

GUIDELINES FOR HEALTH CARE PROFESSIONALS TO MANAGE
CHILDREN WITH FOETAL ALCOHOL SYNDROME AT HEALTH
FACILITIES IN THE KHOMAS REGION, NAMIBIA

A RESEARCH DISSERTATION SUBMITTED IN FULFILMENT

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By

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DECLARATION

I, Marcus Goraseb, hereby declare that this study titled **Guidelines for health care professionals to manage children with foetal alcohol syndrome (FAS) at health facilities in the Khomas Region, Namibia** is a true reflection of my own research and that this research report or parts thereof have not been submitted for a degree at any other institution of higher learning. No part of this dissertation may be reproduced, stored in any retrieval system, or transmitted in any form whether by means of mechanical, electronic, photocopying, recording, or otherwise without the prior permission of the author, or the University of Namibia on his behalf.

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ABSTRACT

In this study, the researcher explored and described the views of health care professionals who are managing children with foetal alcohol syndrome at public health facilities in the Khomas Region in Namibia. The purpose of this research project was to develop and evaluate foetal alcohol syndrome guidelines. This study was qualitative, explorative, descriptive, and contextual in nature and was conducted in four phases.

Phase 1: This phase focused on a situation analysis. The researcher conducted the situation analysis to explore and describe experiences of health care professionals who are providing health care for children with foetal alcohol syndrome at the Katutura State Hospital and the Windhoek Central Hospital in the Khomas Region. The participants were registered nurses, enrolled nurses, medical doctors, and social workers. The researcher used in-depth unstructured interviews to collect data from twelve (n = 12) participants at the Rehoboth District Hospital for a pilot study and from seventeen (n = 17) participants at the Katutura Hospital and the Central Hospital respectively. Six (n = 6) focus group discussions were conducted; two (n = 2) for the pilot study and four at the abovementioned hospitals. Tech's methods were employed for the data analysis. Four themes and 12 sub-themes were identified. The results of the study were used as basis to develop the FAS guidelines for addressing the challenges experienced by health care professionals.

Phase 2: In this phase, the conceptual framework served as guiding tools to develop the guidelines. The essential components identified by Dickoff, James, and Wiedenbach (1968) were used; namely purpose of the activity, and prescription of the activity to the attainment of the set goal. The guidelines included activities from the survey list of Dickoff *et al.*, (1968). These elements were: Agent (researcher), recipient (health care professionals), context (health facilities), dynamics (challenges experienced by the health care professionals in the

context of managing FAS, procedure (guidelines for health care professionals to facilitate the management of FAS, and terminus (individual health care professionals' abilities to manage FAS competently in accordance of their scopes of practice).

Phase 3: The third phase dealt with the development of the FAS guidelines for the health care professionals. The researcher utilised the findings from the situation analysis (Phase 1) and the survey list (Phase 2) of Dickoff *et al.*, (1968) as a reasoning map. The content for the guidelines were supplemented with the information adopted from the Centre for Diseases Control (CDC) (2004), and the Canadian guidelines for diagnosis of FAS. The guidelines comprised six components. The first one focused on the general knowledge for health care professionals to understand the management of FAS, while the other components specifically targeted medical doctors, nurses, social workers and psychologist, occupational therapist, as well as speech therapists. The guidelines structure for each group of health care professionals comprised the aim, role, and responsibilities; management of FAS; management of the environment for mother and other family members, as well as strengthening interprofessional collaboration in terms of the treatment of FAS.

Phase 4: Phase 4 aimed at evaluating the guidelines for the facilitation of the management of FAS by health professionals in the context of the health care facilities. This was done to ensure the authenticity, accessibility, and utilisation to enable the maintenance of such guidelines. This was done in collaboration with various stakeholders who were experts in the field of each category of health care professionals. The guidelines were evaluated in accordance with the criteria of Chinn and Kramer (1991) to observe how clear, simple, general, accessible, and important the guidelines were. That was achieved by conducting a one-day workshop during which the experts were provided with given guidelines to analyse

and afforded an opportunity to give their recommendations for improvement of the guidelines.

During Phase 4 of the study, the guidelines for health care professionals were identified with the purpose of facilitating the management of children with FAS. Those guidelines were derived and conceptualised from the challenges that the participants were experiencing in the context of health care facilities. The guidelines observed the parameters of international standard for FAS management. The health care professionals would manage the children with FAS in the context of their respective scopes of practice.

The study recommends the incorporation of the study findings in the curricula for various health care professionals to augment their essential training growth during in-service training and continual education interventions. Furthermore, the researcher recommends that research should be conducted to generate new ideas from the mother, the family, and the community in general to explore their challenges since this study has narrowly focused on the needs of health care professionals. This research should be done in various regions. Equally, this study urges policy makers to make provision for implementing the developed guidelines that specifically target various health care professionals in the Ministry of Health and Social Services.

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DEDICATION

I dedicate this study to:

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ABBREVIATIONS AND ACRONYMS

AAF	Alcohol Attributable Fraction
ADHD	Attention Deficit Hyperactivity Disorder
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal clinic
APA	American Psychological Association
ARBD	Alcohol-related Birth Defects
ASDR	Age-standardised Death Rates
BAC	Blood alcohol concentration
CDC	Centre for Disease Control
CNS	Central nervous system
CPD	Continual professional development
CT	Computerised Tomography
FAE	Foetal alcohol effect
FAEE	Fatty Acid Ethyl Ester
FAS	Foetal alcohol syndrome
FASD	Foetal alcohol syndrome disorder
FDs	Family doctors

FEN	Family empowerment network
FGDS	Focus group discussions
FMF	Families Moving Forward
GISAH	Global Information System on Alcohol & Health
GYN	Gynaecology
HAART	Highly Active Antiretroviral Therapy
HIV	Human Immune Deficiency Virus
HP	Health professionals
HP	Health promotion
HPCN	Health Professions Council of Namibia
ICD	International Classification for Diseases
IDAS	Infectious Diseases Society of America
IDCP	Interdisciplinary collaborative practice
IDEA	Individuals with Disabilities Education Act
IDI	In-depth interview
IEC	Information, education, communication
IEP	Individualised Education Programme
IOM	Institute of Medicine

ISH	International Society of Hypertension
KSH	Katutura State Hospital
MC	Male circumcision
MCH	Maternal and child health
MDG	Millennium Development Goals
MFS	Midwives-FAS-Scale
MILE	Math Interactive Learning Experience
MOHSS	Ministry of Health and Social Services
MRI	Magnetic Resonance Imaging
NBC	Namibian Broadcasting Corporation
NCDs	Non-communicable diseases
OB	Obstetrics
PACT	Parents and Children Together
PFAS	Partial Foetal Alcohol Syndrome
PFS	Physicians-FAS-Scale
PHC	Primary Health Care
PMTCT	Prevention of Mother-to-Child Transmission
RSA	Republic of South Africa

SADC	Southern Africa Development Community
SDT	Self-determination Theory
SES	Socio-economic status
SOP	Standard Operation Procedure
SSA	Sub-Saharan Africa
STDs	Sexually Transmitted Diseases
TB	Tuberculosis
USA	United States of America
WCH	Windhoek Central Hospital
WHA	World Health Assembly
WHO	World Health Organisation

CHAPTER 1

INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 INTRODUCTION AND RATIONALE OF THE STUDY

Foetal Alcohol Syndrome (FAS) is a preventable condition while its effects are irreversible and last for a lifetime. It is a disease that has devastating effects on the baby, family, and the community in general (Murphy Landau, Choudhury, Hostage, Shanskaya & Sair, 2013). The effects of FAS include mental retardation, malformations of skeletal system and major systems such as heart and brain, inhibited growth, central nervous system (CNS) complications, memory difficulties, and social interaction.

In this study, the health care professionals expressed challenges they were experiencing with the management of FAS. They cited explicit non-existence of protocols and guidelines to address FAS at the health facilities as reasons for those challenges. The health care professionals also mentioned a lack of knowledge and skills, training opportunities, and interprofessional collaboration. That inhibited a comprehensive approach to address FAS in Namibia (May & Gossage, 2011).

In this study, the researcher focused on the development of FAS guidelines for health care professionals to manage FAS in the Khomas Region of Namibia. The guidelines offer knowledge and an understanding to health care professionals for managing FAS at the health facilities. The health care professionals need the knowledge and skills, as well a clear understanding of FAS. Evidence has shown that information provided by health care professionals about health care settings are meaningful.

The goals of the guidelines are to assist health care professionals to recognise the disorders associated with foetal alcohol exposure, promote accurate early (infancy and preschool) diagnosis, prevent secondary disabilities through early diagnosis, and prevent future FAS children of affected families by offering intervention.

The evidence-based health care has gained ground quickly over the past decades. It has motivated the health professionals to engage in research to improve quality health care, especially in terms of the management of FAS. In essence, clinical practice guidelines are “systematically developed statements to assist health professionals and patients decisions to ensure appropriate health care for specific clinical circumstances” (Field & Lohr, 1992). Guidelines are not only giving direction for decision-making, but oversee that uniform tools are applied for the benefits of the patients.

Alcohol use and abuse are common among people living in Sub-Saharan Africa and are characterised by patterns of misuse across many contexts and populations. It includes social strata, rural and urban environments, as well as men and women (Hahn *et al.*, 2011). Among individuals who consume copious amounts of alcohol, there is an increase in negative social and personal consequences; including risky behaviour, negative health outcomes, disinhibition, sensation seeking, and aggressive / violent behaviour.

In the 2014 Global Status Report on Alcohol and Health, Namibia was among countries with one of the highest levels of per capita alcohol consumption, particularly on the African continent. When examining both genders, Namibia had a higher percentage of persons with alcohol use disorders and alcohol dependence in comparison to the WHO African Region (World Health Organization, 2014).

There are a wide range of conditions that could be caused by alcohol consumption during pregnancy. These conditions are: Foetal alcohol syndrome (FAS), Partial foetal alcohol syndrome (PFAS), and alcohol-related birth defects (ARBD).

Alcohol crosses the placenta from the mother's blood into the baby's bloodstream and the baby is exposed to similar alcohol concentrations as the mother.

The effects of alcohol on the foetus include harm to the development of the foetal nervous system, including the brain. Research has also shown damage to developing brain cells, under-nourishment of the growing baby and triggering of changes in the developing of the baby's face, resulting in the typical FAS facial features.

Alcohol consumption in childbearing women is a public health concern due to adverse health implications for the mother and the baby. The patterns of alcohol consumption among childbearing women have been well-documented in the Western countries and elsewhere. Estimates of prevalence of alcohol use by women have also been documented in African countries including Botswana (30%) and Namibia (47%) (Sayon-Orea, Martinez – Gonzalez & Bes – Rastrollo, 2011).

Alcohol consumption is said to contribute to emerging social problems among adolescents and the youth in Namibia. One study estimates that 53.5% of the youth between 13 and 30 years old use alcohol (Barth & Hubbard, 2009). This relates to problems; such as fighting, trouble with police, violence, teenage pregnancies, engagement in unprotected sex, as well as motor vehicle accidents. Lebeau and Yoder (2009) state that the availability of alcohol at bars and private parties in Namibia makes it easy for people to get inebriated and participate in risky behaviour. Lightfoot, Maree & Ananias (2009) agree by arguing that alcohol use is high in Southern African countries, including Namibia. For this study, the researcher

concentrated on the development of guidelines to manage FAS at the hospitals in the Khomas Region, Namibia.

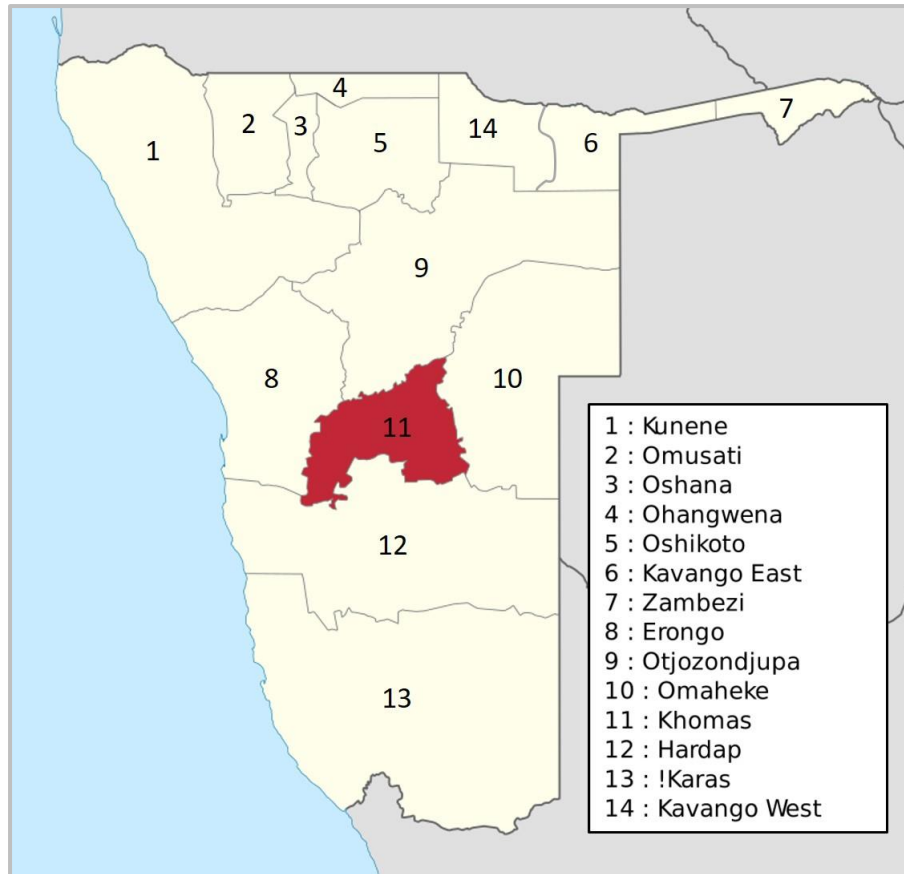


Figure 1: Map of Namibia

Background information emphasises the unmet needs of the health care professionals to manage FAS effectively at the health facilities. Namibia has been ranked as the nation with the third highest alcohol consumption per capita in Africa. Traditional patterns of drinking have been replaced by production and consumption which developed in European countries or empires in the early modern industrialisation. These products involve new beverages; new modes of production, distribution, and promotion, as well as new drinking customs and institutions (Jernigan, Monteiro, Room & Saxena 2000).

Health professionals are in dire need of guidelines to provide quality care to the patients. Sufficient evidence has directed the content of these guidelines.

The participants were the health care professionals who were working in the respective maternity sections of the hospitals as mentioned before. They were the experts in the field of service delivery. The participants contributed tremendously in terms of their lived experiences. These participants had a wealth of knowledge on the topic of FAS. This process enhanced the validity and credibility of the guidelines.

It was imperative to ensure that the target population was properly demarcated. The purpose was to achieve the objectives of the guidelines. In this study, the beneficiaries of the guidelines ultimately were the mothers of childbearing age. Those mothers included the ones who had not given birth to children with FAS and more specifically those with children born with FAS. Furthermore, the mothers were women who were consuming alcohol during pregnancy. To develop these guidelines, it was critical to include a multidisciplinary team for comprehensiveness. That encompassed health care professionals; such paediatricians, psychiatrists, social services, as well as many other disciplines. The development of the guidelines sought to include the various dimensions of roles and functions.

In this study, the target audiences were women of childbearing age, families, and the community. The target audience also included primary care physicians and primary health care nurses. This approach acknowledged the framework of the Government Policy of the Republic of Namibia, namely the Primary Health Care Philosophy. The goal of the Primary Health Care Philosophy is to work towards bringing the health services to the community where they are. Furthermore, the most important were the prevention strategies at the lowest level.

In this study, that approach was appropriate because many factors were influencing the high consumption of alcohol in the whole country. The purpose of guidelines included an attempt to change the mind-set and behaviour of the population.

It became clear that health professionals were not provided and trained on diagnoses, treatment, and management of FAS. The guidelines required exploring the available diagnostic and therapeutic options elsewhere that would suit the Namibian situation. However, very specific consideration had to be given to the health professionals' experiences and challenges in the real settings. Desired outcomes were to reduce the incidence of FAS in the country. It sought to serve as a catalyst for the health professionals in terms of knowledge, skills, and competencies for management of FAS. It was important to address issues of a pertinent nature to the benefit of service providers and service recipients. The guidelines had to provide a clear direction to the management of FAS. It would also provide a universal approach for the health professionals to follow. In turn, the beneficiaries would be assisted to change their health behaviour.

It is important to have validation tools for quality improvement in health care service. The necessity for quality and safety improvement initiatives permeates health care (Hughes & Hughes, 2008). Quality health care is defined as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (Lohr & Schroeder, 1990 as cited by Rubin, Pronovost & Diette 2001). For this study, it was extremely critical to consider validation. That was necessitated by the fact that the guidelines were the first ever developed for the management of FAS. The process also considered the pillars of ever changing dynamics in the health care

system. Other factors had to be considered, such as emerging diseases that are closely related to chronic diseases like FAS. The current health industry should provide the perspective for effectiveness and safety of patient-centred, timely, efficient, and equitable health care.

Effectiveness and safety assessed the process of care measures to establish whether health care providers performed processes that were demonstrated in the guidelines to achieve desired outcomes. The goals of measuring health care quality are to determine the effects of health care on desired outcomes and to assess the degree to which health care adheres to scientific evidence and professional consensus. Quality should lead to a change in the primary objectives in the desired direction and should contribute to intended results.

The emphasis in qualitative research is on reality and the human condition. The business of qualitative inquiry is garnering “the truth” from the participants. A researcher acquires this information and knowledge not in a vacuum but in a specific context. Therefore, the data is a product of various situational roles in which in-depth interviews (IDI), group discussions, or observations are conducted. The outcomes of qualitative research hinge greatly on the contexts from where a researcher obtains the data. Qualitative research is unique in its multi-dimensional efforts of obtaining quality data.

It is also important that a sound researcher-participant relationship exists in the context where the action takes place. This relationship is at the core of IDIs, focus group discussions (FGDs), and participant observation. A researcher and participants share the “research space” where the conventions for communicating are formed and which, in turn, shapes the reality that a researcher is capturing in the data. It is thus

important that qualitative interviews take place in a natural context to support the interactive process.

In this study, the composition of the working environment and the participants were appropriate. The participants were all health professionals who delivered health care services in the same environment. They shared experiences because they were working in the same context. The study focused on the Khomas Region with an emphasis on the maternity sections of the Katutura State Hospital (KSH) and the Windhoek Central Hospital (WCH). The target population were the health professionals who specifically worked in the maternity sections of these two hospitals from 2012 to 2014.

The researcher considered the study areas on the grounds of their identified characteristics. These hospitals formed the hub of referrals; all thirteen regions in Namibia relied on these hospitals for their referrals. The clear majority of the specialists were based in Windhoek and in terms of technology, the two hospitals were well equipped. These hospitals afforded the researcher an opportunity to target children born with FAS.

1.2 STATEMENT OF THE PROBLEM

The World Health Organization (WHO 2014) declare that the protection of the health of populations by preventing and reducing harmful use of alcohol is a public health priority. Moreover, the stance of the WHO is to reduce the harmful impact of alcohol on the health of the population. The “vision of the strategy is to improve the health and social outcomes of individuals, families and communities due to harmful use of alcohol and their ensuring consequences” (WHO, 2010). Consumption of

alcohol and problems related to alcohol vary widely around the world, however, the burden of disease and death remains significant in most countries.

The use of alcohol among women during pregnancy is the most common teratogen affecting unborn babies and those with FAS, not only in Namibia but also worldwide. It is related as the most none-genetic cause of mental and behavioural problem in children (Emerson & Hatton, 2007).

However, the causes and consequence of FAS have been known for 40 years and are affecting millions of people worldwide; about one in every 1 000 live births (May & Gossage, 2011). This condition has a serious impact on health and on societies worldwide. This condition is associated with cognitive, behavioural, and physical impairment and can have devastating implication for individuals, families, caregivers, and health care providers.

The health care providers in this study were medical doctors, nurses, social workers, psychologists, occupational therapists, speech therapists, and physiotherapists. It was expected of them to provide quality health care to individual who affected by FAS. This phenomenon required from the professionals to have knowledge and skills for assisting the affected individuals from conception, during pregnancy, and into adulthood.

The main research questions were:

- Do health care professionals have knowledge and skills about FAS?
- Do the health professionals have knowledge and skills to manage FAS?
- What are their experiences in providing health care for children with FAS and their families?

- What should be done to mitigate the outcomes?

1.3 PURPOSE OF THE STUDY

The purpose of the study was to develop, evaluate, and validate the guidelines that support health care professionals in the management of FAS. The health care professionals were working at the WCH and the KSH in the Khomas Region of Namibia.

1.4 OBJECTIVES OF THE STUDY

To answer the research questions, the objectives of the study were to:

- explore and describe the experiences of health care professionals regarding management of FAS in the Khomas of Namibia;
- develop a conceptual framework that facilitates the development of guidelines for the health professionals;
- develop guidelines that empower health care professionals to manage FAS in Namibia; and
- evaluate and validate guidelines for the management of FAS in Namibia.

1.5 SIGNIFICANCE OF THE STUDY

The ultimate significance of the study was guidelines that provided guidance and support to the health professionals for a better understanding of the management of FAS. The significance of the study was embedded in the benefits of implementing the guidelines.

The intentions of the guidelines were to strengthen the knowledge base of the health care professionals by providing a conducive environment where the participants

could address their challenges and experiences, as well as competence provision for health care professionals. The shared experiences of the health professionals laid the foundation for improving the quality care of this sector of the population. The FAS guidelines would inform policymakers in their strategic planning for providing health services because these guidelines would assist with intensifying prevention interventions.

Despite provision of comprehensive and quality care to those members of society who already have the condition, there is a need for vigorous primary health care interventions. Furthermore, the developed guidelines for FAS would provide a framework of references for health professionals. This would serve as catalyst to reach out to families and communities who are affected by alcohol abuse. The Ministry of Health and Social Services (MoHSS) would use this instrument to address alcohol consumption and its devastating impact on health. The patients, especially women of childbearing age who have children born with FAS, would be guided to become advocates of change.

