native

San-speaking interpreters at the home office outreach/mobile services points needs to be considered to provide national registration services and the issue of national documents to the San people. Many San parents interviewed indicated that they could not register for a pension because they did not have national documents such as birth certificates or identity cards. Many have indicated that they could not travel to the next town Eenhana (40 KMs from Oshandi village), because they did not have transport money. Some were hesitant to go because of the language barriers, stringent requirements, lack of supporting documents, client fees, and fear of lengthy queues coupled with unfriendly treatments from the home office officials.

The tenth recommendation is to revive the Kindergarten at the settlement with qualified teachers and a functional feeding program. During my observation, I have observed a classroom built out of corrugated iron sheets, and there was an unqualified teacher who noted that class is also used for the school feeding program for the san children when food is available. However, she noted that since there was no food, children were not coming.

The above recommendations can only be achieved if the Namibian government allocates adequate nutrition funding. Progress should be measured. Finally, the result areas and indicators should be linked to the intervention activities and reflect input and outcome.

### **Implications for Social Change**

My motivation to conduct this study was triggered by the need to understand the nutritional environment situations, issues, and the challenges faced by the San children

under the age of five in Oshandi village, Namibia. Understanding the nutritional will help inform the nutritional local nutrition service providers and stakeholders about the key barriers affecting the uptake and utilization of these nutritional intervention programs among the San communities, potentially providing credible evidence to inform policies and future program design.

The study findings will help inform the local nutritional service providers and policymakers about the need for innovative approaches that are people-focused as opposed to the ones that are more program-focused, tailor-made, and using a bottom-up approach when designing and addressing nutritional needs related issues for the San people. More particularly, the study findings will inform policymakers that there is a need for a government policy that have an integrated program explicitly dealing with the nutritional programs of the San communities.

The study's findings provided information that could support the need to strengthen the current nutrition intervention programs that could improve child nutrition, leading to improved health outcomes and positive social change. The study findings also provided knowledge that may be used to boost future awareness and promotional campaigns related to the uptake of government nutritional intervention programs, especially among the San people. This study will contribute to the generation of reliable knowledge about what works in which circumstances when it comes to undernutrition among the San children, thereby promoting a positive social change.

I will present the study findings to the nutritional implementers at the national government and the local authority level. I will also seek to present the study findings to

suitable academic platforms and conferences in Namibia and abroad. I will personally present the study findings to the San parents of Oshandi village. I will also share the study finding with the local nutritional service providers via emails as well as in a print form.

### **Conclusion**

The results of this study highlight the need to improve the livelihood of marginalized communities, especially children, as a matter of urgency as the social and economic marginalization had a negative effect on themselves and their parents, more so the people of Namibia. This research was motivated by what I am genuinely passionate about. Despite the many difficulties I have encountered along this journey, I did not give up because I was driven by the desire to bring the problems of the San community from my village to the worldview. My advice to future students is to carry out a phenomenological research study to understand the nutritional, environmental situation of the San children in Oshandi village.

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## Appendix A: Approval Letter

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**OHANGWENA REGIONAL COUNCIL**  
**ONDOBE CONSTITUENCY**

TEL. 065 262400 FAX: 065262404/088612905 PrivateBag88011  
EENHANA  
15 April 2021

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Ms. Evelyn Breuer  
Am Nordpark 21  
53117 Bonn  
Germany

**SUPPORT LETTER TO CONDUCT RESEARCH**

Dear Ms. Breuer

Thank you very much for your request to conduct a research in our beautiful community of Oshandi Village. We are delighted with your proposed work.

Your Research Topic Titled: "The Nutrition Environment Among Young San Children in Oshandi: A Case Study". Please be assured of our highest support in this regard.


Our Constituency has about 3614 numbers of households that makes up to 8.27% of the total percentage of households in the entire region. The majority of the households are depending on government social grants while a few are dependent on farming as their source of income.

Furthermore, Ohangwena region is a home to the third - largest population of the San people in the country.

It is thus our hope that this noble initiative will lessen the burden of undernutrition in our region and the country at large.

Please be assured of my highest support in this project and do not hesitate to contact my office should you need further assistance.