1.6 PARADIGMATIC PERSPECTIVE

Paradigm is described as a worldview that reflects a philosophical stance. The phenomena under study presented themselves in a defined discipline. In this study, the concept of human health and how it could be maintained in human beings (LoBiondo-Wood & Haber, 2010) provided such a paradigm According to Morse and Field (1995) as cited in Tewksbury (2011). The paradigmatic view of Burns and Grove (2009) is explained as a collection of systematic, logically connected concepts and propositions that direct the researcher to conduct an in-depth investigation of the topic. It also refers to the way we perceive, understand, interpret, and think about the

environment. It is like a lens that hones our focus on the reality. Further, one could describe a paradigm as a framework containing the basic assumptions, ways of thinking, and methodology that are commonly accepted by members of a scientific community; such members of any discipline or group share a cognitive framework (Guba & Lincoln, 1994). Some scholars define a paradigm as a framework containing the assumptions about the phenomenon under study, research structures, and how the research is conducted (Shuttleworth, 2008; Raw , McNeil & West 1998).

In this study, an interpretivist paradigm had been used since the researcher aimed at exploring and describing the experiences of health care professionals in relation to the management of FAS as the basis of developing the guidelines. The researcher used a qualitative, exploratory, descriptive, and contextual design. The researcher was relying on the interpretation of the information obtained from the participants of the study. An interpretivist approach is looking at reality as something subjective and is based on understanding and meaning. Such an approach believes that people cannot be separated from their knowledge. That is why the researcher extracted the primary data from interviews with and observations of the participants in the study.

The critical component to understand about interpretivism is that people are fundamentally different from objects. Human beings change over time due to the environment that is influencing them. Interpretivism seeks to understand a certain context and believes that reality is socially constructed (Willis, Jost & Nilankanta 2007). It is important to be cognisant of the fact that interpretivist or constructivist researchers use predominantly qualitative methods (Willis et al., 2007). These approaches provide rich reports that are needed to fully understand the context.

This study used a qualitative method that portrayed a world in which reality is socially constructed, complex, and ever changing (Thomas, 2003). McQueen & Knussen (2002) support the idea of seeing the world through a “series of individual eyes”. The participants in the study had their own interpretations of reality. The interpretivist paradigm and qualitative method of this study assisted the researcher to obtain information from health care professionals in their own environment based on actual experiences. The approach recognises the uniqueness of a certain situation and contributes to understanding of the prevailing circumstances (Myers, 1997). The behaviour or people’s actions are meaningful and make sense. It is important to comprehend people’s ideas, thinking, as well as the meanings of their ideas and thinking (Boas, 1995).

Paradigms for human inquiry are associated with the ways in which people respond to basic philosophical questions. In the view of Polit, Beck and Hungler (2006) as cited by McGloin (2008), assumptions are regarded as basic principles accepted as true from logic, reasoning, and without verification; Burns and Grove (2009) describe an assumption as a proposition of truth. To them, something becomes self-evident when it has been satisfactorily established by earlier research. Mouton, Dudley, Cars Derendorf & Drusano. (2005) maintain that assumptions function as fundamental beliefs or statements that support whatever decisions a researcher makes during the research process. The way a researcher selects to find out about what he / she studies can be referred to as the methodological assumptions.

Four assumptions were applied in this study; namely an ontological assumption that recognises the mature nature of reality, an epistemological assumption that relates the research to the topic of the research, an axiological assumption refers to the

values in a study, and methodological assumptions that explain the process of the research study.

1.6.1 Ontological assumptions (the nature of reality)

Ontology addresses the question “What is the nature of reality? In what way does this question affect other forms of inquiry?” Qualitative researchers assume multiple and dynamic realities that are context-dependent and embrace ontology that denies the existence of an external reality. Searle (2004) describes an external reality as one that exists outside and independent of the interpretations thereof. These individual interpretations are deeply embedded in a rich contextual web that cannot be readily generalised to different settings.

From the perspective of Anderson & Barnett (2003), “the purpose of social science is to understand the social reality as different people see it and to demonstrate how their views shape the action which they take within that reality”. The investigation of ontological differences is a critical facet of the research process. It enables a researcher to uncover how participants’ perceptions of human nature impact on the approach they consciously adopt to reveal social truth (David & Sutton, 2004). A researcher may view social reality as being co-constructed by individuals who interact and ascribe meaning to their world in an active way.

A researcher approaches the search for truth the lived experiences of people through rigorous interpretation (Byrne-Armstrong, Higgs & Horsfall 2001). Ontological assumptions are concerned with what constitutes reality; it interrogates the “what”. Researchers need to take a position in relation to their perceptions of how things really are; how things really work. Ontology is a belief system that reflects an interpretation of what constitutes a fact to an individual. In simple terms, ontology is

associated with the central question of whether social entities need to be perceived as objective or subjective.

Different points of view of ontology are logically competing, not complementary. Should we view social reality as objective, external to people's awareness, or should we view it as social constructs consisting of the actions, experiences, and perceptions of people? There are two basic ontological beliefs: The first takes an objective view at the external reality and a researcher maintains a detached, objective position, while the second views reality as actively constructed by the people who live in that reality.

To understand human reality, a researcher should explore the essence of the phenomenon, as well as the impact it has on human behaviour. Naturalistic enquirers seek to explain the existence of reality within its given context. It is the construction of an individual's participation in a study (Chigurupati, *Mughal*, Chan, Arumugam, Baharani, Tanga & Greig 2010). In this study, multiple experiences were used. The research report uses direct quotations based on the interviews with the participants.

1.6.2 Assumptions about epistemology

Repko & Szostak (2016) posits epistemology as a branch of philosophy that studies how one knows what is the truth and how it is validated. These assumptions and propositions constitute a view of the world. It is concerned with the deep meaning of knowledge and science of the content of truth and related ideas.

For this study, the following assumptions were applied: The personal experience of the health care workers was the rich source of learning, knowledge, and obtaining information; the views of these health care workers represented the configurations

and meaning of the basis for the intended aim. Epistemology is concerned with the nature and forms of knowledge. Epistemological assumptions are dealing with how knowledge is created, acquired, and communicated. This articulates “what it means to know”. Elsewhere, epistemology can be defined as the relationship between the researcher and the reality (*Carson, Gilmore, Perry & Gronhaug. 2001*).

An epistemological assumption seeks answer to question, such as: What does one regard as knowledge or evidence of things in the social world? What is one’s theory of knowledge? What are the principles and rules that influences one’s decision whether and how social phenomena can be known, and how knowledge can be demonstrated?

For this study, the question sought to determine the relationship of the researcher and the phenomenon being studied. It encompassed the researcher’s understanding of knowledge and how he had acquired it (*Chigurupati et al., 2010*). Epistemology is an attempt to answer how we arrive at knowing what we know. It is the challenge for those who seek an understanding of perceptions, truth, explanations, beliefs, and point of view (*Coady & Lehmann, 2008*).

In this study, the information obtained from the health care professionals provided the knowledge that the researcher had been looking for. The researcher allocated sufficient time for interaction with the participants to understand their encounters. Interpretivists assert that researchers study and describe meanings in social action. The aim of the researcher was to gain an in-depth understanding of the phenomenon. The researcher should appreciate the relevance of participants’ daily lived experience.

1.6.3 Methodological assumptions

Mouton, Dudley, Cars, Derendorf & Drusano. (2005) explains that methodological assumptions describe the nature of the research process and the most appropriate method for the research. It is about the accuracy of the information contained in the data obtained. A researcher explains the steps he or she takes to verify the applicability of this information obtained from the participants (Creswell, Hanson, Plano & Morales., 2007).

The researcher used the following assumptions for this study: qualitative phenomenological approach that was suitable to clarify the meaning of the health care workers experience in management of FAS and this process included individual, dialogical engagement between the researcher and participants.

Methodological assumptions consist of assumptions made by the researcher regarding the methods used in the process of qualitative research (Creswell, 2007). The procedures used by the researcher are inductive and are based on the researcher's own experience in collecting and analysing data. The researcher studies the topic within its context and employs the emerging framework/model. The researcher works with the details and specific information before generalising.

Burns and Grove (2005) state that a qualitative research approach is systematic, interactive, and subjective. The methodological assumptions emphasise the naturalistic portrayal of all the information as it emerges from the participants (Polit & Beck, 2004). This laid the foundation for the conclusion that the health care professionals needed guidelines to manage FAS. The aim of gaining an understanding of multiple realities depends on research. It is also imperative to consider that reality is in a constant state of flux because it depends on the way in

which individuals experience internal reality. The personal views of the participants are of importance and should be acknowledged. It is in this respect that a researcher serves as the primary instrument while participants are the teachers.

1.6.4 Axiological assumptions

Axiology refers to the role of value and ethics in research. All research is value laden and biased. Values are derived from disciplinary allegiance, including predispositions toward disciplinary-related methodologies (Lincoln & Guba, 2003), as well as the personal history and research experiences of an investigator. A researcher makes the values and beliefs explicit. Qualitative approaches recognise the impact of the researcher's values and report the biases as data are gathered (Creswell, 2012).

The value system of a researcher informs the research methodology. Values are a part of the "basic beliefs" that undergird and affect the entire research process: Choice of problems, guiding paradigm, rhetorical framework, data gathering method, analysis strategy and presentation format of the findings (Denzin & Lincoln, 2011). Different professionals have their own views or values. The researcher took cognisance of the fact that this research project was value laden and that biases were present. A researcher should openly discuss these values with the participants. Axiology impacts how people view themselves in relation to other people. In other words, the important role of values and ethics in research cannot be ignored.

Furthermore, a close relationship between a researcher and participants can be created through the support of guidelines. It is within that context that this research study followed the principles of subjective findings and honoured the participants'

perceptions. The participants' points of view were valued to improve the management of FAS.

1.7 THEORETICAL FRAMEWORK AS BASIS FOR GUIDELINE DEVELOPMENT

Theories are formulated to explain, predict, and understand phenomena and, in many cases, to challenge and extend existing knowledge within the limits of critical bounding assumptions. The theoretical framework is a structure that can hold or support the theory of a research study. The theoretical framework introduces and describes the theory that explains why the research problem under study exists.

Theoretical assumptions refer to suppositions that are testable, and provide pronouncements about the research area. The assumptions shape a conceptual framework of a research project and provide proposed guidelines (Botes, 1995). The theoretical framework must demonstrate an understanding of theories and concepts that are relevant to the topic of the study. The selection of a theory depends on its appropriateness, ease of application, and explanatory power. The theoretical framework strengthens the study in specific ways:

- An explicit statement of theoretical assumptions allows the reader to evaluate them critically;
- A theoretical framework connects a researcher to existing knowledge. It also provides the basis for the choice of research methods; and
- A researcher is articulating theoretical assumptions to respond to questions, such as why and how.

1.7.1 Practice theory of Dickoff (1968)

A theoretical framework consists of concepts with their definitions and references from relevant scholarly literature about an existing theory that is relevant to an anticipated study. The theoretical framework is a structure that contains or supports the theory of a research study. It explains and describes why the research problem under study exists. The theoretical framework strengthens the study in a couple of ways.

Firstly, it contains an explicit statement of theoretical assumptions to evaluate critically during the research study. Secondly, a theoretical framework connects the researcher to existing knowledge that lays the basis for the choice of research methods. Thirdly, it articulates the theoretical assumptions of the research that compel the researcher to address the questions of why and how. Fourthly, a theory assists with identifying the limits to generalisations. The applied nature of a good theory adds value, because it fulfils the primary purpose of explaining the meaning, nature, and challenges associated with a phenomenon.

The general aim of this study was to describe guidelines that would facilitate the process of providing health professionals with guidelines about the management of FAS. The aim was realised by explaining and describing the meaning of the experiences of health professionals. The survey list of Dickoff *et al.* (1968) was applied to arrive at the desired outcome. The survey list included components that form the basis of formulating the contextual framework. The conceptualisation of the components constituted Phases 3 and 4 of the study. These components were:

- **Agent:** The agent referred to the researcher who conducted and developed the guidelines for health professional to facilitate the management of FAS.

- **Recipient:** The recipient were the health professionals in an environment where health care services for FAS were delivered.
- **Context:** Context referred to the environment where the health professionals expressed their experiences with regard the management of FAS. Those environments were health facilities; such as referral, intermediate, and district hospitals, as well as health centres and clinics.
- **Dynamics:** Dynamics were the challenges that health professionals were experiencing in relation to FAS in the context of health facilities. These dynamics are outlined in Chapter4.
- **Procedures:** Procedures were the techniques that served as pointers for the activities that were undertaken.
- **Terminus:** Terminus referred to eventual goals for individual health professionals to demonstrate their abilities to manage FAS competently in accordance with their scope of practice as illustrated in their professional legislation.

Practice-orientated theory was utilised to achieve the purpose of the study, namely to facilitate the development of the guidelines; these activities included the motivation of Dickoff *et al.* (1968) for producing a reasoning map. The reasoning map is described in Chapter 4.

1.7.2 Guide for development of the practice guidelines process (Kish, 2001)

Clinical guidelines are systematically developed statements designed to help health care professionals decide about appropriate health care interventions for specific clinical conditions or circumstances. In this study, the guidelines were meant for FAS management (Field & Lohr, 1992). Proper guidelines can change clinical

practice and influence patient outcomes. Guidelines are to provide extensive, critical, and well-balanced information about the benefits and limitations of various diagnostic and therapeutic interventions for enabling a health care professional to carefully judge individual cases. By applying guidelines, individual care is likely to require judgment, even when recommendations are properly linked to evidence (Hurwitz, 1999; Subcommittee of the WHO / International Society of Hypertension (ISH), 1993).

Guidelines are used in a wide range of settings to promote effective and efficient health care. These guidelines could be used in primary and secondary care settings. Guidelines reduce undesirable variations in practice and provide a focus for discussion among health care professionals and patients. They enable health care professionals from different disciplines to agree about treatment and devise a quality framework to measure practice. It is imperative to distinguish between guidelines and protocols. Protocols are rigid statements allowing little or no flexibility or variation. A protocol sets out a precise sequence of activities to be adhered to in the management of a specific clinical condition. There are a logical sequence and precision of listed activities (Raw, McNeill & West 1998).

The guidelines topic emerged from the information obtained during the interviews conducted with the health professionals who were delivering health care in the maternity sections at the Katutura State Hospital and the Windhoek Central Hospital. These guidelines were an instrument to direct the health professionals' management of FAS in clinical practice. The lack of guidelines for FAS as expressed by the health professionals had justified the development of these guidelines. The points of view of experts, especially in this specific area were important.

In developing the guidelines, the Development of Practice Guidelines process by Kish, (2001) were adopted and modified (Table 1).

Table 1: Development of Practice Guidelines process

Heading	Applications
Choosing guideline topics	<ul style="list-style-type: none"> • Guidelines for health care professionals to manage children with foetal alcohol syndrome at health facilities in the Khomas Region, Namibia
Determine the scope of each guideline	<ul style="list-style-type: none"> • For the health professionals; such as registered nurses, enrolled nurses, medical doctors, social workers, occupational therapist, speech therapist, and psychologists • Guidelines comprises the aim, role and responsibility, the management of FAS, management of resources, management of the environment for the mother and families, and strengthening interprofessional collaboration in relation to management of children with FAS
Determine the target audience and the target population	<ul style="list-style-type: none"> • Medical doctors • Nurses (registered and enrolled nurses) • Social workers • Occupational therapists • Speech therapists • Psychologists
Determine how the evidence will be selected	<p>Challenges experienced by health care professionals were obtained during the individual interviews and FGDs</p> <p>This challenges were:</p> <ul style="list-style-type: none"> • Lack of knowledge in relation to the management of FAS • Participants experienced inadequate resources to facilitate the management of FAS • Participants expressed unfavorable environment for mother and family that impacted the management of FAS • Participants expressed the lack of interprofessional collaboration in relation to the management of FAS

Heading	Applications
Modify the guidelines based on an independent review	<ul style="list-style-type: none"> • Centre for Disease Control (CDC) (2004) Framework for FAS Guidelines • Canadian Guidelines for Diagnosis (2005)
Submit the guidelines to the Committee for review and publication	Experts in the field from each health care professional discipline were selected to review the guidelines
Review and update the guidelines as appropriate	The developed guidelines must be reviewed every third year

1.8 CONCEPTUAL FRAMEWORK AS BASIS FOR GUIDELINE DEVELOPMENT

A conceptual framework is the system of concepts, assumptions, expectations, beliefs, and theories that support and inform a research study (Muzio & Kirkpatrick, 2011). It is either a visual or written presentation that explains the main aspects to be studied (theoretical framework). It encapsulates what a researcher intends to study. It justifies the intent of a researcher.

1.8.1 Centre for Disease Control and Prevention outlines the management of FAS

The CDC (2004) framework for FAS guidelines were used to help guide this study.

The framework contents are described in detail in Chapter 5.

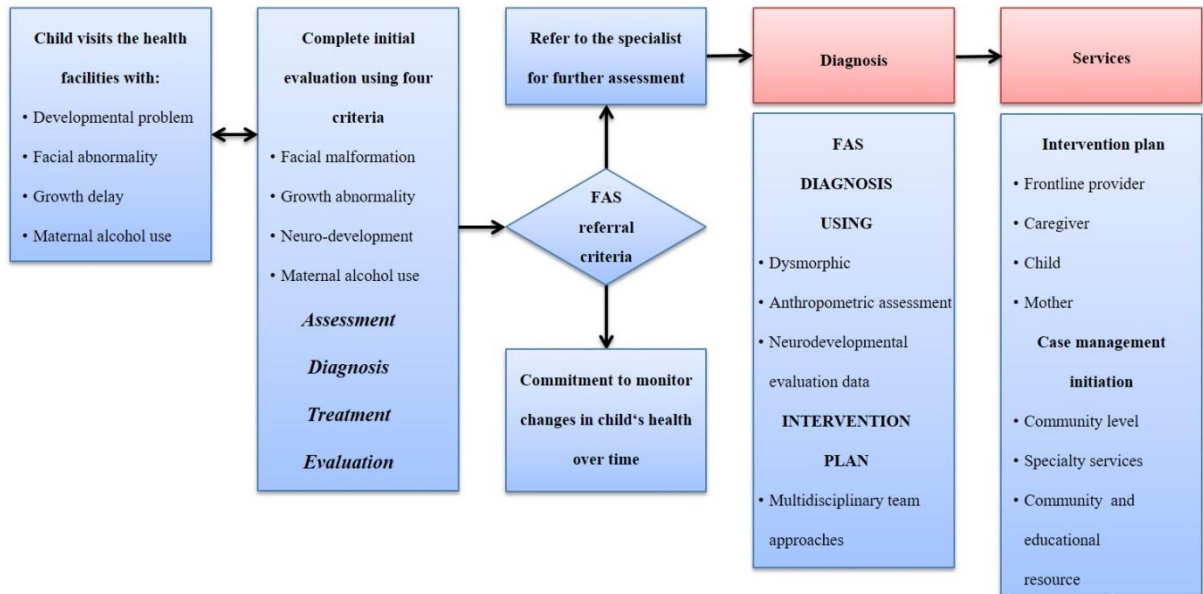


Figure 2: Framework for FAS management

(Adopted CDC (2004) Foetal Alcohol Syndrome: Guidelines for referral and diagnosis)

1.8.2 Canadian guidelines for diagnosis of FAS

The Canadian guidelines for diagnosis of FAS were also applied to develop the guidelines for the management of FAS in Namibia. This was done in the absence of any protocol or guidelines. The basis of the Canadian guidelines is also highlighted in Chapter 5 (Chudley, Conry, Cook, Loock, Rosale & LeBlane, 2005).

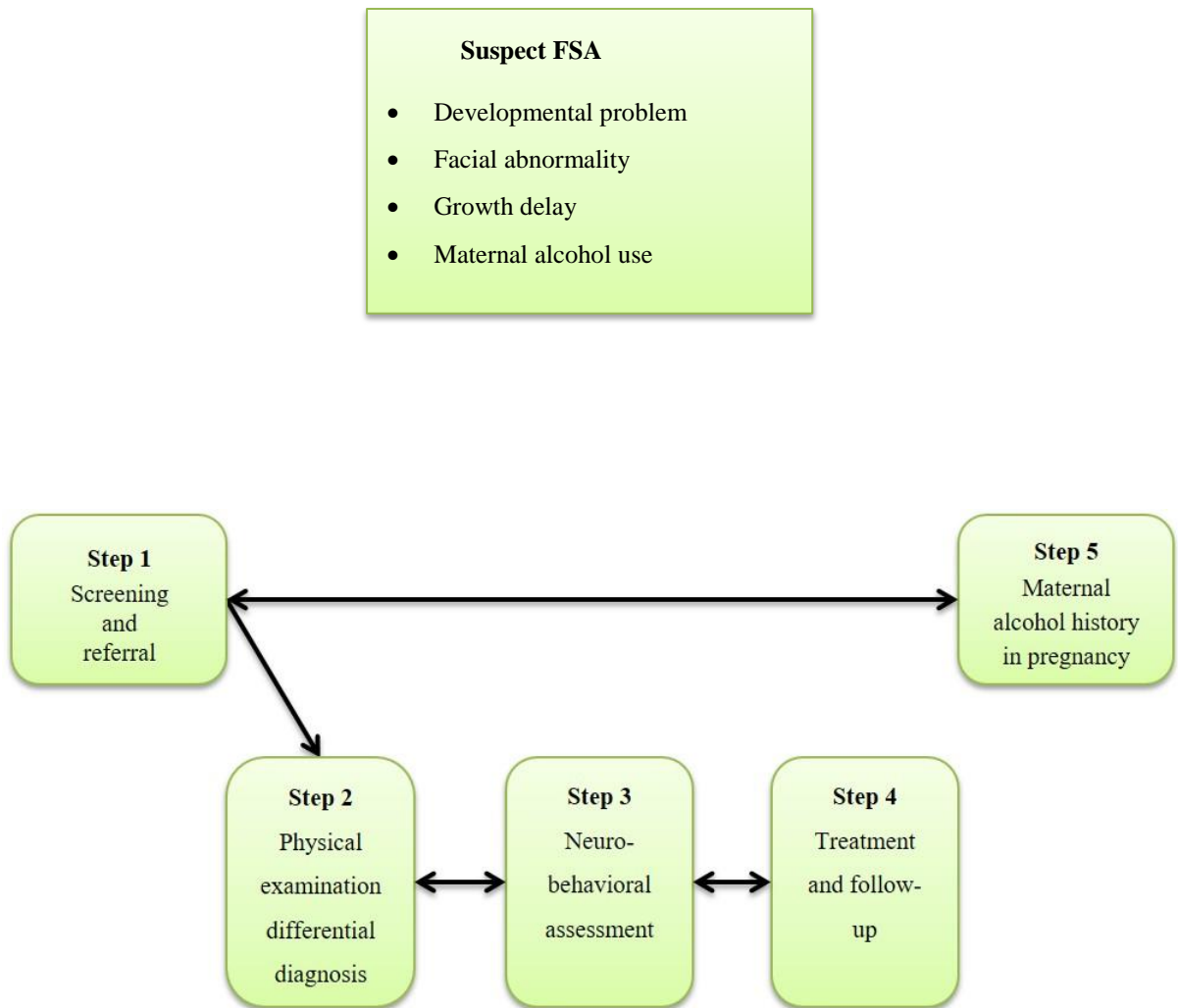


Figure 3: Canadian guidelines for diagnosis of Foetal Alcohol Spectrum Disorder

(Chudley *et al.*, 2005)

1.9 RESEARCH METHOD FOR GUIDELINES DEVELOPMENT

The study was done in four phases; namely situation analysis, conceptual framework, development of the guidelines; and evaluation of those guidelines.

1.9.1 Phase 1: Situational analysis

The aim of this phase was to explore and describe the experiences of health care professionals in terms of the management of FAS in the Khomas Region of Namibia. The researcher used a qualitative, explorative, descriptive, contextual, and interpretive phenomenological research design for this study. Participants from the Khomas Region and the Karas Region; such as medical doctors, nurses, social workers, and mothers with FAS children were purposively selected to participate. The interviews and focus groups discussion were the tools used to collect the data. The researcher analysed the data in line with the eight steps of Tech's method of data analysis. Themes and sub-themes were identified. The permission to conduct research was sought from relevant individuals and institutions. Accordingly, the principles; such as respect, justice, and autonomy were applied. The researcher implemented the four measures of credibility, dependability; transferability and confirmability to ensure the trustworthiness of the research findings.

1.9.2 Phase 2: Conceptual framework

Phase 2 was corresponded with Objective 2 for the development of the conceptual framework as the basis for the development of the guidelines. In the view of Miles Huberman and Saldana (2013), "A conceptual framework explains, either graphically or in narrative form the main things to be studied – the key factors, constructs or variables – and the presumed relationships among them". The study was conducted in the natural settings of the phenomenon under study to ensure true, valid, and accurate information without the influence of external factors. The practice theory provided the guiding tools for the development of the conceptual

framework to include the agent, recipient, dynamics, procedure, and terminus as described in Chapter 4.

1.9.3 Phase 3: Development of the guidelines

Phase 3 (Objective 3) was guided by the findings in Chapter 3. The concepts of developing the guidelines are described in Chapter 4. Through conceptualisation, the agent was the researcher; the recipients were health professionals; the context was the respective health facilities; and the dynamics identified obstacles to the management of FAS; such as lack of knowledge, inadequate resources, un conducive environment, a lack of interprofessional development, as well as a lack of collaboration. The development of the guidelines as terminus was also done in close consultation with the guidelines about the management of FAS of the Centre for Disease Control and Prevention and the Canadian Guidelines for Diagnosis Foetal Alcohol Spectrum Disorder (Chudley *et al.*, 2005). The components of the guidelines; such as structures of the guidelines; general knowledge for health professionals to understand the management of FAS at the health facilities; guidelines for medical doctors, nurses, social workers, psychologists, as well as occupational and speech therapists are outlined in Chapter 5.

1.9.4 Phase 4: Evaluation of the guidelines

Phase 4 (Objective 4) aimed at evaluating the guidelines for the implementation of the management of FAS by health professionals in the context of the health facilities. This was done to ensure that the authenticity, accessibility, and utilisation abilities of such guidelines would be maintained. That was the reason for including various expert stakeholders from each professional field. The researcher had evaluated the guidelines in accordance with the criteria of Chinn and Kramer (1991) to observe how clear, simple, general, accessible, and important the guidelines were. This objective was achieved during a one-day workshop when the experts received the

guidelines to analyse; they were afforded an opportunity to provide their recommendations for improvements as they saw fit.

1.10 DEFINITION OF THE CONCEPTS

The definition of the concepts was informed by the “Guideline for health professionals regarding the management of Foetal Alcohol Syndrome (FAS) in the health facilities in Namibia”.

1.10.1 Guidelines

Guidelines refers to statements or any other indication of procedures that determine a course of action (Scott, 2009). Guidelines are systematically developed statements based on evidence that assist service providers, recipients, and other stakeholders to make informed decisions about health strategies and interventions. For the purposes of this study, guidelines were developed to improve the management of FAS. These guidelines were the instruments that would enhance the appropriate management of FAS in Namibia.

Guidelines provide a standardised approach as a tool for health professionals to make informed decisions. As an instrument, it offers the health professionals directives to provide quality care. In the health industry, which is dynamic and ever changing, it is important to develop appropriate guidelines that are specific to the disease conditions. The guidelines built competencies of the health professionals to strengthen their knowledge and skills. In turn, that ensured the promotion of a holistic and multi-disciplinary approach in health settings. A guideline is defined as “systematically developed statements to assist practitioners and patient decisions about appropriate health care for specific circumstances” (Field & Lohr, 1992).

Guidelines reduce unacceptable or undesirable variations in practice and provide a focus for discussion among health professionals and patients. They enable professionals from different disciplines to reach an agreement about treatment and to devise a quality framework. Guidelines can be used in a wide range of settings to promote effective and efficient health care. They also guide the introduction of new procedures or services to promote effective health care in primary and secondary care settings. This encourages the implementation of cost-effective interventions (Mason, 2001).

1.10.2 Health professionals

Health professionals maintain the health of human beings through the application of the principles and procedures of evidence-based medicine and caring. Health professionals study, diagnose, treat, and prevent human illness, injury, as well as other physical and mental impairments in accordance with the needs of the populations they serve.

1.10.3 Management

Management is defined as “a system of coordinated health care interventions and communications for populations with conditions in which patient self-care efforts are significant. Management is needed to support and coordinate the services that are provided in health care settings (Rakich & Darr, 2000).

1.10.4 Management of foetal alcohol syndrome

Management is defined as the process that comprises social and technical functions and activities. Health care management provides leadership and direction for settings that deliver personal health services. Disease management involves managed care

and refers to the processes and people concerned to promote quality and better access. The health professionals respond to the needs of the recipients of the health care services.

Disease management is a system of coordinated health care interventions and communications for defined patient populations. These populations are patients with conditions for which self-care efforts could be implemented. Disease management empowers individuals, working with other health care providers, to manage their diseases and to prevent complications. Disease management is a proactive, multidisciplinary, and systematic approach to health care delivery. It includes provider-patient relationships and plan of care, interventions based on evidence-based guidelines, continual evaluation of health status, and improved health supported by quality care.

1.10.5 Foetal alcohol syndrome

Foetal alcohol syndrome is a condition in a child that results from alcohol exposure during the mother's pregnancy. Foetal alcohol syndrome causes brain damage and growth problems.

The problems caused by foetal alcohol syndrome vary from child to child, but defects are irreversible. There is no amount of alcohol that's known to be safe to consume during pregnancy. If women drink during pregnancy, the baby is at risk of foetal alcohol syndrome.

Children with FAS have problems with their neurological development, abnormal growth, and have characteristic facial features that result from their foetal alcohol exposure (Bertrand *et al.*, 2004) mentioned by Norman , Crocker, Mattson, & Riley.

(2009). Damage to the central nervous system causes neurological problems. The problems experienced will likely change as the infant grows up. There are issues like poor academic performance, hyperactivity problems, and balance problems. Other additional problems are epilepsy, hearing problems, hormonal disorders, and heart defects. Pregnant women are advised not to consume alcohol during pregnancy.

1.10.6 Health facilities

Health facilities refer to hospitals, clinics, health centres, or institutions that provide comprehensive health and medical care. Apart from hospitals and clinics; they include outpatient care centres and specialised care centres, such as birthing centres and psychiatric care centres. Health care facilities are hospitals, Primary Health Care centres, isolation camps, burn patient units, feeding centres, and others (WHO, 2016).

1.11 CHAPTER OUTLINE

The dissertation is presented in the following chapters and phases:

Chapter 1 introduces the study and provides the background information that has influenced the researcher to conduct the study.

Chapter 2 explains the research design and methods that the researcher followed to conduct the study. This chapter confirms Phase 1 or situation analysis. It is exploring and describing the health care professionals' experience regarding the management of FAS.

Chapter 3 gives an account of the data analysis and literature control. The chapter captures the methods used to analyse data and literature that supports the study findings.

Chapter 4 deals with the conceptual framework. This chapter encapsulates Phase 2, which describes the development of the conceptual framework. The collected and analysed data served as guideline to develop the conceptual framework.

Chapter 5 explains the development of the guidelines to support the multidisciplinary team of health care professionals.

Chapter 6 contains the implementation evaluation and validation of the guidelines.

Chapter 7 captures the conclusion, limitations, and recommendations of the study.

1.12 SUMMARY

The researcher introduced the overview of the study and described the rationale for the research. The background to the problem was highlighted and the research problem, the research purpose, and objectives were stated. The researcher also described the significance, paradigmatic perspectives, and theoretical framework for development of the guidelines.

This chapter also deals with the conceptual framework, which outlines the methods for the guidelines development, situation analysis, development of the guidelines implementation, evaluation, and validation of the guidelines. The chapter describes the operational definitions of key concepts. In the next chapter, the research design and methods are described. The outline of the chapters is also provided.

CHAPTER 2

RESEARCH DESIGN AND METHODOLOGY

2.1 INTRODUCTION

The previous chapter provides an overview of the study. On the other hand, methodology examines, evaluates, and describes methods that are used to produce knowledge that claims to be “truthful” or “valid” (De Villiers, 2009). This chapter outlines the methodology used in the development of the guidelines for health professional to facilitate the management of FAS. The objectives were to:

- explore and describe the lived experiences of health care professionals regarding the management of FAS in the Khomas of Namibia (Phase1);
- develop a conceptual framework to facilitate the development of guidelines for the health professionals (Phase2);
- develop guidelines to empower health care professionals to manage FAS in Namibia (Phase3); and
- implement, evaluate, and validate guidelines for the management of FAS in Namibia (Phase4).

2.2 RESEARCH DESIGN

Research design is a structured framework that guides and leads the reader through how a research study is conducted. A research method refers to the approach that is appropriate to realise the objectives of the study (Lawal, 2009). The same researcher outlines the differences between research design and research methodology. Lawal (2009) states that research design undergoes changes to reach the objectives and the research methodology is referred to as instruments and procedures used for the

implementation of the research design. In this study, the research design included four phases to conduct the research. These phases were Phase 1 – Situational analysis, Phase 2 – Conceptual framework, Phase 3 – Programme development and implementation, and Phase 4 – Programme evaluation.

The researcher developed a qualitative, explorative descriptive, contextual, and interpretive phenomenological research design. This approach explored, described, and created the foundation for developing the intended programme. It was also equally important to interpret or make sense of the experiences of the health care workers. This approach gave the researcher an in-depth understanding of the complexities in relation to human interaction. Some subject matter experts regard research design as guidelines or an outline that directs a researcher. It assists a researcher to make appropriate decisions that are related to the phenomenon under study. Maxwell (2006) posits that if the research design is appropriately done, it is most likely that the outcomes would be successful.

Qualitative research incorporates a range of approaches to what is often referred to as the naturalistic, interpretive, or constructivist world view. The important point here is that such a view of the world incorporates a set of beliefs about knowledge and how this knowledge is developed. A set of characteristic reflects this world view.

2.2.1 Qualitative design

The researcher selected qualitative design to conduct the study because it is a systematic and subjective approach. It enables the researcher to gain insight, as well as explore in depth the richness and complexity inherent to the phenomenon. Qualitative design provides a dialectic, inductive basis of knowing inclusive of

observation and communication. This design depends on the pillars that human beings are mindful and self-directing while they are continually experiencing the social reality (Silverman, 2013). A data collector's field guide based on Mack, Woodsong, MacQueen, Guest & Namey, (2005) was used.

Qualitative techniques are extremely useful when extremely complex researcher questions must be answered. These types of designs are much easier to plan and carry out. The broader scope of these designs ensures that more useful data is generated. Meaningful results can be generated from a small sample group. Qualitative data is not dependent on the sample size. Qualitative research is often regarded as a precursor to quantitative research because it is used for generating possible leads and ideas.

A researcher creates and moulds the research design to be responsive to the context and participants. The research should not be pre-empted, not losing sight of the research goals. The researcher remains flexible, self-critical, and analytical while existing literature serves as a comparative template. The scope of the sample and the selection of the setting are purposefully done to ensure that the "best" optimal example of phenomenon is investigated.

Abadia and Oviedo (2009) explain that data is collected in the natural environment and a researcher is interested in the meanings and sense of the participants' lived experiences. A researcher builds a complex and comprehensive picture of specific views of participants. These views relate to the objectives (Creswell, 2012). Qualitative methods have become more important tools in a broader approach to applied research because they provide valuable insights into the local perspectives of study populations. The great contribution of qualitative research is the culturally and

contextually rich data it produces. The data proves to be critical in the development of comprehensive solutions to public health problems in developing countries.

Qualitative methods are used to answer health services research and policy questions. (Temple & Young, 2004). The essence is conscientious, explicit judicious use of the theory derived from research based information with the view of making decisions about care delivery to individuals or groups of patients. This is done in consideration of individual needs and preferences. Qualitative research guides health workers who are working in health settings to make better use of research evidence. Qualitative research possibly provides valuable evidence and information to direct decision making.

2.2.2 Exploratory design

Tjale (2004) says that qualitative research explains how human beings can be mindful and self-directed while they are constantly constructing and reconstructing the social reality. In qualitative research, the aim is to understand and interpret the meanings and intensions of human action.

It is defined as the initial research of hypothetical or theoretical ideas. A researcher considers an idea or has observed something and seeks to understand more about it. Exploratory research attempts to lay the groundwork that would lead to future studies or to determine whether what is being observed might be explained by current or by existing theory. It lays the initial groundwork for future research.

New angles can result from new ways of looking at things, either from a theoretical perspective or a new way of measuring something. Exploratory research is not intended to provide conclusive evidence but helps us to have a better understanding

of the problem. Saunders & Lewis (2007) warn that when conducting exploratory research, a researcher ought to be willing to change his or her direction due to the revelation of new data and new insight. An exploratory research design does not aim at providing final and conclusive answers to research questions but merely explores the research topic with varying levels of depth.

“Exploratory research tends to tackle new problems on which little or no previous research has been done” (Brown, 2006). Furthermore, it should be noted that “exploratory research is the initial research, which forms the basis of more conclusive researches. It can even help in determining the research design, sampling methodology and data collection method” (Singh, 2007). The purpose of a study is to gain an understanding of the problem. The exploratory nature of research leads to the development of new concepts. The focus is valuable, since it provides knowledge and insight about health care workers’ experiences of the problem. Seaman, Beinghtol, Shirilla & Crawford (2007) suggests that there are advantages to an exploratory design. These advantages are a broader range of data with a richness of detail that enables a researcher to view all findings holistically. An exploratory design is conducted about a research problem when there are few or no earlier studies to refer to.

The focus is gaining an insight and familiarity for later investigations or for problems that are in a preliminary stage of investigation. The goals of exploratory research are intended to produce possible insights: Familiarity with basic details, settings, and concerns; a well-grounded picture of the situation being developed; generating new ideas and assumptions, and developing the tentative theories.

A determination about whether a study might be feasible in the future benefits from refining a more systematic investigation and formulation of new research questions and developing direction for future research and techniques. The contributions of this design are a useful approach for gaining background information. Exploratory research is flexible, can address questions of all types (what, why, how), and provides an opportunity to define new terms and clarify existing concepts. It is often used to develop more precise research problems and exploratory studies help establish research priorities. In this study, the researcher considered the contributions of this design and ensured that usefulness was applied in the contextual research realm.

2.2.3 Descriptive design

Once the groundwork has been established, the newly explored data needs to be structured into information. The next step is to describe the explanations while providing additional information about the topic. Research describe in detail, fill gaps, and expand our understanding. (Tourish & Hargie, 2009). Descriptive research describes what exists that might help to uncover new facts and meaning. The purpose of descriptive research is to observe, describe, and document information about a situation as it naturally occurs (Polit & Hungler, 1999) as cited in Vanaki & Memarian (2009).

This involves the collection of data that would provide an account or description of individuals, groups, or situations. Instruments that a quantitative researcher uses to obtain data are face-to-face interviews, group discussions, field notes, and checklists. It refers to a more intensive examination of a problem and its deeper meaning. The

main aim is to accurately and cautiously describe how health care workers are experiencing the problem.

Descriptive research is a study designed to depict the research participants in an accurate way. Descriptive research records what exists that might assist with uncovering new facts and meanings. The process involves the collection of data that would provide an account or description of individuals, groups, or situations.

The characteristics of individuals and groups; such as nurses, patients, and families could be the focus of descriptive research. It is likely to provide a knowledge base that becomes a springboard for other types of studies. In this study, the researcher focused on the actual experiences of the health care workers. They shared their acquired knowledge through sharing their experiences in the study context. The researcher ensured that the information was captured by using instruments; such as observations, field notes, and in-depth interviews.

2.2.4 Contextual design

The study took place in a predefined context (Mouton, 1998) as cited by (Longo-Mbenza *et al.*, 2010). Research is contextual when a study focuses on occurrences in their immediate environment. The context of a study refers to the situations of the phenomenon and appropriate measures that mitigate these situations.

2.3 REASONING STRATEGIES

Burns and Grove (2009) refer to reasoning strategies refer as the organisation of thoughts to arrive at conclusions. Reasoning strategies facilitate the formulation of arguments that assist with exploring and describing the phenomenon under study. These strategies include bracketing, induction, intuition, reasoning, analysis, and

synthesis (Groenewald, 2004). In this study, the reasoning strategies were used for developing the guidelines.

2.3.1 Inductive reasoning

Inductive reasoning was used in this study. Jaye (2002) explains that inductive reasoning originates from real life observations, questions, an understanding of the phenomenon, and generates theories and hypothesis. Inductive reasoning is a “process of reasoning in which general principles are inferred from specific cases” (Onwuegbuzie & Collins, 2007). It is a logical process that proceeds from individual to the general; what is assumed true of elements from a specific group is assumed true of the entire population.

Edmonds and Kennedy (2013) cited by Kamali (2014) conclude that inductive reasoning focuses first on specific observations of a phenomenon under study and move towards general patterns. In this study, the researcher categorised specific statements to form a complete picture of the phenomenon. That approach made room for critical issues to surface in the patterns of the study (Henning *et al.*, 2004).

Babbie and Mouton (2002) add that inductive reasoning is a form of reasoning where genuine supporting evidence can at best lead to highly probable conclusions and not to conclusive “inferences”.

In this study, a qualitative research design was appropriate for the explorative, descriptive, and contextual nature of the study (Babbie & Mouton, 2002). In inductive reasoning (inference), a researcher would use specific information to form a picture of the phenomenon in general. Researchers make many observations, discern patterns, generalise, and infer an explanation or a theory.

2.3.2 Deductive reasoning

It is a logical process in which a conclusion is based on the concordance of multiple premises that are generally assumed to be true. Sometimes, it is referred to as top-down logic. It proceeds from general to specific conclusions. Deductive reasoning commences with generalisations, and seeks to see whether these characteristics apply to specific instances. Deductive reasoning is a form of valid reasoning. Deductive reasoning or deduction, starts out with a general statement or hypothesis, and examines the possibilities to reach specific, logical conclusions. “In deductive inference, we hold a theory and based on it we make prediction of its consequences”. In this study, the researcher commenced with a situation analysis. This was done to seek the extend of the problem in terms of the experiences of health care professionals (Bradford, 2015).

2.3.3 Inferences

An inference is the act or process of deriving at logical conclusions from the premises known or assumed to be true. The conclusion drawn is also called an idiomatic explanation. It is the act of reasoning from factual knowledge or evidence (Collins English Dictionary, 2003). A literature review assists with inferential validity. Since this study was descriptive, discussions were based on the study itself. Rossouw *et al.* (2015) emphasise the important nature of validity and rigor that applies to qualitative research. Phase 1 of this study contains the situation analysis that describes the conceptual framework. It implies that the guidelines would serve as a premise to train health care workers.

2.3.4 Reflection

Reflexivity is the process of contemplating one's own subjectivity and how it might be shaping each aspect of the research. Reflexivity takes place while designing the research methodology. Reflexivity takes place while designing, conducting, and writing the research report. During the design phase, a researcher would ask how his or her own background might affect the interpretation of data, what biases he or she has about the research topic. It is also important to know what commitments a researcher is bringing with them into the field of study.

When conducting a study, the researcher must rigorously examine and reflect upon the assumptions he or she is making, or what emotions are arising during the process. During the writing phase, a researcher must decide how much of him or herself and the relationships with participants to include in the findings (Fong, 2008). Rossouw *et al.* (2015) explain that data collection, data analysis, and data interpretation have an impact on credibility due to the subjective involvement of a researcher in the entire process. To ensure that the data is unbiased, open coding is used. This distinguishes between the subjectivity of data belonging to an individual and the consensual nature of data of a group, called "peer group interaction". When discussing findings, it is critical to take into consideration multiple meanings and some aspects of interpretation (Thyme , Wiberg, Lundman, & Grancheim, 2013).

2.3.5 Bracketing

A researcher identifies and endeavours to exclude prior knowledge to grasp experiences of the participants. LoBiondo-Wood and Haber (2010) posit that a researcher must limit biases not be actively involved. This will prevent participants

from paying attention to issues a researcher regards as essential. It is also in this manner that a researcher would not interfere with his personal knowledge in the opinions of the participants (Groenewald, 2004).