Yours Sincerely

  
**Hon. Hilaria Ndjuluwa**  
**Councillor - Ondobe Constituency**

ONDOBE CONSTITUENCY OFFICE  
 P/BAG 88011  
 EENHANA, NAMIBIA  
 2021-04-15  
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 REPUBLIC OF NAMIBIA

## Appendix B: San Parents Interview Guide

### INTERVIEW GUIDE

(Target respondents: San parents with children under the age of five).

Respondent No. \_\_\_\_\_

Which Site are you affiliated to? \_\_\_\_\_

How many biological or adoptive children under the age of five do you care for? \_\_\_\_\_

\_\_\_\_\_

How many other children under the age of five do you care for? \_\_\_\_\_

What time period do you receive nutritional support from  
government \_\_\_\_\_

### WELCOME

Thank you very much for agreeing to take part in the interview. I appreciate your willingness to participate.

### INTRODUCTIONS

My name is Evelyn Breuer and I am A PhD candidate at Walden University. I am conducting this child undernutrition study in the San community residing in the Oshandi, Ohangwena Region, Namibia to hear your perceptions on various intervention programs available to you. It is hoped that the information generated from this study will be used for better planning, designing and programming of nutrition interventions acceptable to you. The interview will be voice recorded and take about 1 hour thirty minutes to complete. Any information that you provide will be kept strictly confidential and will not be shown to other people outside the research team. Your name and identifying information will be removed from any report. Your participation is also voluntary, and you can end your

participation at any time without consequence. I really appreciate the time you took to participate in this San community Survey by answering questions about various interventions and services available to you?

---

**RQ1: How do the San parents perceive their children's nutritional status?**

**Q:** On a scale of 1-5 with 5 being 100% fully nourished/balanced diet daily and 1 being malnourished, where will you rate your child's nutritional intake? \_\_\_\_\_

Follow up Q: Tell me what makes you rate your child's nutritional intake a \_\_\_\_?

**Q:** What is your opinion about the nutrition in a child's life?

**Q:** How do you see your child nutritional condition?

**Q:** Can you describe for me with which type of food do you normally feed your children?

**Q:** Tell me more about that

**Q:** What foods do you feed your children with now?

**Probe:** Why is it so?

**Q:** How vulnerable and susceptible do you think your children might be to conditions such as undernutrition?

**Probe:** Why do you say so?

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**RQ2: How do the San parents perceive the nutritional intervention programs available for their children?**

**Q:** Can you describe for me the kind of nutrition support that parents get in order for them to feed their children?)

**Probe-** who provides that? What is provided?

**Q:** Have you utilized any of these supports?

**Probe-** If so, which ones and how often have you used them?

**Q:** In your opinion, is the nutritional support important, how would you rate it, with 5 being 100% fully utilized and 1 being the least utilized? \_\_\_\_\_

**Probe:** Tell me what made you rate it so?

**Q:** Do you utilize all the nutritional support (food parcels) you get?

**Probe:** If not. Why not

**Q:** Using a scale of 1 to 5, with 5 being a 100% and 1 being the least: In your opinion, is the nutritional support that you get sufficient?

**Probe:** Why did you give it the scale of \_\_\_\_\_?

**Q:** How long does the food last in your household?

**Q:** Follow up question if the food gets finished before the next handout. What do you feed your children from when the food is finished before the next handout?

**Q:** Apart from the food parcels, what other support do your children get at this settlement?

**Q:** Can you indicate for me the support that you think your children need for you to be able to feed them properly?

**Probe-**Why do you say so?

Is there anything else you may want to share with me about the nutrition programs and child feeding for San people in this community?

## Appendix C: San Parents Interview Guide (Oshiwambo Translation)

Omulandu womapulo kovadali vOvayelee

**OMULANDU WOMAPULO**

(Ovanyamukuli: Ovadali vOvayelee vena ounona veli koshi yeedula 5).