The researcher must view the phenomenon without any influence. It is equally important to guard against external contamination of data not to dilute the essence of the real experiences of participants. It is with this approach that tangible issues would be uncovered for positive outcomes of the discussions (Henning *et al.*, 2004). It is the setting aside of a researcher's assumptions. Bracketing in qualitative research refers to conceptual and practical matters. Bracketing techniques require a researcher to "suspend judgement about the existence of the world and 'bracket' or set aside existential assumptions made in everyday life and in the sciences" (Schwandt, 2007).

2.4 METHODOLOGY

Research methodology refers to the comprehensive approach to the research process. It deals with the theoretical background of the research. Methodology comprises the issues why certain data is collected, what type of data is collected, from where is the data collected, when does one collect the data, and how does one perform analysis of the data. A phenomenological paradigm focuses on an understanding of human behaviour from the participants' own frame of reference. In the view of LoBindo-Wood and Haber (2010), research is defined as a systematic set of guidelines and procedures used by a researcher when collecting and analysing data. These guidelines and procedures ensure that the research question is answered and objectives are met.

2.4.1 Phase 1: Situational analysis

In this phase, a situation analysis was conducted for decision making purposes. It afforded the researcher an opportunity to explore and describe how the implementation of the guidelines would look like.

2.4.1.1 Context of the study

The context refers to the immediate environment where the phenomenon is researched. This is where the real-life experiences are taking place. In this study, the context comprised the two hospitals mentioned in Chapter 1. The health care professionals at WCH and KSH were facing challenges in managing FAS due to a lack of knowledge and skills to address the issue comprehensively. The research included a strategy that contextualised FAS management from the perspective of health care professionals (Mouton *et al.*, 1990).

2.4.1.2 Population

A research population is known as a well-defined collection of individuals or objects known to have similar characteristics. All individuals of a certain population usually have at least some common, binding characteristics or traits. In this study, the health care workers in the maternity sections at the Katutura State Hospital and the Windhoek Central Hospital had the same characteristics, because they were health care professionals who had to manage FAS. Some of these health professionals had worked almost their entire professional lives in these sections. In other words, they met the inclusion criteria as stipulated later in this research report (Homan *et al.*, 2007). The researcher has drawn the sample from the population. These individuals met the criteria for inclusion.

2.4.1.3 Sample and sampling method

In research terms; a sample is a group of people, objects, or items that are taken from a larger population for measurement purposes. Babbie and Mouton (2009) define sampling as a subset of the population that is selected for an academic investigation. Sampling is the act, process, or technique of selecting a suitable sample. This process ensures representation of part of the population to determine the parameters or characteristics of the whole population. In this study, purposive sampling was used to select suitable participants. The reason for selecting the sample in this manner was to ensure that the participants had the characteristics required for this study.

Fossey *et al.* (2002) concur that participants are recruited due to their exposure to the phenomenon in question. These types of sampling ensure richness of the data gathered. It is known as purposive or purposeful sampling. Qualitative samples are often small (Fossey *et al.*, 2002), but since the researcher was not attempting to generalise any findings, it was not a problem. The researcher started with the information from previous subjects and the accumulated data. The researcher discovered a wealth of new and emerging material (Parahoo, 2006).

Purposive sampling is widely used in qualitative research for the identification of information-rich participants related to the phenomenon of interest. There are several different purposive sampling strategies; however, the selection is based on the appropriate criteria for a study. Purposive sampling was used to ensure that those participants of interest were included in the sample.

Henning *et al.* (2004) explain that purposive sampling provides an information-rich and powerful forum for decisions. A researcher's judgment directs the sampling process to ensure that the elements selected fit the inclusion criteria of the study.

(Davies & Bansel, 2007). In qualitative research, a researcher's intention is to select a group of participants with specific criteria in mind. Purposive sampling is an information tool widely used in qualitative research. Purposive sampling techniques are also called judgment sampling. It is the deliberate choice of an informant due to the qualities the informant possesses. The participants provide information from their lived experiences and knowledge (Lewis & Sheppard, 2006) mentioned by Tongco (2007).

In this study, health care workers of the maternity sections were selected on the basis that they had met the inclusion criteria. The purposive sampling was the choice of selection because they would share tangible information that was of interest to the researcher.

Sample size refers to the number of participants or observations included in a study. In this study, the researcher did not focus on a large sample since qualitative research in that context did not depend on sample size. The researcher had continued with data collection until saturation of data was reached (Polit & Hungler, 2006).

The concept of data saturation refers to the process of gathering and analysing data up to the point where no new insights are being observed. Data saturation is considered important because it addresses whether a study is based on an adequate sample to demonstrate content validity (Entwistle, 2010).

In this study, the stage of data saturation was reached after the researcher had conducted ten in-depth interviews and two focus groups (one at each hospital). Babbie and Mouton (2009) emphasise that there is a need for a researcher to have exclusion criteria or to narrow down the size of subjects in the research. Since

qualitative research was undertaken, the in-depth nature of data collection required a small, selective sample (Cormack, 1991 cited by Carr, 1994).

Inclusion:

Participants had to be health care professionals at the KSH and the WCH who were familiar with the management of FAS. These health care professionals worked in the maternity sections at these respective hospitals between 2012-2014. Those health care professionals were registered with the Health Professions Councils of Namibia (HPCNA, 2004).

2.4.1.4 Pilot study

The aim of the pilot study was to unpack the experiences of the participants. The term pilot study refers to a mini version of a main study. Some researchers call it ‘feasibility study’; it involves the pretesting of a certain research instrument, such as a questionnaire or interview schedule. A pilot study is a crucial element of a good study design. It fulfils a range of important functions and can provide valuable insights for other researchers. In social science research, a pilot or feasibility study refers to “small-scale version(s), or trial run(s), done in preparation for [a] major study” (Pilot, *Lacombe, Gaymard, Chérel, Bouchherez Thibaud & Sentenac*, 2001).

Conducting pilot study is advantageous because it might provide a warning in advance about possible shortcomings of a data collection instrument (research methods or instruments are not appropriate or are too complicated) before the main research project commences. In the words of De Vos (2011): ‘Do not take the risk’.

The important issues were:

- Duration of individual interviews;
- Whether sufficient details were gathered;
- Were the experiences adequately captured; and
- Would it be possible to develop themes from the data?

The purpose a pilot study is to describe emerging issues of practical nature that might present potential barriers to recruiting participants; it engages a researcher in an appropriate way or direction and reflects the importance of an epochal process.

It also assists a researcher to modify interview questions, value competent research practice, develop and test adequacy of research instruments, and identify logistical problems.

In this study, the pilot study was conducted at the Rehoboth Roman Catholic Hospital in the Hardap Region. This is a district hospital with a bed capacity of 120 and serving 21 000 inhabitants. The director of the Hardap Region was informed by the Head Office of the Ministry of Health and Social Services about the pilot study. The researcher interacted with three medical doctors, three registered nurses, and three enrolled midwives. The anticipated instrument of the main study had been used to identify possible limitations in the instrument.

After the pilot study, the researcher adjusted the instrument by discarding all unnecessary, difficult, or ambiguous questions. The time taken to conduct the pilot study was also considered to estimate the approximate duration of an interview during the main study. The pilot study participants were not part of the actual study. The pilot study procedures improved the internal validity of the questionnaire.

2.4.1.5 Data collection procedure

The information was needed to address the problem of the study and to examine the thereof. Information gathering examine the phenomenon in supported of the researcher's assumptions. The study already indicated what the anticipated research outcomes would be and how data collection activities would suite the aims of the research study. Mindful of this background and during the selection process (Burns & Grove, 2005), the researcher used methods to collect data with the assistance of individual interviews, focus group discussions, and fieldwork notes.

Each focus group consisted of five participants. Shamdasani & Balakrishnan (2000) states that a focus group should not be too large because it would the data collection exercise unmanageable and preclude adequate participation by all the members. In addition, they suggest that a focus group should also not be too small because it might fail to provide substantially greater coverage of the research topic. The triangulation method was selected to enhance the trustworthiness of the data. Apart from the FGDs, in-depth phenomenological interviews were used in the data collection process.

The study aimed at obtaining a deeper understanding of the lived experiences of the health care workers. Phenomenology encompasses the nature of occurrences and events, as well as how they occur. There will be a difference between what the researcher perceives and what the participants were experiencing. Munhull (2007) holds the opinion that phenomenology is a way of describing the structure of an experience as it is. The important aspect is to describe and understand the essence and qualitative nature of an experience (King, 2008).

In phenomenology, the research is based on the premises of one's experience of the world surrounding him or her. In this study, the research was suspended through bracketing to exclude own pre-knowledge to avoid judgments, thus excluding bias. (Le Gall , Payri, Bittner & Saunders 2010).

2.4.1.6 Individual interviews

An interview is an active interaction between a researcher and a participant. It is obtaining of information directly from the participant who has the insight of the phenomenon (De Vos *et al.*, 2011). In this study, in-depth unstructured interviews were used. The aim was to gain insight of the experiences of other people and they meanings they are attaching to the experiences. Only one, open-ended question was asked for probing and opening the way to dialogue. De Vos *et al.* (2011) describe a qualitative interview as an attempt to grasp the participant's world and to disclose the meanings of these experiences.

An interview enables a holistic picture of the phenomenon under study. The interview is conducted to explore and uncover human experiences without influence of the interviewer or researcher (Polit & Hungler, 2006). The researcher is paving the way to get an understanding of the phenomenon and to document meanings of responses. Each interview was conducted in a conducive atmosphere that provided smooth and good interaction for open discussions. The researcher did not impose his own framework (Wengraf & Chamberlayne, 2006).

It was necessary to obtain permission from the participants to voice record the interviews. The participants were assured that the recordings will only be used for research purposes. The researcher applied appropriate interpersonal, as well as

communication skills to ensure the quality of the interview process. The researcher also took field notes while interacting with the participants.

There were four ethical aspects taken into consideration during the interview process to reduce the risks of unanticipated harm; this had a bearing on the personal perspectives of each interviewee. When an interviewer listens to and reflects on personal information from an interviewee, the process may develop in unforeseen ways. This can result in unintended harm. The researcher was prepared to provide support to lessen stress.

- Anonymity of the interviewee in relation to the information shared was maintained in order not to jeopardise the position of the interviewee in the system. The information was protected and kept anonymous.
- It was necessary to ensure adequate communication of the intent of this research. It was of utmost importance that interviewees verbally gave consent to participate in the interviews several times (Germain, 2004).
- Lastly, interviewees should not be exploited for personal gain. This was secured by building into the research plan a method of acknowledging the contributions of participants to the success of the research (Anderson & More, 2007).

Table 2: Individual interviews

Hospitals	Participants	Number of the interviewees
Rehoboth Hospital	Registered nurse	4
	Enrolled nurse	4
	Doctors	2

Hospitals	Participants	Number of the interviewees
	Social workers	2
Katutura State Hospital	Registered nurse	2
	Enrolled nurse	4
	Doctors	4
	Social workers	0
Windhoek Central Hospital	Registered nurse	3
	Enrolled nurse	4
	Doctors	4
	Social workers	0

2.4.1.7 Focus group discussions

A focus group discussion is a form of a group interview in which a small group – usually 10 to 12 people – is led by a moderator (interviewer) in a loosely structured discussion of various topics of interest. The course of the discussion is usually planned beforehand and most moderators rely on an outline, or moderator’s guide, to ensure that all topics of interest are covered.

Focus group sessions should be considered as a means of exploring unknown territory. They are excellent as tools for explaining participant’s experiences, attitudes, for clarifications, and providing a better understanding of the subject matter.

The benefits of focus group discussions are: Relatively quick, relatively inexpensive, and excellent for obtaining background information. The FGDs were carefully planned and designed to obtain perceptions in the specified area of interest in a

permissive and non-threatening environment. The reason for choosing focus group interviews is to obtain data directly from the participants, to ensure good interaction with the group, and to allow room for adequate responses (Fiske & Kendall, 1990 as cited in Merton, 2008).

The participants had the same characteristics, namely all of them were health workers and working in the same environment. A small group of four to six participants is preferable if they share the same characteristics (De Vos, 2002). The researcher established rapport with the participants to control the discussion, for smooth participation, for affording them an opportunity to express themselves without fear, and to avoid conflict between participants.

Table 3: Focus group discussions

Hospitals	Participants	Number of the FGDs
Rehoboth Hospital	Registered nurses	1
	Enrolled nurses	1
	Doctors	0
	Social workers	0
Katutura State Hospital	Registered nurses	1
	Enrolled nurses	1
	Doctors	0
	Social workers	0
Windhoek Central Hospital	Registered nurses	1
	Enrolled nurses	1
	Doctors	0
	Social workers	0

2.4.1.8 Field notes

Field notes are defined as recording of observations, activities, events, and other features of the setting being observed. This process is embarked upon to remember what has transpired. Through this process, a researcher produces meaning and an understanding of the culture and social situation of the phenomenon being studied. In this study; interviews, group discussions, and experts' opinions were recorded.

The researcher considered several factors while taking field notes

- Field notes contained time, date, and place of each individual interview and FGD;
- Notes were taken during and immediately after the activities;
- The research question provided theoretical criteria for when, where, and how to record the field notes;

The process of creating field notes:

- The researcher jotted down short sentences to help him recall events and narratives;
- The researcher provided a detailed and coherent description of the observations; and

2.4.1.9 Data analysis

Qualitative data analysis took place concurrently with data collection for allowing the researcher to generate an emerging understanding about the phenomenon in question. The iterative process of data collection and analysis had led to a point where new categories or themes emerged. That signalled when data saturation occurred.

The researcher created a data base to generate findings that transformed the raw data into new knowledge. This was achieved by active engaging in the analysis processes throughout all phases of the research. The researcher relied on inductive reasoning processes to interpret and structure the meanings from derived data, and was concerned with uncovering knowledge about what people thought and felt about their experiences.

Data analysis is necessary because certain procedures need to be used on large body of information. This is to synthesise, interpret, and communicate the obtained data. The researcher should be sensitive, creative, and insightful. Groenewald (2004) focuses on qualitative analysis processes in search of meanings and relationships among categories and themes. Tesch's method of data analysis was used (Creswell, 2008) in this study. In a qualitative study, various strategies can be used, however, most common methods used for data collection are interviews.

These methods are mainly either semi-structured or unstructured (Holloway & Wheeler, 2002). The opening question must be clear and linked to the purpose of the study. The approach of in-depth or group discussions is most commonly used. Data saturation is often referred to as a point where no new information is obtained.

Thorne and Darbyshire (2005) suggest a researcher should use the concept of data saturation as a convenient point to stop collecting data.

Open coding was the choice of procedure:

- Transcripts, with the field notes were transcribe verbatim to obtain a sense of a whole context;
- There were no difficulties with language;
- All or most participants spoke English and thus no translation was needed;
- The individual transcripts were read to get the meanings;
- Similar ideas and meanings were clustered together and then grouped into unique themes;
- Lines were drawn to identify relationships of categories;
- Categories and themes were aligned;
- Independent co-coders verified the data analysis.

a. Process of data analysis

Elo and Kyngäs (2008) argues that content analysis of discussions is a method that may be used in an inductive or deductive way for either qualitative or quantitative data. Qualitative content analysis is commonly used in nursing studies but little has been published about the analysis process and most research literature generally only provides a short description of this method. When using content analysis, the aim is to build a model that describes the phenomenon in a conceptual format.

Both inductive and deductive analysis processes are represented as three main phases: Preparing, organising, and reporting. The preparation phase is similar in both approaches. The concepts are derived from the data by means of an inductive content

analysis. Deductive content analysis is used when the structure of analysis is operationalised in terms of previous knowledge.

This process had begun during the early stages of data collection and allowed the researcher to move back and forth between concept development and data collection (Miles, Huberman & Saldab, 2013). This approach supported valid and reliable inferences. The useful steps in this study were the eight steps of Tesch (1990).

- **Step 1 – Prepare data:** Transcripts were used (Patton, 2002) to make sense of the whole.
- **Step 2 – Define the unit of analysis:** To ensure the focus on the meaning, the researcher jotted down any thoughts in the margin of the document in front of him. This procedure secured important decision making and looked for the expressions of an idea; a theme might be expressed in a single word, a phrase, a sentence, a paragraph, or an entire document (Minichiello, Aroni, & Hays 2008).
- **Step 3 – Develop categories and a coding scheme:** Lists were developed after reading and coding to group similar concepts together and to rearrange these concepts as major, unique, and unrelated concepts.
- **Step 4 – Test coding scheme on sample text:** Validation of the coding scheme was an early process that had been conducted on a code sample of the data. The researcher checked the consistency by using inter-coding agreement assessment. (Schilling, 2006). The researcher wrote down the codes next to appropriate segments of text. It was also important to establish whether new categories were emerging.

- **Step 5 – Code all the text:** When sufficient consistency was obtained, the coding rules were applied to the entire corpus of text. Coding was revisited to prevent “drifting into an idiosyncratic sense of what the codes mean”, new emerging themes and concepts were added to the coding scheme. (Schilling, 2006).
- **Step 6 – Access coding consistency:** The researcher checked decisions for abbreviations of each category, as well as listing these codes in alphabetical order. It was done to ensure that the various codes complemented one another.
- **Step 7 – Draw conclusions from the coded data:** In this section, the researcher was making sense of identified themes and categories, and henceforth drew inferences from the data and its properties. The researcher explored relationships among categories, uncovered patterns, and tested categories against the full range of data (Bradley, 2007).
- **Step 8 – Methods and findings:** When need arose, recoding of the existing data was conducted and the researcher strived for a balance between description and interpretation. Description illustrated the background and context (Denzin & Lincoln, 2011) to fundamentally understand interpretation and perceptiveness that were essential for the personal and theoretical understanding of the phenomenon under study. This aspect was carefully considered and clearly described which allowed the reader the space to gain sufficient understanding (Patton, 2002). In this study, the researcher took cognisance of a better understanding of the meanings, themes, and patterns that were contained in the text. The researcher paid attention to unique themes that illustrated the range of the meanings of the phenomenon. Consequently, the

study results could be better understood by the researcher as well as the readers (Berger, 2001).

2.4.2 Phase 2: Conceptual framework

Phase 2 addressed Objective 2 with the compiling of the conceptual framework as basis for the development of the guidelines. Homan, (2007) agrees that a conceptual framework is used to enable a researcher to explore with the view of reaching a proper understanding of the phenomenon. A conceptual framework explains, either graphically or in narrative format, the main issues to be studied – the key factors, constructs, or variables – and the presumed relationships among them (Miles & Huberman 2002). The mental map used by the researcher is outlined in Chapter 4 (Figure 4). The theoretical structure of assumptions, principles, and rules unite a broad concept comprising the supporting ideas. The conceptual framework is an analytical tool with several variations and contexts. It is used to make conceptual distinctions and organise ideas. Strong conceptual frameworks capture something real and do it in a way that is easy to remember and to implement. The practice theory was used as the guiding tool for the development of the conceptual framework and it was done in terms of the agent, recipient, dynamics, procedure, and terminus as described in Chapter 4.

2.4.3 Phase 3: Development of the guidelines

In this phase, data from Phases 1 and 2 forms the basis for the development of the guidelines. The purpose of the study was to develop FAS guidelines that needed to muster empirical evidence. Through conceptualisation: the agent was the researcher, the recipients were health professionals, the context was health facilities, dynamics – such as a lack of knowledge, inadequate resources, uncondusive environment, a lack of interprofessional development, and a lack of collaboration – were identified as obstacles for managing FAS. The development of the guidelines as terminus was

also done hand in hand with the guidelines of the Centre for Disease Control and Prevention that outline the management of FAS and the Canadian Guidelines for Diagnosis of Foetal Alcohol Spectrum Disorder (Chudley *et al.*, 2005). The components of the guidelines such as structure of the guidelines; general knowledge for health professionals to understand management of FAS at the health facilities; guidelines for medical doctors, nurses, social workers, psychologists, as well as occupational and speech therapists are outlined in Chapter 5.

2.4.4 Phase 4: Evaluation of the guidelines

Phase 4 satisfied Objective 4 with its aim of evaluating the guidelines for facilitating the management of FAS by health professionals in the context of the health facilities. That was done to ensure that the authenticity, accessibility, and utilisation abilities of such guidelines would be maintained. Various expert stakeholders from different medical professions assisted with this process. The guidelines were evaluated in accordance with the criteria of Chinn and Kramer (1991) to observe how clear, simple, general, accessible, and important the guidelines were. This was achieved during one-day workshops when the experts analysed the guidelines and were afforded the opportunity to express their recommendations for improvements where it was necessary.

2.5 ETHICAL ASPECTS

The fundamental ethical principles based on the human rights that need to be protected in the research guide a researcher; namely the right to self-determination, privacy, anonymity, confidentiality, fair treatment, and protection from discomfort and harm (Bezuidenhout , Davis & Du Plooy - Cilliers 2014). In this study, the

researcher started with the permission to conduct the research based on established research principles.

2.5.1 Permission to conduct the research

Institutional approval was obtained from the Post-Graduate School Committee of the University of Namibia to ensure that the proposed research complied with the minimum standards (Annexure A).

Approval was obtained from the Research Committee of the Ministry of Health and Social Services (Annexure B). The research proposal was attached to the letter of request to conduct the research study at the identified health facilities of the Ministry of Health and Social Services.

Approval was obtained from the Directorate of Specialised and Clinical Services to conduct the research study in the environments that were under the authority of this specific directorate (Annexure C). The researcher negotiated access by securing permission from the in-charge officials at the facilities where the activities were going to take place.

2.5.2 Principle of respect

Respect for human beings recognises their intrinsic value. In human research, this recognition includes abiding by the values of research merit and integrity, fairness, and beneficence. Respect also requires having due regard for the individual and collective welfare, beliefs, perceptions, customs, and cultural heritage of those involved in research. Researchers and their institutions should respect the privacy, confidentiality, and cultural sensitivities of the participants and where relevant of their communities. Any specific agreements made with participants or a community should be fulfilled. Respect for human beings involves giving due scope, throughout the research process, to the capacity of human beings to make their own decisions.

Where participants are unable to make their own decisions, or have diminished capacity to do so, respect for them involves empowering them where possible and providing for their protection when it is necessary.

2.5.3 Principle of beneficence

Beneficence means doing good to other people and preventing harm. An extreme form of beneficence is paternalism. This can cause denial of autonomy and freedom of choice. Researchers should maintain the principle of beneficence and oversee the potential consequences of revealing participants' identity. It is a moral obligation of each researcher. Protection of participants' identities also applies to publications. The principle of beneficence means that in no situation the participants are harmed. Beneficence refers to making efforts to secure the well-being of research participants. It maximises the possible benefits and minimise possible harm to ensure balance (Murphy & Dingwall, 2001 as cited by Marzano, 2007). In this study, it was important to consider the optimum benefits of the participants. The main aim of the study was to implement change in their environment relating to health services.

2.5.4 Principle of impartiality

The principle of impartiality refers to equal treatment and fairness. One of the crucial and distinctive features of this principle is avoiding exploitation and abuse of participants. A researcher understands and applies the principle of impartiality in qualitative research studies and is demonstrated by recognising the vulnerability of the participants and their contribution to a study. The end results of the research study will be based on the contributions of the participants. The contributions of the participants should be acknowledged. Impartiality refers to a commitment to distributing responsibilities equitably among researcher and participants.

A commitment to impartiality means that researchers do not use a study to benefit themselves and to the detriment of other people. The results should be a balance between taking responsibility for participants and rewarding the beneficiaries. Researchers have an important role to play in advancing societal commitment and ensuring a fair distribution of the benefits and burdens of the research. The concept that resonates assumptions about truth is impartiality. Impartiality involves the attempt to apply truth to human expectations. Impartiality is defined as an emotional commitment to a standard; expectations; and the values of fairness, rightness, and orderliness. Impartiality is a cultural symbol of direction, order, and commitment that the world or entire universe is sensible and knowable. The researcher had considered these ethical issues as a moral commitment and applied it to the benefit of all parties involved in the research study.

2.6 TRUSTWORTHINESS

Trustworthiness has grown to be a crucial concept, since it enables investigators to explain the virtues of qualitative terms outside of parameters that are generally used in quantitative research. The purpose of trustworthiness in qualitative research is to support the argument that results of an inquiry are “worth paying attention to”. This is different from the typical experimental research. Thus, in qualitative research transferability, credibility, dependability, and confirmability are considered.

2.6.1 Truth value (credibility)

The researcher established confidence in the truth of the results for the topics or informants and the context in which the research was undertaken. Credibility determined how confident the investigator was about the truth of the findings based on the research design, informants, and context. The truth value of a research project

is commonly acquired from the discovery of human experiences as they are lived and perceived by informants.

Credibility refers to the concept of internal consistency, where the core issue is how researchers ensure rigor in the research process and how they communicate to other people (Lincoln & Guba, 1988) as cited by Golafshani (2003). Additionally, credibility increases by a thorough description of source data and a fit between the data and the emerging analysis in addition to “thick descriptions” (Lincoln & Guba, 1988). Credibility is accomplished by prolonged interaction with people, continual observation in the field, utilisation of peer debriefing, participant checks, researcher reflexivity, and validation.

2.6.1.1 Prolonged engagement and field perception

Speziale and Carpenter (2007) strongly suggest that researchers should establish close relationships with participants. The relationship builds trust and creates a favourable environment. Participants are also allowed to seek clarifications when it is needed. The researcher spent four months personally interviewing participants.

2.6.1.2 Member checking

It is a criterion that involves the participants in reviewing and verifying the interpretations of the data from the interviews. The researcher solicited participants’ views on the credibility of the findings and interpretations by replaying the voice recordings. In this study, the participants were afforded an opportunity to listen to the voice recordings to confirm their experiences. Member checking was done immediately after termination of each interview.

2.6.1.3 Independent co-coders

Involving external resources in the study enhanced the credibility of the study. Two independent co-coders analysed the transcripts of the raw data. Once the data analysis process was discussed and consensus reached with the researcher, the main themes and sub-themes were confirmed.

The research findings in this study were audited by an external auditor in South Africa who examined whether the data supported the findings, interpretations, and conclusions.

2.6.1.4 Peer debriefing

In this study, external colleagues conducted a peer review. They reviewed the insights and views and perform co-coding of the data. Rossouw (2003) cited by Sumpter (2004) argues that a critical discussion of data analysis and interpretation by a co-coder is an important aspect of the research to verify whether conclusions are supported by the data collected. Graneheim and Lundman (2005), cited by Anaker and Elf (2004), explain that dialogue among co-researchers is valuable for credibility because various experts and researchers should agree on the way that data is labelled and sorted. The credibility of this study was ensured through peer review (a colleague and a doctoral graduate student) that independently scrutinised the data collected.

2.6.1.5 Triangulation

In De Vos, Delport, Fouche & Strydom (2011), Padgett describes triangulation as the convergence of multiple perspectives that can provide greater confidence in capturing what has been targeted. Triangulation was utilised in this study, since data

was gathered from various health workers during the interviews. The other methods used were field notes, observations, individual interviews, as well as focus group discussions. These methods were employed to ensure that diverse views were captured consistently at different times.

Contributions from the co-coders, as well as from a literature control were used as basis for the development of themes. These findings are detailed sufficiently for comparison by future researchers (Babbie & Mouton, 2009). Individual interviews, field notes and a voice recorder were used as methods of data collection. The researcher compared the notes to the recordings.

2.6.2 Applicability (transferability)

It is the degree to which the findings may apply to other context and settings or with other groups; it is the capacity to generalise from the findings to a greater population. Transferability means the level to which an audience is able to generalise the results of a research study to her or his own context. This can be done when an investigator provides adequate information about the self (the researcher as an instrument) and also the research context, processes, members, and relationships between a researcher and participants to make it possible for the reader to decide how the findings may be transferred. Transferability refers to the extent to which the research findings of a study could be applied to another context. A researcher is responsible to provide data sets and descriptions that are rich enough to enable other researchers to make judgements about the transferability of findings to different settings or contexts.

2.6.2.1 Thick description

The researcher attended the thesis workshop at the University of Namibia at the beginning of the course that equipped him with the necessary knowledge to pursue a study. The researcher attended the seminars and consulted with the supervisor during the development of the proposal, data collection, analysis, and development of the guidelines. A literature review (Chapter 3) was conducted at the beginning of the study. An independent expert in qualitative data analysis did a trail audit of the study data to determine its relevance with a view of ensuring the confirmability of the study (Polit & Beck, 2012).

2.6.2.2 Neutrality

It is defined as the degree to which research results are solely based on the contributions of the informants and conditions of the research and not of other biases, motivations, and views. Guba suggests that confirmability is founded on the acknowledgement that research is never objective. It deals with the main issue that “findings should signify as far as possible the specific situation being investigated as opposed to the beliefs, theories, or biases of the researcher”.

This perspective requires the integrity of results to be based on the data and the researcher must properly structure the data, analytic processes, and findings in a manner that enables the reader to confirm the adequacy of the findings. Confirmability refers to which “extent the characteristics of data, as posited by the researcher can be confirmed by others who read or review the research results” (Bradley, 2007).

2.6.3 Consistency (dependability)

Consistency of data means whether the conclusions would be consistent if the inquiry were repeated with the same subject matter or in a similar context. Consistency is defined in terms of dependability in qualitative research. Dependability relates to the primary challenge that The procedure of processing the results must be explicit and repeatable whenever possible.

This is achieved by means of meticulously monitoring the emerging research design and through keeping an audit trail, which is an in-depth chronology of research activities and processes, influences on the data collection and analysis, emerging themes, classifications, or models, and analytic memos. It also refers to “the coherence of the internal process and the way the researcher accounts for changing conditions in the phenomena” (Bradley, 2007).

2.6.3.1 Inquiry audit

The inquiry audit was done when the study supervisors had checked the research methodology and questions contained in the interview guide by for relevance before the actual data collection begun (Pope *et al.*, 2000). The study supervisors guided the researcher by to ensure compliance with the qualitative protocols for the data collection and data analysis processes. The methodology of the study is described in detail in Chapter 2. The findings of the literature review that the researcher conducted is described in Chapter 3.

2.6.4 Confirmability (neutrality)

Confirmability refers to neutrality and accuracy of the data (Tobin & Begley, 2004). Confirmability is the process of comparing data gathered from multiple sources to

explore the extent to which findings can be verified (Casey & Murphy, 2009). The aim of confirmability is to ensure the objectivity that is required of qualitative research (Shelton, Richeson, Salvatore & Trawalter, 2003). This is a very important step when a researcher ensures that the findings of the experiences of the health professionals represent the reality. The results are the experiences and ideas of the participants rather than the preferences and characteristics of the researcher. Miles and Huberman (2013) describe confirmability as the extent to which the researcher admits his or her own predisposition. A detailed methodological description enables the reader to determine extent to which the data and its emerging constructs could be accepted.

2.6.4.1 Confirmability audit

During an external audit, an external researcher examines both the process and product of a research study. The purpose is to evaluate the accuracy and evaluate whether the data supports the findings, interpretations, and conclusions (Miles & Huberman, 2013).

Application: The researcher analysed the data to identify themes and sub-themes for the study. An external auditor followed the process and procedures used by the researcher in the study to determine whether they were acceptable.

2.6.4.2 Audit trail

An audit trail is a transparent description of the research steps taken from the start of a research project to the development and reporting of findings. Therefore, records are kept to confirm what was done during an investigation (Malterud, 2001).

The study supervisors had checked the research methodology and questions contained in the interview guide by for relevance before the actual data collection commenced. The study supervisors guided the researcher to ensure compliance with the protocols of the University of Namibia and Ministry of Health and social Services. The methodology of the study was described in detail and a literature review was conducted during the study.

2.6.4.3 Triangulation

Triangulation involves the ability of a researcher to use multiple methods and resources in the research process to understand the study problem better (Patton, 2002). Individual interviews, FGDs, field notes, and a voice recorder were used as methods / tools for data collection. For data analysis, both the researcher and external coder were playing vital roles in analysing the data. The researcher compared the field notes with the recordings. A qualitative, explorative, and descriptive research design was used.

2.6.4.4 Reflexivity

Reflexivity is the process of examining both oneself as researcher and the research relationship. Self-searching involves examining one's assumptions and preconceptions and how these factors affect research decisions; particularly, the selection and wording of questions. Reflecting on the research relationship involves examining one's relationship with the participants and how the relationship dynamics affect responses to questions (Hsiung, 2012).

The researcher ensured reflectivity through explaining in detail the methodology / techniques that had been used, especially for data collection and analysis (Chapter

3). Secondly, the emerging patterns and theories used were discussed and acknowledged in the discussion of the results of the report (Shelton, 2003). Furthermore, the study was conducted in the natural settings of the phenomenon under study to ensure true, valid, and accurate information without the influence of external factors. This design created a platform that made it difficult for the researcher to either distort or manipulate the natural setting where the study was conducted.

2.7 SUMMARY

This chapter represents the vigorous process of the research study. It has explained the study design based on a qualitative research methodology. The study was conducted using in-depth interviews, FGDs, experts' opinions, verification of records, qualitative design, as well as explorative and contextual processes.

The research consisted of the study population, sample and purposive sampling, data collection instruments, and a pilot study before the main study was conducted. The summary also outlines the inductive reasoning, reasoning strategies, inferences, reflexivity, intuitive reasoning, analysis, inductive reasoning, and synthesis.

The content of this chapter also led the researcher into a deeper insight and better understanding of the findings of the study phenomenon. Chapter 2 facilitates further discussions about the actions, strategies, and interventions that were involved in the research study.

CHAPTER 3

DISCUSSION OF FINDINGS AND LITERATURE CONTROL

3.1 INTRODUCTION

The previous chapter has given an account of design and methods of the research study. This chapter describes, explores, and contextualises the health care workers' experiences about FAS. The findings of the interviews about the experiences of the participants are discussed. The researcher used a methodological approach that guided him to achieve the set goals and objectives of the study. This chapter describes the processes that have led to the development of the guidelines for management of FAS. Furthermore, the chapter describes the research method, approaches for ensuring trustworthiness, and ethical standards that were maintained during the course of the study.

3.2 BACKGROUND TO DATA COLLECTION AND ANALYSIS

PROCESSES

The researcher used a qualitative, explorative, descriptive, contextual, and interpretive phenomenological research design. The participants were from the Khomas Region, Windhoek while the pilot study participants were from the Hardap Region, Rehoboth. The participants were medical doctors and nurses who worked in the maternity sections of KSH and WCH, social workers, occupational therapists, speech therapists, and psychologists who were purposively selected to participate. Unstructured interviews and focus group discussions were the tools used to collect the data. The data were analysed in line with Techs' method of data analysis (Creswell, 2014). Themes and sub-themes were identified. The findings of the study

were the basis for developing the guidelines (Chapter 5) after the conceptualisation had taken place (Chapter 4).

The aim of the research design was to ensure that the investigator had an opportunity to describe how the research had been conducted.

3.3 DISCUSSION OF THEMES AND SUB-THEMES

In this study, four themes and 12 sub-themes were identified by applying the techniques of reading, coding, displaying, reduction, and interpretation (Ngoma, 2015).

The themes and sub-themes supported by a literature review are illustrated in Table 4.

Table 4: Themes and sub-themes

Themes	Sub-themes
<p>Theme 1: Participants expressed a lack of knowledge about management of FAS</p>	<p>1.1 Lack of comprehensive policies and guidelines for the management of FSA</p> <p>1.2 Lack of knowledge about the factors contributing to FAS</p> <p>1.3 Inadequate understanding of the impact of FAS on the mother and family, as well as on the community in general</p>
<p>Theme 2: Participants experienced inadequate resources to facilitate the management of FAS</p>	<p>2.1 Educational information</p> <p>2.2 Media for sharing information</p> <p>2.3 Inadequate space for health education</p> <p>2.4 Lack of staff development and training in relation to FAS</p>
<p>Theme 3: Participants expressed</p>	<p>3.1 Unconducive living condition for the mother</p>

Themes	Sub-themes
<p>unconducive environment for mother and family that impacted on the management of FAS</p>	<p>and family</p> <p>3.2 Lack of knowledge of the mother about the FAS</p> <p>3.3 Lack of family support to the mother</p>
<p>Theme 4: Participants expressed the lack of interprofessional collaboration regarding the management of FAS</p>	<p>4.1 Poor communication among health professionals</p> <p>4.2 Lack of motivation and team work.</p>

3.3.1 Theme 1: Participants express a lack of knowledge about management of FAS

Knowledge is to “know”, that is to “hold something in one’s mind as or as being what it purports to be”. “It implies a sound logical or factual basis”. Knowledge refers to the “fact or condition of knowing something with familiarity gained through experience or association” (Webster-Stratton, 2004).

In this study, health care knowledge complex in form and function was applied. It is important to appreciate the different types and modalities. Knowledge type refers to the orientation and domain of knowledge, whereas knowledge modality refers to the representation medium in which the knowledge exists. Knowledge contributes directly to clinical decision-making and care plan.

For the purposes of this study, the following aspects were very important: Patient knowledge based on a clear description of the health status, practiced-based practitioner knowledge; tacit knowledge that was exercised while providing patient care; knowledge based on advice, learning, and experiences; medical knowledge

encapsulated health care delivery models and processes; and resource knowledge that was the quantification of the care delivery, resources, and infrastructure. In the settings, process knowledge was applied in accordance with the institution-specific pathway (workflow).

Health professionals in this study expressed a lack of knowledge about the management of FAS. The knowledge they had was too limited to provide quality care to the clients. The prevention and management and continued services for FASD necessitated a good understanding of these disorders among health care professionals. That included their relationship with maternal alcohol consumption, what intervention strategies were effective, and how they were managed. Health care professionals had a poor understanding of a set of those conditions, Mukherjee *et al.* (2006).

It is important that health care professionals understand and be trained in the adverse health outcomes of FAS to integrate the management, diagnosis, and prevention into everyday practice (Gahagan *et al.*, 2006) as cited by (Moise *et al.*, 2014). The health care professionals being in the rightful position must be able to advise the number of ways it adversely impact the reproductive system. These observations are: Heavy alcohol consumption is associated with an increased risk of infertility and high rates of menstrual disorders (Royal College of Obstetricians and Genealogists, 2006) as cited by (Wilkinson, 2011).

Alcohol consumption is associated with an increased risk of miscarriage which results in the development of aneuploidy or major structural malformations of the foetus. Alcohol consumption by women is also associated with a decreased chance of becoming pregnant.

Pre-term delivery and stillbirth are associated with high levels of maternal alcohol consumption during early or late pregnancy and low to moderate levels of consumption are associated with an increased risk of stillbirth (Kesmodel *et al.*, 2002).

There is a clear indication that various health care professionals are involved in the management of FAS. This implies a multidisciplinary approach that requires a well-trained team of health care professionals. The focus on patient-centred care and holistic practice demand greater needs to ensure that knowledge and skills of health professionals are updated. There is a need for health professionals to set and maintain standards of practice “for their own honor [sic] and the public benefit” (Parsley & Corrigan, 1995).

3.3.1.1 Sub-theme: Lack of comprehensive policies and guidelines for the management of FAS

Clinical practice guidelines are the foundations of efforts to improve health care. Guidelines are systematically developed statements to assist practitioners and patients with their decisions about appropriate care for specific clinical circumstances (Field & Lohr, 1990). Health policy refers to decisions, plans, and actions that are undertaken to achieve specific health goals in a society. An explicit health policy can achieve several things: It defines a vision for future that assists with establishing targets and points of reference for the short and medium term. It outlines priorities and the roles of different groups, builds consensus, and informs people (Inchley & Currie, 2016).

A policy is a law, regulation, procedure, administrative action, incentive, or voluntary practice of governments and other institutions. Policy development is an

essential public health function (Prevention of FAS and related disorders are of tremendous public health importance). Research in this field has enabled researchers to recommend the effective management of FAS. These guidelines target specific populations for reducing the risk of an alcohol-exposed pregnancy. Substantial empirical and clinical scientific evidence has shown that prenatal exposure to alcohol causes damage to the developing foetus (Kuczmarski, *et al.*, 2002).

Implementing strategies are based on guidelines that can be used to reduce the incidence of FAS if integrated with human immune deficiency virus (HIV) and sexually transmitted diseases (STDs) and other programmes. The needs of health care professionals are included in the national genetic education programme for primary care practitioners (Woods, 2002).

Women of childbearing age are the key proponents in successful FAS prevention. It is important for a better understanding of the many social and psychological processes. The environments in which the women live harbour contributing factors to risky drinking, thus there is a need to seek delineating personal and societal interventions. (Stein *et al.*, 2000).

Foetal alcohol syndrome is high on the agenda of priorities for the Policy Framework of the Government of the Republic of Namibia (2015). Identification of those exposed to alcohol prenatally can be challenging in areas like diagnosis and appropriate referral, especially when guiding tools are not available. Identification of FASD can be improved by better detection of women who are consuming alcohol during pregnancy (Chiodo *et al.*, 2009). Clinical and preclinical studies have identified risk factors for FASD, including dose, as well as patterns and timing alcohol consumption exposure.

It is important for the health care professionals to understand the mechanisms how alcohol consumption impacts the development of a foetus (Goodlett *et al.*, 2005). Guidelines and policies facilitate early identification of persons affected by prenatal exposure to alcohol so they and their families can receive services that they need. The individuals and families will be able to achieve healthy lives and reach their full potential.

Public health professionals play an important role in policy development by conducting policy relevant research, communicating findings in a manner that facilitates action, encouraging the efficient use of resources, and promoting evidence-based health care interventions (Elder, 2002).

The participants expressed a lack of policies and guidelines to manage FAS at their health facilities where they interact with patients. It is important to take cognisance of the functions played by policies and guidelines to facilitate the appropriate and uniform approach to a given health condition. In this study, it was clearly indicated that these tools were not available at the health facilities.

Absence or non-availability of the policies and guidelines hampers quality care provision. The participants had diverse opinions about managing babies born from mothers who are consuming alcohol during pregnancy. Policies are principles, rules, and guidelines formulated or adopted to reach long-term goals. Policies and procedures are designed to influence and determine major decisions, actions and activities within the boundaries set by an institution. Procedures are the specific methods employed to express policies in action in day-to-day operations of an institution.

Together, the policies and procedures ensure that points of view held by the institution, in this case the MOHSS, are translated into steps that result in an outcome compatible with that view.

Foetal alcohol syndrome guidelines are intended to assist health care professionals to recognise the disorders associated with foetal alcohol exposure, promote early (infancy and pre-school) and accurate diagnosis, and prevent secondary disabilities through early diagnosis (Grant, 2005). The health care professionals are concerned about the lack of guidelines and policies because it would assist them with managing the patients born with FAS. The following are supporting statements:

- “Information sharing about the impact of alcohol is not backed-up by official documents.”
- “The babies are not growing normally and look very small babies.”
- “Concrete understanding of the condition lacks, because of lack of IEC (Information, Education, Communication) material.”
- “Why is she drinking?”
- “Sometimes refer to social worker.”
- “Sometimes they are so tiny; automatically the babies are not growing normal.”
- “It is clear that the health care workers are seeing babies of alcoholic mothers. However, a concrete understanding of the condition lacks. They are also aware of an increase in alcohol consumption among the Namibian population.”

It is important that policies and guidelines are available to guide the health professionals. These guidelines will empower the health professionals to identify

women at risk of alcohol exposure pregnancies. The health professionals will teach and assist women who might already have a child with FAS.

3.3.1.2 Sub-theme: Lack of knowledge about the factors contributing to FAS

The factors contributing to FAS are numerous. These are responsible for the adverse health outcomes in women. Women drink alcohol to socialise with family and friends and to celebrate on special occasions. Although some women drink responsibly, alcohol has a unique risk for all women. Approximately 47% of girls and women at the age of 12 or older have been reported as current drinkers (Pleis *et al.*, 2009). The Australian government guidelines advises women who are planning a pregnancy not to drink (National Health and Medical Research Council, Australia, 2009).