Omunyamukuli No. \_\_\_\_\_

Eedula domunyamukuli: \_\_\_\_\_Ahombolwa ile ina hambolwa. \_\_\_\_\_Oho pewa omayakulo okudilila kovakweni. \_\_\_\_\_Ondodo yehongo. \_\_\_\_\_

Ohodi pepundo lilipi? \_\_\_\_\_

Owuna ounona voye mwene vangapi ile ovo totekula veli koshi yeedula 5? \_\_\_\_\_

\_\_\_\_\_

Ounapo vali ounona vamwe veli koshi yeedula nano hovatonatele? \_\_\_\_\_Openi ho mono omayambidido oipalwifa voye? \_\_\_\_\_

\_\_\_\_\_

Oho mono omayambidido oludi lilipi??

\_\_\_\_\_

Efimbo lilipi wali wamona eyambidido loikulya no ladile kehangano lashike? (tumbula

Edina lehangano) \_\_\_\_\_

Molwa elalakano lekonaakono eli, otwa pumbwa ouyelee wokaana kamwe keli koshi

yeedula 5. Okaana aka to dilaadila mouyelee owu twa pumbwa mekonakono eli okena

eedula ngapi? \_\_\_\_\_

**ETAMBULEKO**

Tangi eshi wa kufa ombinga mekoona kono letu.

**ETWALEMO**

Edina lange aame Evelyn Breure, omunafikola pondodo youndoxotola kofikola yopombada yoWalden University. Onga oshitopolwa shelongo lange, ohandi ningi omakoonakono enasha noiplawifa kounona vOvayelegele ovo veli momukunda Oshandi, moshikandjo shOhangwena. Onda hala oku shiiva omayambwidido oipalwifa oo haa pewa ounona vOvayelegele mOshandi. Osha teelika okudja momapekoapeko etu omauyelegele kutya omauyelegele aa otaa kalongifwa oku etapo omalongekido mawa. Omapulo otaa kakwatwa pefimbo lokupula pakanya oule wafika lwopo vili. Ouyelegele awushe ta wu di mekoonakono eli otawu kwatwa nawa nota ukalongifwa ashike kwaavo vapitikilwa okulongifa shinasha nekonaakono eli. Edina loye nomaukwatya oye otaa kufwamo molopota. Ekufombinga loye olo pokuliyamba no todulu oku ninguluka keshe efimbo kaapena mbudi yasha. Ohandi tumbaleke efimbo loye eshi tokufa ombinga mekonaakono eli oku tupa omauyelegele enasha nomayambidido oipalwifa kOvayelegele. Omapulo ashike handi dulu okuynyamukula pefimbo apa shinasha nekonaakono eli?

Elakkano lekonaakono eli, onda hala ulongife kamwe komounona voye keli koshi yeedula 5.

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**RQ1:** Ovadali vOvayelegele ova talako ngahelipi oukwatya woipalwifa younona vavo?

**Q:** Koshiyelekifo okudja po 1-5, ondodo oninaho (5) oyi lilepo 100% kokutya okaana okena oipalwifa yawanapo keshe efiku omanga oyimwe (1) ta shiti kutya okaana iha ka

mono oipalwifa yawanapo. Oto tengeneke kutya okaana koye keedula \_\_\_\_ (eedula)\_\_\_\_  
ohaka mono oipalwifa tai yelekwa ifike peni? \_\_\_\_\_

Epulo: Oshike mbela wa hoolola ondodo oyo yinasha noipalwifa yokaana koye \_\_\_\_?

**Q:** Koshiyelekifo okudja pu 1 fiyo opu 5, 5 ota shiti kutya osha fimana omanga 1 ta shiti  
ina shi fimana, onomola yilipi tayi wapalele eedula doye shinasha noipalwifa?

**Probe:** Oshike wakufila ehoololo eli?

**Q:** Oto dulu okutulombwela oikulya oyo wa pa okaana koye omafiku a heyali apita?

**Q:** Oikulya eyi mbela oya faafana ile oyiilile kwayi we kapele oivike ikwawo ya pita?

**Q:** Lombwenge etokolo eli hokufa kutya oikulya yilipi tope okaana koye?

**Q:** Oikulya yilipi ya liwa kokaana onghela?

**Probe:** Oshike hashi kutokolifa u hoolole kutya oikulya yilipi tope okaana koye?

**Q:** Koshiyelekifo okudja po 1 fiyo opu 5, 5 ta shiti kutya okaana koye okeli moudjuu  
wokumona oikulya ya wanapo, omanga 1 ta shiti kutya oh aka mono oikulya ye li xwapo  
no ita kakwatwa komanyutu. Opo ndodo yilipi to tula okaana koye kutya oke li monghalo  
yokukwatwa komanyutu?