The factors that influence women's attitude about consuming alcohol during pregnancy and their behaviour include a desire to drink alcohol, anxiety about the baby's health, lack of knowledge, and misunderstanding the risks and effects to children with FASD. Depression has also been identified as one of the common contributing factors (Trujillo-Lewis, 2008). Women who drink heavily and who have children with FASD are likely to have heavy drinking in their families of origin and procreation and in their peer groups (Viljoen *et al.*, 2002).

A study conducted by May *et al.* (2005) reveals that domestic violence is a contributing factor and spousal abuse play a critical role. Smoking is another contributing factor among mothers giving birth to children with FAS.

From the above-mentioned selective review, new and highly focused attention should be paid to gather accurate and well-detailed data. This data must come from those women who have given birth to children with FAS, childbearing age mothers, and women who do not drink. Improved methods of collecting maternal risk data are needed to make progress in this area.

In this study, several issues were expressed that concurred with the cited study outcomes.

The extent of a woman's desire to drink alcohol is a key factor in alcohol consumption during pregnancy. Women's pre-pregnancy drinking behaviour influences drinking during pregnancy. The relative level of anxiety about the baby's health and wellbeing dictates that corrective action should be taken.

Abstaining could be the relatively easy choice.

“Mhh... is very strange, I do not know what are you talking about and I do not know even the cause of that condition.”

“Even you told them not to drink while they are pregnant it; seems they do not understand the impact of alcohol to their unborn babies.”

“I suggesting [sic] that we need training or even a book that really show us what is that condition, [referring to the FAS] how to identified such condition [referring to FAS] and many things.”

“What do excepting from the client if we ourself [sic] we do not have required skills to that condition you have stated? It is a pity!”

“I am also supporting that idea; without knowledge about that condition us nurses, we can't help the patient who is having such condition.”

3.3.1.3 Sub-theme: Inadequate understanding of the impact of FAS on the mother and family, as well as to the community in general

FAS is caused by prenatal exposure to alcohol (Streissguth, 1997) and diagnostic characteristics of FAS include specific facial features deficiencies in growth, and central nervous system (CNS) dysfunction. The children born with FAS may display varying degrees of severe impairment, as well as multiple disabilities. Since FAS appears in different degrees, there is a misunderstanding of FAS as a condition that is entirely preventable. Furthermore, there is a lack of training in this area for professionals who include medical personnel, teachers, and other service providers.

FAS is a condition that children do not outgrow. Children who exhibit only some of the characteristics are referred to as having foetal alcohol effect (FAE). This condition is sometimes underdiagnosed due to physical disability not being clear (Streissguth, 1997). Although current information is essential to understand the physical aspects of FAS, there is a dearth of information pertaining to experiences of health care professionals, mothers, families, and the community.

Any type of alcohol consumption during pregnancy has dire consequences. The alcohol can damage or affect the unborn baby's growth and general development. There could be in utero brain damage of the unborn baby, as well as serious consequences to the mother. These consequences are: The body of the mother is worn out by tiredness, fatigue, nausea, and weakness during labour. The mothers can lose consciousness, have increased urine output, lose electrolytes owing to vomiting and depleting nutrients. The mothers are likely to miscarry, because the

foetus is no longer supported internally. Alcohol consumption during pregnancy disrupts the normal functioning of both the maternal and the foetal endocrine systems. This may disturb the normal maternal-foetal endocrine balance. These alterations may adversely affect the development and organisation of multiple systems in the foetus. The complex role of the placenta and the direct and indirect effects of maternal alcohol consumption on both the mother and the foetus are far reaching.

Thus, these factors play a pivotal role in alcohol-induced foetal damage; disruption of hormonal influences stifles the developing foetus. An increased understanding of the endocrine function during pregnancy; the foetal endocrine system; and the processes that influence the maternal, placental, and foetal hormones offer new insights into the adverse effects of prenatal alcohol exposure (Gabriel *et al.*, 1998). Children born with FAS have destroyed brain cells that result in malformations of the developing brain structures. Several studies indicate the severity of the disability that results from severe prenatal exposure to alcohol. Most of the women are chronic alcoholics which makes FAE or FAS inevitable (Coles *et al.*, 1987). These children manifest with developmental disabilities, attention deficit disorder, learning disabilities, developmental delays, and behavioural disorders.

The common effects of FAS include sleep disturbances, difficulty in peer and sibling relations, hyperactivity, difficulties with developing independent, and excessive talkativeness (Guiunta & Streissguth, 1988). Children and families can benefit significantly from an early diagnosis. This information can help them to cope with the condition, shape their expectations, and obtain support from the families. The parents need understandable practical information to provide a realistic view of the

child's current and future functioning to their family and external support. The family experiences hardship in terms of their daily lives. Since the parents have multiple tasks, it is extremely difficult for them to allow space for the condition.

In terms of community, there are many challenges; especially an individual's ability to live independently in a community when they become adults (Kvigne *et al.*, 2003). These individuals require constant supportive living. This is a great significance for affected individuals and for society which must provide educational and social services (Coles & Plantsman, 1992). Individuals with FAS / ARND usually require services as young children to help them through childhood and their school years. These children need counselling, as well as support systems to help them to lead successful and reasonably independent lives.

"It is very difficult to help someone if I do not know what the disease of children caused by alcohol is."

"I have just heard that condition in the book and sometime we delivered baby small to her gestational age, but you can't tell if it [is] caused by alcohol."

"I suggesting [sic] that we need training or even a book on how to diagnoses [sic] that condition."

"There are no protocols or guidelines."

The participants described what they were experiencing, but not in detail. Health professionals should be able to give reasons why these symptoms are appearing. It is therefore important that in-service training is provided. In dealing with FAS, it is important that health professionals know the details of the presentations of the

condition. These effects can range from mild to severe. They can affect individuals in different ways; including physical problems, as well as problems with behaviour and learning. It is imperative that the health professionals look for the following signs and symptoms.

Abnormal facial features; such as a smooth ridge between the nose and upper lip (smooth philtrum), thin upper lip and short distance between inner and outer corners of the eyes, weight and / or height is lower than 10th percentile, and central nervous system problems. The individual can have problems with memory, the senses, or social skills. These include changes in the structure of the brain and neurologically there can be poor coordination, poor muscle control, and problems with sucking as a baby.

Functional ability is below what is expected from the individual of a certain age. There is also a significant delay in development that results in a low Intelligence Quotient

However, some of the health professionals, such as doctors can identify these deficits.

“Eyes and heads are small.”

“Babies look strange.”

“Physical appearance is not showing normal.”

The factors that facilitate the achievement of the expected goals in managing FAS effectively are jeopardised. Thus, the facilitator of the development of the guidelines concentrated on content, goals, and specific content to attain the desired outcomes.

a. An adequate understanding of the impact of alcohol consumption

Alcohol is a teratogen, i.e. an agent that can disturb the development of an embryo or foetus. If a foetus is exposed to alcohol, it may result in a range of adverse effects to the brain and organs of the unborn child. No alcohol is safe for pregnant and breast feeding women, particularly for the development of the baby. Alcohol can affect the development of the baby throughout pregnancy, thus there is no safe time for drinking alcohol during pregnancy. Women who stop drinking before pregnancy can avoid exposing their babies in the early stage. In the first three to six weeks, the foetus is most vulnerable to structural damage. The nature and degree of harm to the baby due to alcohol can be difficult to predict. The range of adverse effects to the brain and organs of the unborn child is collectively known as Foetal Alcohol Spectrum Disorders (FASDs). Children with FAS can experience a range of cognitive, behavioural, and physical impairments.

“People should plan for children for they are precious.”

“Sisters tell them about cigarette rook [sic] and alcohol drinking, but they repeat the same behaviour ti /gui tara mi ≠gao.”

“But they are doing the same story at Katutura where they are living.”

The study revealed that comprehensive knowledge and skills were still to be reinforced, especially for the ultimate beneficiaries.

Concluding relation statement to Theme 1: Participants expressed lack of knowledge and skills about FAS

The participants were not comfortable when providing care to mothers with babies born with FAS. The participants needed policies and guidelines to direct them. Besides these shortcomings, the participants had to undergo in-service training. This training should cover a wide range of aspects about FAS. Furthermore, the focus should be on a primary health care (PHC) approach, which would lead to integration with existing programmes in Family and Community Health. It was therefore of the utmost importance to align with those policy directives with the mandate of MoHSS. Hence, this approach will also match the Mid-Decade Goals.

3.3.2 Theme 2: Participants experienced inadequate resources to facilitate management of FAS

The second theme evolved from inadequate provision of resources for the health care professionals to manage FAS. These resources covered a wide range of components. It was in this case difficult for the health care professionals to provide quality health care to their patients. Media plays an important role and is a link between health care professionals and the larger public. It serves as a source of correct information, as well as an advocate for correct health behaviour (Swayne, 2009) Media transmit the desired message when they are provided with clear instructions. Information is widely recognised as a vital resource of sharing experiences of specific subject matter.

Education and training are another significant issue. The various issues in relation with health are shared with the wider community to positively change health behaviour. Staff development in this study refers to formal and informal learning activities of health care professionals to support their roles in the health sector. Staff development includes an orientation to new or revised policies and guidelines,

clinical application of new technology, and continual professional development (CPD). The health care professionals in this study expressed their experiences of shortcomings in their areas of practice. Health systems and specifically improvement of quality should focus on changes. It is geared toward relieving the burden of conditions on a population. Equally, it is important to provide effective, patient-centred, timely, and efficient health care (Kohn *et al.*, 2000). It is in this respect that various resources are needed.

Resources are limited and demand exceeds supply; allocation becomes a problem. How that problem is solved depends largely on the nature of the resources. When the resources are construed as social good, allocation may proceed either in terms of competition among individuals on the grounds of the relative strengths of their competing rights, or on an aggregate basis by evaluating which distribution likely fits the purpose. Health resources, whether understood in material or in human terms, are limited or are depending on how health care is delivered. The demand for health care resources will always and necessarily exceed supply. From the Hippocratic perspective, the focus of medical action gravitates towards the physician-patient encounter. It establishes a fiduciary relationship between the physician and the patient (Shaw, 2011). In this study, the resources included human, material, and infrastructure resources.

The serious shortage of health workers across the world has been identified as one of the most critical constraints to the achievement of health and development goals. The crisis impairs the critical provision of essential life-saving interventions; such as immunisation, safe pregnancy and delivering services for mothers, and access to prevention and treatment.

Friedman *et al.* (2006) estimate that over four million more health workers are needed to bridge the gap. Namibia is not an exception to this situation. Across the globe, 57 countries have been identified as having critical shortages; 36 of these countries are in Africa. In Namibia, health workers are migrating between the public and private health sectors. Unlike any other developing country, in Namibia there is a lack of adequate staffing for the priority disease programmes that are competing for scarce staff. Health workers are at the heart of the health care system. They are an integral part of health services in which each member contributes different skills and performs different functions. The study revealed that there was a critical staff shortage of human resources in the critical health care areas. These staff shortages are caused by retirement, migration to the private health sector, resignation, and taking up other posts. Accessibility of resources enables health care professionals to execute their multi-functional roles effectively.

The WHO World Health Report (2006) States that this situation also causes the remaining staff to be overworked, therefore, they are unable to perform other functions such as health education. Furthermore, it compromises the quality of the services. The following statements serve as evidence:

“The main problem is shortage of staff.”

Another participant expressed:

“Many nurses resign and those remaining are overloaded with work.”

The countries with the poorest health indicators have the highest shortage of health workers (The World Health Report, 2006, Chen *et al.*, 2004). Health worker shortages in Sub-Saharan Africa have many causes, including past investment

shortfalls in pre-service training, international migration, career changes among health workers, early retirement, morbidity, and untimely mortality (Ayub & Siddiqui, 2013).

3.3.2.1 Sub-theme: Educational information

The education of the health professionals needs a major overhaul. Clinical education simply has not kept pace with or been responsive enough to shifting patient demographics and desires, as well as changing health system expectations. These circumstances have an impact on evolving practice requirements and staffing arrangements, new information, a focus on improving quality, and new technologies (Institute of Medicine (US), 2001). It is therefore important to ensure continual education of health care workers. The study revealed that they were lagging in the latest updates on FAS, thus they were not able to appropriately manage the condition.

Communicating a broad range of health messages to a wide variety of audiences could be challenging. It is necessary to avoid the one-size-fits-all mindset when developing effective health communication material. Culture and literacy skills are important factors that seeks to capture the intended audience's attention. It is important to remember that even those with higher literacy skills want health information that is understandable and meaningful to them, as well as easy to use. Technical information should be transformed into communication material the audience can relate to and understand. These are useful tools; such brochures, booklets, and pamphlets. In this study, the health care workers were the recipients who would transfer the knowledge to the mothers. The following expressions of the participants confirmed that:

“Sometimes cry with strange voice, but no information material to explain to the mothers.”

“Not feeding enough through placenta; appropriate information is needed.”

“We don’t have information; leaflets, pamphlets like for smoking and TB in different languages.”

“There is no protocol or guidelines for using to manage FAS.”

From clinical health care to public health campaigns, the health industry is increasingly turning to social media to support, promote, and increase the dissemination of information. It also improves the personal and community health practices. Social media have shared space for preventative information and create enabling support structures to track personal health and build patient-to-patient support networks.

Across the health spectrum, people communicate more rapidly, have instant access to supplementary research data, and equip them with pertinent health information that is needed to manage their own health. Media have been instrumental in changing relevant personal and community health. It is substantially easier for the population to share information. Media plays an important role in communicating public health information. It serves the role of being a source of accurate information, as well as an advocate for promoting healthy behaviour.

The local and international media play a vital role as a link between health workers and the wider public. In this study, the participants expressed concerns about the

access to media for information sharing about FAS. The following statements were expressed:

“Re-educate; gives education to client and ask again the other week what is dangerous to the baby. You have to repeat and re-educate every time the patient come to the hospital.”

“If possible, introduce a programme to go to NBC to be on the air.”

The participants expressed the dire need for access to media. It seems that the media are paying more attention to other competing programmes; such as HIV and acquired immune deficiency syndrome (AIDS), tuberculosis (TB), prevention of mother-to-child transmission (PMTCT), and male circumcision (MC). There is a gap in terms of reaching out to the population concerned. There are benefits to the accessibility to media. The benefits of access to media are increased interactions with other people, which include readily available shared, tailored information and education that reaches wider community.

3.3.2.2 Sub-theme: Media for sharing information

From clinical health care to public health campaigns, the health industry is increasingly turning to social media to support, promote, and increase the dissemination of information. It also improves the personal and community health practices. Social media have shared space for preventative information, create enabling support structures to track personal health, and build patient-to-patient support networks.

Across the health spectrum, there are many ways nowadays to communicate more rapidly, access supplementary research data, and for health care professionals to arm

themselves with pertinent health information that is needed to manage health conditions on their own health. Media have been instrumental in relevant changes to both personal and community health. This is most noticeable in the sharing of information that has become easier for the population. Media are constantly used in public health situations. It serves the role of being a source of accurate information, as well as an advocate for promoting healthy behaviour.

The local and international media play a vital role as a link between health workers and the wider public. In this study, the participants expressed concerns about the access to media for information sharing about FAS.

The participants expressed the dire need for access to media. It seems that the access is paying more attention to other competing programmes such as HIV / AIDS, TB, PMTCT, and MC. There is a gap in terms of reaching out to the population that is affected by FAS. The benefits of access to media are:

- Increased interactions with other people;
- More available shared, tailored information is generated; and
- Education is reaching out to the wider community.

3.3.2.3 Sub-theme: Inadequate space for health education

The physical environment impacts staff outcomes and therefore facility design and renovation provide an opportunity to interact with the different elements. The conducive facilities ensure effectiveness of the health care team in providing care, as well as patient and practitioner satisfaction. Therefore, it is of utmost importance to provide space for patients and families to interact with health care workers.

The physical design is changing in long-term care settings; such as modifications, natural element, future repositioning, and social interaction support (Parker, 2004). Health care practitioners are required to process different types of information. They communicate vital information to the patient, and need space conducive for this purpose (McCarthy & Blumenthal, 2006). The physical work environment influences positively or negatively the mindset of the service providers and their efficiency and ability to innovate delivering of quality care. In this study, the participants expressed their experiences of lack of space to provide health education to the mothers. The researcher also observed those shortcomings at the two health facilities that were part of the study.

The study revealed as stated by participants that there was no space for health education. Glanz (2008) describes that health education “comprises of [sic] consciously constructed opportunities for learning that involves some form of communication designed to improve health literacy, including improving knowledge, and developing life skills which are conducive to individual and community health”. Green and Kreuter (2005) define health education as “any planned combination of learning experiences”. The effectiveness and efficiency of this process are amplified by a conducive environment with appropriate space. The learning process should be discharge in a space at the health facilities with a conducive atmosphere for both the researcher and participants.

It is important to understand, address these problems, and consider the health care workplace as an interdependent environment that comprises a physical system of work processes (Becker, 2007). The physical environment impacts staff outcomes

and therefore facility design and renovations provide an opportunity for the different elements to interact.

One of participants expressed the following:

“There is no space for health education.”

Concluding relation statement about Theme 2

Participants experienced lack of resources; health system resources are needed for quality health service delivery. Resource constraints in resource-limited settings can affect quantity and quality of health care. Health care resources are the means that are available to a health care system for delivering services to the population. It is important to have effective and efficient health system resources that are sufficient and appropriate. The participants mentioned a shortage of human resources, as well as a lack of space. This leads to difficulties in providing health education. The participants added that the information material was not available unlike than for other programmes; such as malaria, TB, HIV / AIDS, and PMTCT. They were also concerned about accessibility to media. There was no provision made with the NBC for information sharing on this specific topic. The participants were of opinion that primary prevention strategies had been developed to address the issue of increased alcohol consumption in the country.

3.3.3 Theme 3: Participants expressed uncondusive environment for mother and family that impacted on the management of FAS

The mothers who give birth to children with FAS are discriminated against. Their exposure to stigma (negative stereotypes) has dire implications for public awareness, policy, and treatment practices. This relates to pregnant women who consume alcohol, individuals affected by FASD, as well the caregivers. Many women in this situation feel ostracised by other people and are reluctant to seek services and interventions to improve their quality of life (Gould *et al.*, 2010). People condemn those who are unable to address their problematic alcohol consumption; they often experience judgmental attitudes from service providers, feelings of shame, guilt, depression, fear of losing children, poverty, low educational status, and a low self-esteem (Livingston & Boyd, 2010).

They also experience barriers to obtaining appropriate medical services and access to other health care professionals (Finnegan-John, 2013). Parenting a child with FAS can be extremely exhausting and stressful for the mothers. The misconceptions mentioned in the earlier paragraph could adversely affect the life and health of the mothers (Green & Kreuter, 2007). Many individuals with FASD also have mental health issues. Society does not understand that FASD is a lifelong disability, which is at odds with the social norms. The health care professionals need to apply their professional competencies to assess these individuals in terms of various environmental and social aspects.

It is important to make sense of behaviour changes in relation to changes to the environment. To promote health, an ecosystem must offer an economic and social environment conducive to healthy and wholesome lifestyles. These environments

should also provide information skills that enable individuals to engage in healthy behaviour. The individuals must also be provided with support to help them modify their behaviour and reduce their exposure to risk factors, such as alcohol abuse. The ultimate recipients of the quality care, namely the mothers, should not remain dependent on health professionals. They should adjust their behaviour to the changing environmental conditions or adjust their environments to the changing behaviour. The following statement is evidence:

“How is the environment she is staying, how many kids she has?”

Social and economic features have been linked to important health indicators, such as health status and birth outcomes. Characteristics of neighbourhoods can influence health, e.g. accessibility of liquor stores, substandard housing, substance abuse, smoking, and violence. Social and community influences on health have been recognised, however, it is equally important to consider the conditions in which people live and work. People living in poverty and social exclusion often have the greatest need for good health care, education, jobs, and housing. It is evident that positive and negative environmental factors affect human health either in promoting and sustaining health or threatening health. Therefore, a careful analytical approach is required before health education is embarked upon.

Concluding relation statement in relation to Theme 3: Lack of conducive environment for the mothers

The health care workers had connected the behaviour of the recipients with the environment in which they live. The several factors influencing health were identified and labelled as determinants of health outcomes. The influencing factors should be used to assist with changing behaviour and attitudes in a positive direction.

The participants in this study were concerned that the mothers went back to the same circumstances in Katutura and became trapped in the same circumstances. This situation exposed the mothers to the same friends and families who were living in this unhealthy environment. It is therefore imperative to address the alcohol consumption comprehensively in a community context to reach out to the Namibian population.

3.3.3.1 Sub-theme: Lack of knowledge of the mother about the FAS

The health care workers had connected the behaviour of the recipients with the environment in which they were living.

3.3.3.2 Sub-theme: Lack of family support to the mother

In family settings, the provision of some level of care and support is very important. This informal care “can be substantial in scope, intensity, and duration. For centuries, family members have provided care and support to one another during times of illness. Family caregivers and informal caregivers refer to an unpaid family member, friend, or neighbour who provides care to an individual who has an acute or chronic condition and who needs assistance to manage a variety of needs and a variety of tasks; e.g. bathing, dressing, and taking medication. The economic value of this support is invaluable (Bonuck *et al.*, 2002).

Some situations might emerge, such as depression and distress for the family members that interfere with the person’s ability. The supporters will then fail to assist and subsequently stop interaction with the needy (Fulmer *et al.*, 2010). Family members and caregivers should seek the assistance of health care professionals to manage their tasks and emotional demands. Family supporters often feel unprepared

to provide care and have inadequate knowledge to deliver proper care. Family members must interact with the health system to obtain information, services, equipment, negotiate with family and friends, and mobilise support.

Families are perhaps the most critical component of an early childhood system dedicated to promoting optimal development of young children. Families set the stage for a baby's development. It starts with prenatal care and promoting a healthy pregnancy. Family support assists family members with their parenting roles. It is indeed a daunting prospect, especially when economic stress, neighbourhoods, or communities without adequate resources challenge families. It is also important to take a lack of education and experience into account. Family support is an essential part of efforts to improve outcomes for young children. In this study, health care professionals mentioned a lack of family support. That indicated that mothers giving birth to children with FAS were left alone to deal with the situation.

The below statement serves as evidence:

“They are doing the same story at Katutura.”

Family support is critical for mothers who give birth to FAS children. The mothers of these children need support from their families, friends, and the community. Our societies are complex and cannot be separated from health. There are inextricable links among people societies that exacerbated the complexity of providing health care. This complexity includes people, societies, and the socioeconomic environment. There are also changing patterns that are based on the interaction of the society, the natural environment, as well as individual behaviour (The Ottawa Charter, 1986). There is an enormous threat to health caused by the environment and

ecosystems. It is imperative that a human being is regarded as the instrument of change in this interplay between these different constituents.

In this study, the significant role of support from family and creation of conducive environment is important. Families are the care units of society, and advancing their quality of life and ability to have control over their destinies and personal decisions is constant with long-established constitutional principles of family autonomy and personal liberty. The purpose of family support is to strengthen efforts of family interaction to enhance the quality of life and community integration of families whose members have disabilities. This integration increases their access to supports and services (Koda-Kimble, 2016).

Family support can also be defined as an integrated network of community-based resources and services that strengthens parenting practices and healthy development of children. There are characteristically driven true partnerships with the families. It has also other characteristics; such as comprehensiveness, flexibility, and individualised approach to each family based on culture, needs, values, and preferences. In this study, it was necessary to reflect on the ecomap and genogram. These concepts describe in detail a family tree and the extended family. This shows the historical context from one generation to the next. Community consists of components that are interlinked. These components are locus, sharing, joint action, socialites, and diversity. The components are the driving forces for community action in terms of support of individuals (Weick, 2005).

“How many kids she has.”

Physical environment, family, and community support play a very important role in health management. Family planning allows individuals and couples to anticipate

and attain their desired numbers of children. The parents decide on spacing and timing of the births of their children. The access to safe, voluntary family planning is a human right. Family planning is central to gender equality and women's empowerment. Health systems should ensure a conducive environment for supplying contraceptives, supporting family planning, and providing technical support. In this study, it was a concern that support systems were not strengthened to keep pace with the impact of FAS.

3.3.4 Theme 4: Participants express the lack of Interprofessional collaboration regarding the management of FAS

Interprofessional collaboration has been defined as “multiple health workers from different professional backgrounds work together with patients, families, caregivers and communities to deliver the highest quality care” (Gilbert *et al.*, 2010). Poor communication among health professionals can be associated with a rise in mortality and longer stay in the hospital. Interprofessional collaboration is a dynamic process that may be strengthened by mutual appreciation of one another's roles. There is sharing, partnership, interdependency, and power (D'Amour *et al.*, 2005). Health professionals must recognise their own individual scope of practice and skills set while appreciating other health professionals' capacity to contribute to the delivery of health care.

Interprofessional collaboration is the most critical instrument in the health care system. Interprofessional collaboration helps to build a patient-centred and community-orientated health care system. It is important to consider the following components: Interprofessional communication responsibilities, teamwork, and ethics for interprofessional practice. Interprofessional communication includes the

integration of the different professionals. The different professionals must communicate appropriately among themselves to expedite treatment or referral of patients.

The teamwork creates a platform for shared problem solving and decision making supported by a common goal. Health care professionals working in interprofessional teams communicate and address the challenging needs of the complex health system (Lumague *et al.*, 2008 as cited by Bridges *et al.*, 2011).

The interprofessional approach allows sharing of expertise to form a common goal and improve outcomes while combining resources (Barker & Oadasan, 2005 as cited by Claire-Jehanne, 201 *et al*0). Lack of interprofessional collaboration is caused by different barriers (Grant *et al.*, 1995). These organisational barriers at different levels are discouraging interprofessional collaboration; such as lack of knowledge and appreciation of roles, lack of initiatives for team building, and education structures. At team level, there can be lack of purpose, lack of exchange of information, differences in levels of authority, and difficulties with engaging the community, lack of commitment of team members, and the inappropriate composition of the team of professionals.

Individual team members could face barriers: Competition naiveté, persistence of defensive attitudes, lack of trust in the collaborative process, split loyalties between team and own discipline, and a reluctance to accept suggestions from other team members. In terms of independent providers, there are issues such as unease with following others in clinical decision-making and discomfort with performance review by team members of different professional backgrounds. In overcoming

barriers, it is important that the health care professionals commit themselves to the common goal of collaboration.

Equally important is to learn about other professions, respect skills and knowledge of other health professionals, willing to share the responsibility of patient care, and establish positive attitudes about one's own profession. It is imperative to have a clear understanding of other members' unique contributions. Each team should be knowledgeable about the skills of other professionals. If there is a clear understanding of other professions, there is a basis that underpins successful collaborative endeavours. In the health system, there can be "turf battles" that result from territoriality. The principle of autonomy reflects the desire for each profession to be defined and maintain the unique identity of its scope of work. It is thus important to address these underlying factors to facilitate interprofessional collaboration (Grant *et al.*, 1995).

The future of a health system depends on health professionals re-tooling the way they practice health care. No longer can a multidisciplinary model support complex health needs of many clients, nor can any health profession have all the knowledge needed to provide complete patient centred care. Furthermore, current education and health systems are structured around a multidisciplinary model of practice. The client should be included in care planning. True interdisciplinary practice is referred to as a partnership between a team of health professionals and a client in a participatory, collaborative, and coordinated approach to share decision-making.

This approach requires a revamping of how health professionals are educated and how the system accommodates shared decision-making. Romanow (2002) challenges the health professionals to move towards "teamwork and interdisciplinary

collaboration". Teamwork should transform the traditional multidisciplinary approach to health care delivery in favour of a more interdisciplinary approach. The interdisciplinary approach recognises and values expertise and perspectives of a variety of different health care providers. Moving towards patient-centred interdisciplinary collaborative practice (IDCP) requires a fundamental shift in health professionals' attitudes towards such an approach. A change to IDCP requires adjustments to existing health professionals' values, socialisation patterns, and workplace structures.

To facilitate such a change, there is a need to create a new culture in health systems that supports trust, a willingness to share care decision-making with patients, and meaningful inclusion of patients and / or family members in discussions about their care. Comprehensiveness requires that both interprofessional and interdisciplinary approaches are adopted (Clarke *et al.*, 2000).

The interdisciplinary approach is a dynamic process involving various health professionals with complementary backgrounds, skills, knowledge, and sharing common health goals. This study identified the issue of a lack of interdisciplinary teamwork. This is a great concern for the phenomena under study and has a devastating impact on the wider population. In recent years, medical training institutions have moved towards strengthening teamwork in the interest of the patient, family members, as well as the community.

Teamwork can be experienced at three levels; namely health care professionals, patients, and health care organisations. These outcomes have an impact on staff satisfaction, quality of care, and well-being (Xyrichis & Ream, 2008). Henneman (1995) mentioned by Gelling and Chatfield (2002), explains that collaboration

requires competence, confidence, and commitment of all parties. The team spirit and mutual respect play a vital role in health settings.

a. Unavailability of mechanisms for interdisciplinary collaboration

“Interdisciplinary collaboration refers to the positive interaction of two or more health professionals, who bring their unique skills and knowledge to assist patients/clients and families with their health decisions” (McColl *et al.*, 2005). Enhanced and efficient communication optimises team functioning and patient care. Communication is a hallmark of effective teamwork.

There are several barriers that could hinder functional mechanisms in interdisciplinary collaboration:

- **Barriers at the team level:** Unclear purpose, team not composed of appropriate professionals, different roles of individual team members, lack of commitment, and conflict among professionals.
- **Barriers faced by individual team members:** Multiple responsibilities, competition, defensive attitude, and a lack of trust in the collaborative process.

Some professionals are remarkably ignorant of other health professions. During training, other professionals tend to become socialised into their own professions. One should have a clear understanding of other members’ unique contributions.

In this study, the participants expressed a lack of support from management to carry out their responsibilities. There are no standard operating procedures (SOPs) to guide them, especially for the nurses. There are no joint interactions among the disciplines. The patients are referred but not everybody is involved in the discussions. It is also

difficult for participants to assess the patient even before the physician arrives, because their knowledge is limited.

The following statements bore evidence:

“No referral system in place.”

“Try to send the child for speech and hearing therapy, but mechanism non-existing.”

“Sometimes send to social worker, but no follow-up are [sic] done.”

“Unfortunately, the diagnosis is complex and needs [sic] multi-disciplinary approach.”

“You need assessment reports from psychologist, speech therapist, physiotherapist, and other professionals.”

From the above statements, it is clear that an interdisciplinary approach is the key to managing FAS. There is a need for the management to develop training for the health care workers and for implementing SOP protocols and guidelines. These documents would serve as catalyst to direct the health care workers appropriately.

3.3.4.1 Sub-theme: Poor communication among health professionals

Communication is referred to as an act of transmitting information from one person to another (Oxford Dictionary, 2013). Communication is also perceived as a process of transferring information in a specific context of emotions, ideas, objective behaviour, or attitudes. The communication process consists of a sender (creator of the message) and a receiver (recipient of the information) through various

communication channels. The care of patients now almost inevitably seems to involve many different individuals all needing to share patient information and discuss their management. The use of information and communication technologies becomes critical to support health services. Information is the lifeblood of health care (Alvarez & Coiera, 2005).

There is still an enormous gap in our broad understanding of the role of communication in health care delivery. The information exchange in health care delivery still happens in a vacuum (Alvarez & Coiera, 2005). The complexity of interactions within health care systems puts a heavy burden on the process of communication because miscommunication has terrible consequences. Communication errors are due to inadequate skills that are associated with communication difficulties (Wilson *et al.*, 1995 as cited by Stetson, 2001). The clinical communication space is interruption-driven with poor communication systems and poor practices.

It is important that the communication system is efficient and effective. Access to effective communication is critical component of best practice and quality care communication. Health care professionals often lack the training needed to cope with their patients' communication difficulties. It is imperative that health care professionals possess communication skills to interact with fellow health care professionals and patients. Communication skills include verbal and non-verbal messages: Words, phrases, voice tones, facial expressions, gestures, and body language that are used in interaction with another person.

Verbal communication is the ability to explain and present your ideas in a clear manner to diverse audiences. This is to tailor your delivery to a given audience,

using appropriate styles and approaches. There should be an understanding of the importance in oral communication. Oral communication requires background skills of audience awareness and critical listening. Non-verbal communication is the ability to enhance the expression of ideas and concepts without the use of coherent labels. The gestures, facial expressions, and tones of voice are used.

The components allow people to understand the information and modify what is said (Robinson, 2011). Effective communication is an essential part of building and maintaining good physician-patient and physician-colleague relationships. These skills help people to understand and learn from one another, develop alternate perspectives, and meet one another's needs. Communication skills in health care are used to explain diagnosis, treat, involve patient in decision-making, communicating with relatives, conveying bad news, communicating with other health care professionals, and giving instructions on discharge. In conclusion, appropriate communication in health care is critical. It eases or avoids misunderstandings and provides close interprofessional collaboration.

In the present-day health care system, delivery processes involve numerous interfaces and patient handoffs among multiple health care practitioners with varying levels of educational backgrounds. When health care professionals are not communicating effectively, patient safety is at risk because there is a lack of critical information, misinterpretation of information, and overlooked changes in status. By addressing this issue; health care organisations have an opportunity to greatly enhance their clinical outcomes (Joint Commission Resources, 2003). Literature has shown the complexity of medical care, coupled with human limitations. It is therefore critically important to have standardised communication tools. Structured

communication helps to avoid communication gaps and ensure a very effective strategy for enhancing teamwork. Equally important is the establishment of collaboration through a memorandum of understanding back up by SOP protocols, guidelines, and policies. The communication mechanism should strengthen in the interest of the patient and satisfaction of the health professionals.

The key should be around behavioural standards and the relationship with patient safety. Addressing defects in communication that affect collaboration, information exchange, appreciation of roles and responsibilities, and direct accountability for patient care are key components of any patient safety.

The patients expressed the following points of view:

“No memorandum of understanding signed with outside partners.”

“We tell them to stop alcohol consumption and consequences, but cannot refer them for continuum of services.”

The management of mothers whose babies are born with FAS is multi-dimensional. Clients are supposed to receive services from a consolidated single point. It offers the client continuity of the intended intervention plan. The health care workers must be familiar with protocols and SOPs used by other health professionals. The paramount goal when dealing with alcohol abuse clients and diverse services is to promote the clients' best interest. It is imperative to have strong bonds among health professionals. Clients' lives are dynamic and changing and they are exposed to new information all the time. It is critical that practitioners are aware of this possibility for them to change the course of action. It is in this respect that communication among health professionals should depart from a point of mutual understanding.

Concluding statements in relation to Theme 4: Lack of direction for inter-disciplinary collaboration

In the health system, communication among health professionals is of utmost importance. Health professionals with various training backgrounds should work towards a common goal. This common goal is striving to improve the relationship with the patient or client. Poor communication among health professionals can jeopardise the professional values and ethical responsibilities towards the patients. It was clear in this study that professional boundaries could impede on the purpose of alleviating the suffering of the patient. It is therefore essential that the health care workers' training is geared towards attainment of a common goal for the patients. The other important aspect is continual in-service training for health care workers. Interaction and communication among health care workers should be strengthened by joined training and creating opportunities for growth.

3.3.4.2 Sub-theme: Lack of motivation and team work

Motivation is an "individual's degree of willingness to exert and maintain an effort towards organisational goals. Motivation is closely linked to job satisfaction, which retains workers in the jobs with the passing of time (Luoma, 2006). Keeping health workers satisfied and motivated helps the entire health system work smoothly. Many countries currently experience serious ramifications owing to a shortage of health care professionals. Poorly motivated health care professionals have a negative impact on the entire health system. Some health care professionals leave for more appealing opportunities while others even leave the medical field completely.

A complex set of social, professional, and economic factors influences motivation. Strong career development, adequate working conditions and living conditions.

Having strong human resources mechanisms in place within a health system can help to ensure that the right motivational factors are in place (Deussom *et al.*, 2012). Maintaining positive relationships with workers can increase motivation while fully considering the problems related to career development, remuneration, and working conditions. These are factors that lead to dissatisfaction. Career development is defined as the possibility to specialise in a specific field or be promoted through the ranks of health workers. Health care professionals who are working in rural settings cite limited career development opportunities as a demotivating factor (Willis-Shattuck, *et al.*, 2008).

Motivation strategies should tackle these complex problems holistically, provide opportunities for career development, promote a positive work environment, and ensure the implementation of a support system (Luoma, 2006). In the health system, it is of paramount importance to apply appropriate tools to motivate health care professionals, especially in terms of career development.

Teamwork in health is defined as two or more people interacting interdependently with a common purpose, working toward measurable goals. The health care professionals maintain stability while encouraging honest discussion and problem solving. Learning fundamentals of teamwork and collaboration assist health care professionals to better understand patient needs, especially in areas where a plethora of social and health issues. Teamwork in health care employs the practice of collaboration and enhanced communication to make decisions as a unit and with a common goal.

Another important aspect is to hold meetings to discuss patient results, share information, and debate suggestions to improve performance (Manser, 2009).

Teamwork is becoming an important health intervention due to the complex nature of medical services. It reinforces the appeal to medical staff to assume a multidisciplinary health care approach. This approach would also take care of patients who suffer from multiple health problems (Mickan, 2005).

The importance of teamwork in the health sector was convincingly expressed:

“You need a history from the social worker, psychologist, and physical assessments.”

“The main problem is shortage of staff.”

“Many health care professionals resign and those remaining are overloaded with work”

Health care is a multidisciplinary profession consisting of doctors, nurses, and other health professionals from different specialities. They work together, communicate, and share resources. These professionals are cadres in health care; each with specialised knowledge and different health-related tasks (Manser, 2009). Motivation is a process that accounts for an individual’s intensity, direction, and persistence of effort toward attaining a goal. Motivation stems from a need which must be fulfilled and this in turn leads to specific behaviour.

The reward is a combination of intrinsic on extrinsic fulfilment. Intrinsic fulfilment is an individual’s person who takes pride and feels good about a job well done. Extrinsic fulfilment refers to sharing the rewards of successful health care with other professionals from various backgrounds in the health care sector. Job satisfaction is a pleasurable or positive emotional state, resulting from job experience. In the health care field, attaining health objectives depends largely on the provision of effective,

efficient, accessible, viable, high-quality services. The health workforce has a unique and strong impact on the comprehensive health system performance (Rigoli & Dussault, 2003).

It is critical to provide human resources to obtain the set objectives for health care delivery. Human resources can be defined as the different kinds of clinical and non-clinical staff responsible for public and individual health interventions. Arguably the most important of the health system inputs that benefit the performance and the system can deliver depend on knowledge, skills, and motivation of the individuals who are delivering health services. The diagnostic process ideally involves collaboration among multiple health care professionals. This also includes the patient and the patient's family. Patients and families play a pivotal role in the diagnostic process.

McDonald (2014) explains that the diagnostic process could involve a single clinician if the condition is uncomplicated. In health care, teamwork is a “dynamic process involving complementary backgrounds and skills. The decision-making process is based on shared communication.” (Xyrichis & Ream, 2008). For complex disease conditions, there are five principles of team-based care, shared goals, and measurable outcomes. The role of teamwork in health care cannot be underestimated (Borril *et al.*, 2000).

“Unfortunately, the diagnosis is complex.”

Teamwork in the health care settings helps to run health services smoothly. It is important to base health care on the pillars of a team-based approach. In this study, there was a clear indication that motivation and teamwork were lagging. Further,

health care professionals needed to be capacitated to competently assume their responsibilities.

a. Participants experience inadequate management support

In many health care systems worldwide, increased attention is being focused on human resources management. Specifically, human resources are one of three health system inputs (World Health Report, 2000). Workforce training is an important issue and it is essential to consider the composition of the health workforce in terms of both skill categories and training levels. New options for the education and in-service training of health care workers are required to ensure that the workforce is aware of and prepared to meet the present and future needs of their country (World Health Report, 2003).

Quality of health care services depends on a skilled and competent health care workforce. Quality is therefore underpinned by value, excellence, as well as conformance to specifications and requirements. Schuster *et al*, 2005. state that good health care quality means “providing patients with appropriate services in technically competent manner, with good communication, shared decision making and cultural sensitivity” (Schuster *et al.*, 2005).

The health care workers have a dire need for in-service training to increase effectiveness and efficiency. Management is responsible for support and provision of resources. Poor performance of service providers leads to inaccessibility of care and inappropriate care, which thus contribute to reduced health outcomes. The quality and type of professionalism determine output and productivity. Most performance problems can be attributed to unclear expectations, skills deficits, resource shortages, or lack of motivation.

3.4 CONCLUDING STATEMENT IN RELATION TO THEMES

The desired outcomes of quality health care hinge on appropriate interprofessional collaboration. In clinical settings, communication among the health care professionals present enormous challenges. It is imperative for health professionals to realise that the diverse training in their speciality fields is central to the success of quality health care delivery. While keeping their professional boundaries, the health professionals should work toward shared goal. There should be an exchange of knowledge and skills and open dialogue among health care providers. Effective communication is critical for managing various disease conditions; communication builds relationships among the entire health workforce.

3.5 SUMMARY

This chapter describes results and includes a literature control. In this chapter, the researcher provides an account of the research process and sheds light on the phenomenon. The researcher understands the phenomenon under study. Tesch's method was used for the data analysis to identify themes and sub-themes. These themes and sub-themes are summarised in Table 4.

CHAPTER 4

CONCEPTUAL FRAMEWORK OF THE STUDY

4.1 INTRODUCTION

This chapter describes the second phase of the study. The phase focused on the development of guidelines and integrated the findings that had emerged from the interviews conducted. The researcher linked the results to the existing body of knowledge, which was supported by the conceptual framework. Dickoff *et al.* (1968) describe the steps of developing such a framework.

4.2 DEVELOPMENT OF THE CONCEPTUAL FRAMEWORK AND REASONING MAP

The themes that emerged from the data analysis of the health care professionals' contribution served as basis of the conceptual framework. The researcher considered the purpose, agent, recipient, context, procedure, dynamics, as well as terminus for framing the logical development of the guidelines.

Dickoff *et al.* (1968) express the opinion that a theory is a conceptual framework that is invented for a specific purpose. This theory has three components. These components are: The goal which specifies the aim of the activities in this study, description of these activities to attain the goal, and the survey list that supports the presentation of the activities for achieving the goal.

The survey list of Dickoff *et al.* (1968) assisted with describing the framework of the study. The survey list comprised the agent, recipient, context, dynamics, procedure,

and terminus. The survey list aimed at responding to six crucial questions of the prescriptive theory:

- Who or what (the agent) performs the activity in this research study?
- Who or what is the recipient of the activity in this study?
- In what context is the activity performed? Is the context or setting where the activity takes place?
- What is the energy source (dynamics)of the activity?
- What is the guiding procedures, principles, and techniques (tools) used for the activity?
- What is the end-point (terminus) of the activity when the set goals are accomplished?

The procedure employed in this study contained the necessary aspects reflecting the experiences of the health care professionals with the intention of attaining a specific goal.