**Probe:** Oshike wa hoololela ondodo oyo koshiyelekifo?

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**RQ2: Ovakulunhu vOvayelege ova talako ngeipi omayambidido oipalwifa younona  
oyo hava pewa?**

**Q:** Oto dulu ku tulombwela kutya oipalwifa ilipi hamu yambididwa nayo mu palufe ounona  
veni?

**Probe-** olyelye he mupe omavatele oipalwifa? Oikulya yilipi hamu pewa ku \_\_\_\_\_?

Oshike lela hamu yambididwa ku \_\_\_\_\_?



**Q:** Owa longifa yimwe yo moipalwifa oyo hayi yambididwa okupalufa nayo okaana koye?

**Probe-** Ngeenge osho, olungapi holongifa oikulya oyo?

**Q:** Omavatelo oikulya aa hamu mono okuli moukwatya uli ngeipi? (Pula kombinga ya keshe ehavaleko olo hava mono ngaashi sha popiwa pombada).

**Q:** Koshiyelekifo okudja pu 1 fiyo opu 5, 5 okuyta osha fimana neenghono omanga 1 okutya ina shi fimana, omayambidido oikulya okwa fimana shifike peni kwoove? \_\_\_\_\_

**Probe:** Oshike wa yandjela onomola oyo shinasha nomayambidido \_\_\_\_\_?

**Q:** Koshiyelekifo okudja po 1 fiyo 5, 5 okutya oikulya ya havalwa oha yi longifwa omanga 1 okutya iha yi longifwa. Oikulya ya havalwa oha yi longifwa ngahelipi momudingonoko weni?

**Probe:** Etokolo loye pandodo yoshilekifo owe li hoolola ngahelipi \_\_\_\_\_?

**Q:** Koshiyelekifo okudja po 1 fiyo 5, 5 okutya eyambidido loikulya ola fimana omanga 1 okutya ina yi fimanekwa, omayambidido aa owe a talako ngahelipi?

**Probe –** Oshike totile ngaho \_\_\_\_\_ shinasha nefimano lomayambidido aa momudingonoko weni?

**Q:** Koshiyelekifo okudja po 1 fiyo 5, 5 okutya omayambidido okwa tambulwako omanga 1 okutya inaa tambulwako, omayambidido aa owe a tambulako ngahelipi?

**Probe –** Oshike totile ngaho \_\_\_\_\_ shinasha netambuleko lomayambidido?

**Q:** Koshiyelekifo okudja po 1 fiyo 5, 5 okutya opena omukumo omanga 1 okutya kapena omukumo, owuna omukumo wo kulongifa omayambidido oikulya oyo ha mu pewa?

**Probe –** Oshike totile ngaho \_\_\_\_\_ shinasha nomukumo wokulongifa omayambidido aa?

**Q:** Koshiyelekifo okudya pu 1 fiyo o100, 100 okutya omayambidido a wana 100% (owa pewa keshe shimwe wa pumbwa) omanga 1 okutya ino wanenwa komayambidido, oikulya eyi homono oya wanena ngaho okaana koye?

**Probe:** Oshike totile ngaho \_\_\_\_\_?

**Q:** Ngee wa yambididwa noikulya eyi, oha yi kalapo shifike peni meumbo loye? Oshike mbela hashi tokola kutya oikulya eyi ota yi kalapo efimbo lifike peni?

**Q:** Elandula-pulo: Ngeenge oikulya oya pupo manga efimbo lehavalo ina li fika, oikulya yilipi holongifa manga wa teelega efiku lehavalo?

**Q:** Kakele nee koikulya, omayambidido ashike vali okaana koye haka mono?

**Q:** Owa ulika kutya oikulya eyi wa pewa o \_\_\_\_\_% ya wana okaana koye. Eshi wat ala owa pumbwa eyambidido lifike peni opo wu palufe okaana koye lela lela?

**Q:** Owunapo edilaadilo lashike oku etapo elunduluko liwa shi nasha nomayambidido oipalwifa momudingonoko weni?

**Probe-** Oshike totile ngaho?

**Q:** Oshike vali wa hala oku lombwelange shi nashi nomayambidido oipalwifa ounona vOvayelege momudingonoko weni? Oshike mbela ina ndi shi pula eshi u wete tashi dulu oku eta elunduluko liwa moku yandja omavatele oipalwifa kounona ovo veli koshi yeedula

5?

## Appendix D: Service Provider Interview Guide

**INTERVIEW GUIDE**

(Target respondents; Local Councillors, Traditional Leaders, Project Managers, Government officials, WIMSA,) NB: will be adjusted depending on who I am meeting.

Respondent No. \_\_\_\_\_

Institution \_\_\_\_\_

Position \_\_\_\_\_

Period as a Service Provider \_\_\_\_\_

**WELCOME**

Thank you for agreeing to be part of the interview. I really appreciate your willingness to participate.

**INTRODUCTION**

My name is Evelyn Breuer and I am A PhD candidate at Walden University. I am conducting this child undernutrition study in the SAN community residing in the Oshandi, Ohangwena Region. The reason I am having these interviews is to hear your views about the status of the San children's undernutrition state and the nutritional program available to them. Among other things I am interested in knowing the support you have, the challenges and any suggestions you may have to improve the services. It is hoped that the information generated from this study will be used for better planning, designing and programming of nutrition interventions acceptable to you. The interview will take about 1 hour thirty minutes to complete. Any information that you provide will be kept strictly confidential and will not be shown to other people. Your participation is also voluntary. So, I need your input and want you to share your honest and open thoughts with me.

I will be voice recording the interview because I want to capture everything you have to say. I will not be recording your name in the report, you will remain anonymous . Only your ideas are needed.

### **ICE BREAKER**

Tell me one thing you really like about working with San children?

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### **RQ3: How do service providers view the parents' involvement in the nutritional status of their children?**

**Q:** Can you describe for me what you know (and see) about San parents/family members feeding their children?

**Follow-up Question:** can you describe for me the kind of nutritional support that San parents get in order for them to feed their children?

**Probe-**who provides that?

**Q:** (Apart from the nutritional support programs, what other support services do San children get from/through your organization/program? Probe for the following (health education e.g. immunisation, hygiene, care, sanitation, juridical protection against abuse, exploitation and violence)

**Q:** Can you share with me the support that you think San parents need for them to feed their children properly?

**Probe:** why is it important?

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### **RQ4: How do the Service Providers perceive the nutritional intervention programs available to the San children?**

**Q:** What is your opinion about the nutritional programs for San children?)

**Follow-up Question:** From your knowledge and observation, how motivated are San parents to utilize the nutritional programs?

**Probe** - do you think San people value and accept these programs?

**Q:** what do you think are the main reasons why San parents do not utilize the nutrition programs? **Probe** for reasons why nutritional interventions are not utilized

**Q:** In your opinion, do you think the support in place is successful?

**Probe:** Why or why not?

**Q:** What are the challenges you face on nutritional support for the San people?

How do you think these challenges can be overcome?

Is there anything else you may want to share with me about nutrition for San people in this community?

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Thanking the participant

## Appendix E: Research Protocol

## Data Collection Methodology

Targeted Interviewees	Proposed Methodology	Comments
San Parents	Interview Guide (10 Participants)	All participants selected from parents with children under the age of five and have benefited from nutritional intervention program.
Service Providers <ul style="list-style-type: none"> <li>○ San Community leader</li> <li>○ Ministry of Health and Social Services or Office of the Prime Minister</li> <li>○ Local Authority Councillor</li> <li>○ Civil Society Organisation such as WIMSA</li> </ul>	Service Providers Interview Guide (Up to 4 participants)	All Service providers will be identified through various levels of engagement to the identified community related to the provision of nutritional intervention programs for over 3 years.

## Key Instruments

- ✓ Interview guides (Parents Guide and Service Providers' guides)

## Research Site

The site for the study research is Oshandi, in Ohangwena region where San people are resettled.

## Participant selection

- a) San parents of children who are under the age of five at Oshandi settlement to be identified through the assistance of a local NGO (identification method of being a parent to a child under the age of five and having received or benefitted from the nutritional intervention program).

- b) Service Providers will be identified through various levels of engagement to the identified community related to the provision of nutritional intervention programs for over 3 years (Participation on voluntary).

#### Ethical Considerations

All participants will be informed of the purpose of the study and will be asked to participate only if they wish to do so. All participants to sign consent form. Interviews to be in Oshiwambo language for the San parents while for the Service providers will be in English. No photographs of participants will be taken.

## Appendix F: IRB Approval

Dear Evelyn Breuer,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "The Nutrition Environment among Young San Children in Oshandi: A Case Study."

Your approval # is 11-19-21-0638432. You will need to reference this number in your dissertation and in any future funding or publication submissions. Also attached to this e-mail are the IRB approved consent forms. Please note, if these are already in an on-line format, you will need to update those consent documents to include the IRB approval number and expiration date. You will also need to ensure that the translated copy of the consent form is updated with this information.

Your IRB approval expires on November 18, 2022 (or when your student status ends, whichever occurs first). One month before this expiration date, you will be sent a Continuing Review Form, which must be submitted if you wish to collect data beyond the approval expiration date.

Your IRB approval is contingent upon your adherence to the exact procedures described in the final version of the IRB application document that has been submitted as of this date. This includes maintaining your current status with the university. Your IRB approval is only valid while you are an actively enrolled student at Walden University. If you need to take a leave of absence or are otherwise unable to remain actively enrolled, your IRB approval is suspended. Absolutely NO participant recruitment or data collection may occur while a student is not actively enrolled.

If you need to make any changes to your research staff or procedures, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive confirmation with a status update of the request within 10 business days of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.




When you submitted your IRB application, you made a commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.



Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained on the Tools and Guides page of the Walden website: <https://academicguides.waldenu.edu/research-center/research-ethics/tools-guides>

Doctoral researchers are required to fulfill all of the Student Handbook's [Doctoral Student Responsibilities Regarding Research Data](#) regarding raw data retention and dataset confidentiality, as well as logging of all recruitment, data collection, and data management steps. If, in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.

## Appendix G: Protection of Human Research Participants Certificate

		Completion Date 30-Sep-2020 Expiration Date N/A Record ID 38691220
This is to certify that:		
<b>Evelyn Breuer</b>		
Has completed the following CITI Program course:		
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Not valid for renewal of certification through CME.</div>		
<b>Student's</b> (Curriculum Group)		
<b>Doctoral Student Researchers</b> (Course Learner Group)		
<b>1 - Basic Course</b> (Stage)		
Under requirements set by:		
<b>Walden University</b>		
		
Verify at <a href="http://www.citiprogram.org/verify/?wb51d3389-6c73-4411-b166-a1b93399db0f-38691220">www.citiprogram.org/verify/?wb51d3389-6c73-4411-b166-a1b93399db0f-38691220</a>		

## Appendix H: Participant Flyer (English)

## Participants Needed for a Research Study on Child Nutrition

Are you are San parent/guardians/caretaker to a child who is under the age of five years in Oshandi village? You may be eligible to this research study on child undernutrition that may improve the nutrition condition of your child.

### You May Qualify If You

- are 18 years and older
- are a parent, guardian or caretaker of a child under the age of 5 years
- a San person from Oshandi Village

### Participation Involves

- Face to face interviews with the researcher for about 45 minutes.
- Describing all you know about your child's nutritional condition
- Describing all you know about the nutritional intervention programs.
- Participants will not be compensated

### Potential Benefits

Participating in this study may improve your child's nutrition condition.

### FOR MORE INFORMATION

Please contact Evelyn Breuer at 0811282094, email [evelyn.breuer@waldenu.edu](mailto:evelyn.breuer@waldenu.edu) or [carol.spaulding@waldenu.edu](mailto:carol.spaulding@waldenu.edu)