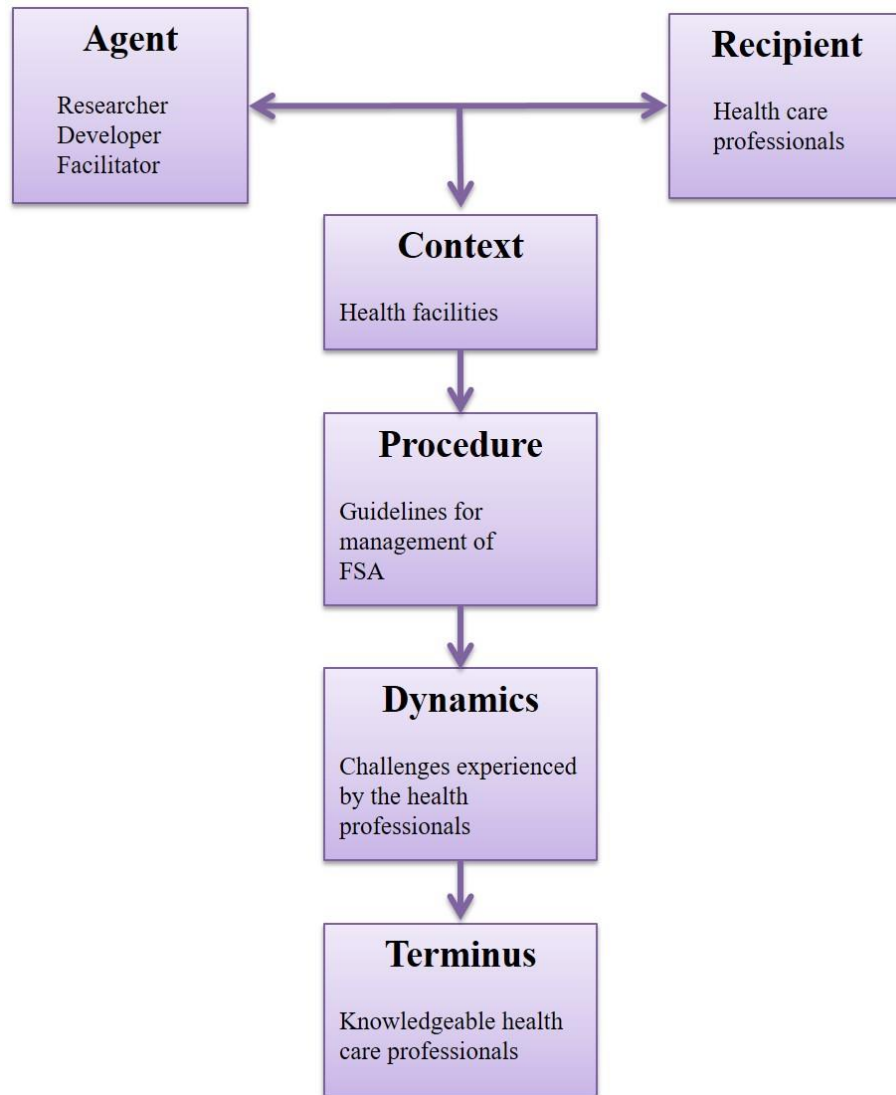


Figure 4: Reasoning map for the development of the guidelines to manage FAS

4.2.1 Agent

In this study, the impact of professionalism on the recipient was critical. The researcher (facilitator) had to ensure that professionalism was maintained at the highest standards. Professionals provide a service and help others, have special skills, and employ these skills to transmit knowledge. A professional's actions are based on research practices available and ensure that members adhere to the highest ethical principles (Robards & Lovecraft, 2010).

It is important to recognise the significant role that the health care professionals play. Health care providers who have experienced working on the frontline are often placed in the unique position of educating, training, and preparing the environment for change in addition to influencing national health policy. Communication, collaboration, and cooperation among health care professionals across the spectrum are essential. Collective action is more effective, hence collective advocacy and support are needed for a common vision. The WHO (2002) supports the abovementioned aspects. These aspects underline the pivotal role of health care professionals that is also related to achieving the optimum care (Thorton & Young-Demarco, 2001). Health professionals play a central and critical role in improving access to quality health care for a population. They provide essential services to prevent diseases in families and communities.

In this study, the agent fulfilled a critical role because as an educator he had to motivate, transfer interpersonal skills, as well as empower and support the recipients (participants) (WHO, 2016). Health care professionals engage in practice teaching should reflect on their role and analyse their skills as teachers. Practice settings are rapidly changing in a turbulent environment and require practitioners who have a flexible and responsive approach. The agent is charged with moulding the recipient (health care professionals) through his educational role (Humphrey & White, 2000).

In this study, the researcher provided an activity, namely the development of guidelines to empower health care professionals with knowledge and skills related to the management of FAS. To carry out that task, the researcher had to possess specific qualities.

Those qualities included interpersonal relationships and a clear clinical role to guide and provide support to health care professionals. It was equally crucial to create an atmosphere conducive for the health care professionals to provide quality services. The health care workers should ensure access to services, maintain dignity and integrity, and be responsible for the services provided. The provision of high-quality, affordable health care services are presenting an increasingly difficult challenge.

In this study, the role of the researcher was considered as an instrument of data collection (Denzin & Lincoln, 2003). The researcher described relevant aspects of self, expectations, and experiences to qualify his ability to conduct the research (Greenbank, 2003).

The agent (researcher) was an individual who had to have the capabilities to lead the activity with the aim of realising the goal. He had to facilitate the guidelines development for an optimal understanding of the activity undertaken. The researcher in this case was providing skills, techniques, policies, and other resources for capacity building. The characteristics of the researcher included knowledge, skills and a sound understanding of the subject matter. The researcher used the research findings as a foundation for facilitating the guidelines development process.

As a lecturer, the researcher facilitated the implementation of the guidelines. Cherry (2004) as cited in Stewart (2006) posits that a facilitator has the skills and knowledge to influence the positive outcomes of educational guidelines.

Table 5: Characteristics of an agent (researcher)

<p style="text-align: center;">Communication</p> <p>Communication is at the heart of who we are as human beings. It is our way of exchanging information. It also simplifies our symbolic capability. Carey (2008) reflects on two functions as the transmission and ritual views of communication respectively.</p> <p>The researcher had to transmit his knowledge and skills to the health care professionals. It was of cardinal importance that the developed guidelines were implemented and evaluated. The agent was looking for an opportunity when the content of the guidelines could be disseminated. The agent should be an effective communicator, committed, confident, a motivator, and knowledgeable in the subject matter. The researcher was respectful and exercised the highest ethical standards.</p>
<p style="text-align: center;">Respect</p> <p>Respect is the acknowledgement of a person's right to hold views, make choices, and take action (Beauchamp & Childress, 2001). This action is based on personal values and principles. Health care professionals treat their colleagues professionally. The relationship between a researcher and recipients is critical. It is of utmost importance to show acceptance, confidence, and an understanding (Littauer <i>et al.</i>, 2005).</p> <p>The researcher treated the recipients with respect and showed gratitude for their contributions to the development of the FAS guidelines. The researcher was also communicating with them in a professional manner.</p>
<p style="text-align: center;">Competence</p> <p>Competence is defined as the capability to demonstrate how to approach challenges, being a role model, and to inspire other people (Checkoway, 2003). In other words, a competent agent possesses the following attributes: Skills, values, knowledge, a positive attitude, and required abilities to ensure success of the guideline implementation. Competence affects many aspects of health care professionals, including education, practice, and management. A researcher should possess analytical skills, proactive demeanour, emotional intelligence; process-orientated approach, and akin to the real world.</p> <p>At the heart of health systems are the skilled health care professionals. Preparing health care professionals to take on the daunting task requires a common vision of commitment by the professions. They should primarily meet patients' needs as envisioned (Institute of Medicine, 2001) as cited by Fixsen (2005).</p> <p>The guidelines would provide competencies to the recipients in their respective fields of training. Quality service delivery should be strengthened. In this case, the researcher had to transform the mindset of the recipients to have a positive attitude and values that contributed to the successful implementation of the guidelines.</p>

Knowledge

A facilitator (researcher) should align with up-to-date knowledge of the subject matter under discussion.

In this study, the researcher transferred up-dated or most recent ideas to his colleagues. Those fellow colleagues, in turn, had to transmit the knowledge to other health care professionals.

Skills

The researcher, a lecturer with the required qualifications, was teaching at the medical school. Also, he was a physician with vast experience. Furthermore, the researcher was in the position to develop the guidelines in conjunction with other experts.

Being a lecturer, the agent had the capability to share his knowledge and skills with the participants. Those participants were frontline health care professionals who were providing health care at the health facilities concerned.

Attitude

People prefer to be associated with a person of desirable attitude and a pleasant manner of dealing with other people. A facilitator should have a friendly and honest disposition. During the training process, each team member deserves equal treatment. However, the differences of each one's capability are considered. The facilitator must be committed to help the participants to become independent learners. It is equally important that a facilitator is patient, as well as perseverant to appreciate and understand the difficulties of the team. Other aspect to demonstrate are a professional attitude, confidence, as well as a positive and purposeful atmosphere (Eforsys, 2010) as cited by Khan *et al.* (2011). The abovementioned characteristics are the cornerstones for the development of conceptual framework.

The researcher had a positive attitude for the development of the guidelines. The researcher also demonstrated confidence, as well as a positive and purposeful atmosphere. That was confirmed by the experiences of the participants.

The facilitator portrayed a picture of patience and perseverance to understand the problem at hand. The researcher was positive in developing the guidelines. The participants in the field provided their inputs with an open mind and a forthcoming attitude.

Empathy

It is important to create an empathetic attitude that would contribute to meet the set goals (Maurage, 2011). An understanding of empathy in the context of clinical care lead to positive patient outcomes, patient satisfaction, compliance, as well as well as satisfied health care professionals (Hojat, 2009).

One of the important aspects was to be empathetic to the recipients. That had created a conducive environment. The conducive environment improved the communication process. All the participants were active contributors to the development of the guidelines.

Motivation

Intrinsic motivation gives a feeling of accomplishment, mastery and / or self-fulfilment (Ledford *et al.*, 2013). Internal motivation stimulates, guides, and drives both the direction and force of specific behaviour (Huitt, 2004). A researcher should be dedicated, committed and, goal-driven (Goleman, 1998).

Motivation was the driving force in the accomplishment of the set goals and objectives. The commitment and dedication of the researcher encouraged the participants to achieve the intended goal.

Logical reasoning

Transformation of knowledge and experience of the participants is of paramount importance. Their knowledge, skills, and experience should be linked to the new situation (Amir *et al.*, 2007).

The researcher ensured that knowledge transfer to the participants took place. The participants approached the new situation with logic and contributed immensely to the realisation of the desired goal.

Creativity

The agent should be creative in the development and implementation process of guidelines. The guidelines must be tailormade to meet the needs of the health care professionals. It is the role of a researcher to ensure that the ultimate objectives of the guidelines find its way to the broader community (Galford & Maruca, 2010).

The guidelines were tailored to suit the Namibian situation. The researcher approached the participants with respect and took their views into account. The researcher also ensured that the broader community would be among the beneficiaries. Thus, the guidelines were developed in the Namibian context.

Concluding statements related to an agent

The agent developed, described, and implemented guidelines for the health care professionals to manage FAS in the health care settings. Those guidelines were aimed at assisting health care professionals to gain knowledge and skills for the management of FAS. The roles of the agent were to discharge his role with respect, knowledge, and trust in a conducive environment. The agent built rapport with the health care professionals to ensure that sound interpersonal relationships existed. The agent's role was to work closely with the experts to achieve the goal of quality care. The agent as a health professional was obliged to transfer knowledge and skills to them. There were some competencies needed that a health care professional should possess:

- Provision of patient-centred care with respect, values as well as expressed needs of cooperation, communication, and integration of care that was based on a common goal.
- Application of quality improvement by identification challenges and the implementation of interventions to ensure quality care. The researcher had to apply those various skills to empower the recipients to serve the population in need.

The researcher developed guidelines to empower health care professionals with concrete skills. The implementation of the guidelines was built on appropriate collaborative experiences of the health care professionals. It was also expected from the researcher to engage other stakeholders to capture their opinions to meet the qualities of comprehensiveness and inclusiveness. That created team spirit and

ownership in the implementation of the developed guidelines. It was in the interest of the medical fraternity and other beneficiaries.

4.2.2 Recipients

Recipient refers to an individual who is a beneficiary of an action. In this study, the recipients were the health care professionals who needed knowledge and skills. Those health care professionals were working in the maternity sections of the WCH and KSH. They needed specific competencies to manage FAS in their health care settings. The agent designed activities for the recipients to be competent in their task to carry out their duties.

Recipients are people who receive something that benefits them (Dickoff *et al.*, 1968). In this study, the recipients were the health care professionals at the specified health facilities. These health care professionals included medical doctors, nurses, social workers, psychologists, speech therapists, physiotherapists, and occupational therapists. Those professionals played a pivotal role in the management of FAS (Figure 5).

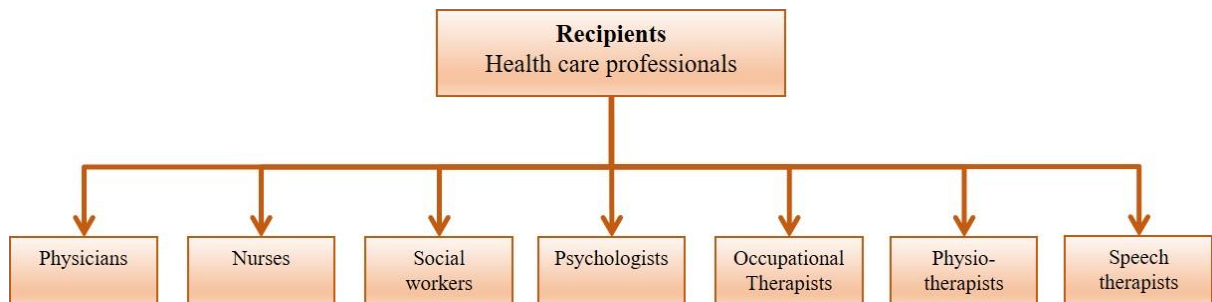


Figure 5: Categories of health care professionals

a. Characteristics of health care professionals

Interpersonal skills became so natural that health care workers might take them for granted, that they stop thinking about how they communicate with other people.

Good interpersonal skills can improve many aspects of professional and social life that lead to a better understanding and relationships. People with interpersonal skills are perceived as calm, confident, and optimistic. These people usually are endearing and appealing to people they communicate with.

Relationship: People who carry out quality improvement initiatives in health care should focus on enhancing systems, structures, measurements, and adaptive action (Batalden & Davidoff, 2007). It is important that there is a positive working relationship among health care professionals and collaboration is also required for quality care services (Bate *et al.*, 2008). It is clear that communication across communities of practice needs to improve (Hudelson *et al.*, 2008).

Perseverance: Perseverance and courage form the foundation in a professional career. The agent used perseverance to know the direction in which he could direct the actions. He pursues the actions despite some possible obstacles. This assist in accomplishing the goal of action undertaken (Tye, 1997). Perseverance includes tenacity and commitment. Perseverance, persistence, tenacity, and pertinacity require a resolute and unyielding pursuit of a defined course of action. Perseverance commonly suggests sustained activity despite difficulties or steadfast and continual carrying out of duties. Endurance and perseverance are the combined instruments to achieve a set goal at the end of a process (Lew, 2010).

Enthusiasm: It is a strong feeling of excitement and active interest in something that one likes or enjoys (Merriam Webster's Dictionary, 2004). Although the health care professionals were recipients of the programme, the mothers with babies born with FAS were eventual beneficiaries. There was a lack of support in the health system, which obstructed or impeded acceptance of knowledge. The needs reflected in the

study would be transformed into professionally competent health care professionals, and this would, in turn, creates behavioural changes in the mothers who are giving birth to babies with FAS.

Communication skills are the process when people exchange information, feelings, and meaning through verbal and non-verbal messages. Face-to-face communication usually happens in a health care setting. Communication is a complex, two-way process with people simultaneously sending and receiving messages to and from one another. Communication is the key to healthy relationships. Equally important is healthy interaction for health relationships. When people are communicating, it is important to be polite, understand one another's point of view, interact regularly, and apply an effective communication approach.

b. Professional values and ethics

Value: Values are beliefs or principles that guide professional behaviour. Values may reflect ethics, practices, standards, and other norms in the health settings. Values are an integral part of people's everyday lives, even though individuals do not often consciously determine how their values influence their ideas or behaviour. One common definition of values is the notions or ideas that people hold in high regard. Cultural background, agendas, religious affiliation, and membership of social groups influence values. Values, therefore, become internalised and affect motivation, thoughts, and behaviour. The values become standards that guide one's behaviour and are part of one's identity. Undergoing a values clarification process helps individuals to recognise their own values and let them understand how to make future choices (Kulig, 2000).

Ethics: Ethics take moral principles, values, and standards of conduct into consideration. The field of health and health care raises numerous ethical concerns related to; for example, health delivery, professional integrity, data handling, the use of human subjects in research, and the application of new techniques (WHO, 2011). Health ethics at its simplest form is the set of moral principles, beliefs, and values that guide us in making choices about medical care. At the core of health care, ethics are our sense of what is acceptable and what is unacceptable, as well as our beliefs about human rights and duties human beings owe one another. A professional code of conduct binds health care professionals to discharge their duties based on the protocols of relevant professional bodies.

Curiosity: Curiosity increases the intelligence and knowledge of an individual; it is also the root source of discoveries. Things learned with curiosity are better and easy to understand and are remembered for longer. Curiosity increases the knowledge and intellect in both qualitative and quantitative scales (Smith, 2013). People are curious because they observe new ideas, discover new circumstances, recognise opportunities, and look beneath the surface to discover new possibilities.

Values and attitudes: Values are principles, standards, or qualities that an individual or group of people hold in high regard. These values guide the way we live our lives and decisions we make. Attitude can be referred to as a group of feelings, beliefs, and behaviour tendencies directed towards ideas or objects.

Self-awareness: Schnell *et al.*, (2013) define the meaning in life and in work as a sense of coherence, direction, significance, and belonging. A sense of coherence implies the activities of individuals align to the broader goals, called vertical coherence, and their activities or goals do not contradict one another, called

horizontal coherence. A sense of direction implies that some purpose guides decisions, pursuits, and personal development. There is also a sense of significance that individuals feel their activities are consequential, reticent of self-efficacy. Finally, the individuals are filled with a sense as belonging and are part of a broader force. It is therefore important to encourage recipients to embark upon some self-discovery.

Reflection: Reflection in medicine considers the larger context, the meaning, and the implication of an experience, while action allows the assimilation and reordering of concepts, skills, knowledge, and values into pre-existing knowledge structures. When used well, reflection would promote the growth of health care professionals. (Branch, 2002 *et al*).

In this study, it was crucial to discover shortcomings in competencies for the implementation of the educational guidelines. That had paved the way for proper planning of the programme.

c. Education for the health professionals

Education for the health professionals needs a major revision. Clinical education simply has not kept pace with or been responsive enough to shifting patient demographics and desires, as well as changing health system expectations. This impacts an evolving practice requirement and staffing arrangements, new information, and a focus on improving quality or new technologies (Brennan, 2000). It is therefore important to ensure the continual education of health care workers. The study revealed that the latest updates on FAS were lagging, thus they could not appropriately manage the condition.

Competence of health care professionals: There are concerns about quality and safety of health care delivery that continue to mount, and no single health profession can address the deficiencies on its own (Brennan, 2000). Numerous reports cite the need for team-based education in health profession schools. Meaningful preparation for collaborative practice is not keeping up with changes in health care delivery. It is of utmost importance that health care professionals are trained in a way that fits the needs / demands of the recipients of the service. Competence of health professionals will ensure quality care of the patients based on evidence-based information.

Health care workers, especially in this study, were demonstrating a lack of knowledge about FAS management. Thus, these guidelines had been developed at an opportune time. The educational guidelines should be task-orientated, while suiting the needs of the beneficiaries.

Table 6: Responsibilities of various health care professionals

Health care Professionals	Responsibilities and responsibilities
Physicians	<ul style="list-style-type: none"> • Take leadership role • Diagnose, treat, and manage diseases • Educator, communicator, decision maker, caregiver, manager, community leader, and researcher (Smith <i>et al.</i>, 2011)
Nurses	<ul style="list-style-type: none"> • Provide emotional and psychological support to the patients and families, as well as creating harmonious environment (Oster, 2003) • Treat the effects of alcohol and prevent prenatal alcohol exposure (Weber <i>et al.</i>, 2002) • See patients in multiple settings, prenatal clinics, labour, delivery, hospitals, and schools (Spradley, 2000)
Social workers	<ul style="list-style-type: none"> • Provide frontline services to patients with conditions spanning the entire health care continuum (Streissguth <i>et al.</i>, 2004)

Health care Professionals	Responsibilities and responsibilities
	<ul style="list-style-type: none"> • Help patients and families understand certain lifelong illnesses (Gallicano, 2010) • Provide counselling; resolve the social, financial, and psychological problems • Provide interventions to support patients and their families during recovery
Psychologist	<ul style="list-style-type: none"> • Concentrate on the intellectual, emotional, biological, psychological, social, and behavioural aspects of human performance (Eisenberg, 2000) • Conduct research and use methods to prevent and manage disease, maintenance and promotion of health, and formulation of health policies
Occupational therapists	<ul style="list-style-type: none"> • Primary goal is to enable people to participate in the activities of everyday life, enhance their ability to participate by modifying the environment to better support participation • Engage with those who have limitations or impairments • Supported by physical, social, attitudinal, or legislative environments
Speech therapists	<ul style="list-style-type: none"> • Work with babies, children, and adults who have various levels of speech and communication problems • Swallowing, drinking, or eating difficulties • Ensures educational relevance • Work with wide range of conditions (Owens <i>et al.</i>, 2007)

Concluding statement about recipients

The aim of the study was to explore the way in which the recipients' experience would contribute to the management of FAS and to develop guidelines as a supportive instrument for the management of FAS. In this study, the health care professionals in the maternity sections of the WCH and KSH were the recipients.

The health care professionals were expected to possess specific characteristics to facilitate the positive outcomes of patient care.

These health care professionals should be motivated, confident, disciplined, and prepared to assume professional responsibilities. The health care professionals shared their experiences in terms of a lack of supporting tools and their desire or wishes to strengthen their skills. That translated into acquiring knowledge and skills, which would improve the quality of health care. It is crucial that health care professionals are provided with updated knowledge about the management of FAS, thus the development of the guidelines. As health professionals, they were obliged to exercise their code of professional conduct in a supportive environment. They needed the competencies to provide quality health care to their patients.

4.2.3 Context

Context is the circumstances, conditions, or objects that surround one. It is a situation, an environment, or background. In this study, the context referred to the maternity sections of the intermediate and national referral, hospitals respectively (WCH and KSH). Those two hospitals were selected because patients were referred from the regions to those hospitals. The health care workers at those hospitals were the recipients, who were responsible for health care services to the patients. The participants were from the environment where the care of patients was taking place. The participants shared their experiences.

Context can be defined as a setting, circumstances, or an environment. Environment is where activities take place (Dickoff *et al.*, 1968). These circumstances are where individuals are interacting with influences that influence them in different dimensions (Patel *et al.*, 2010).

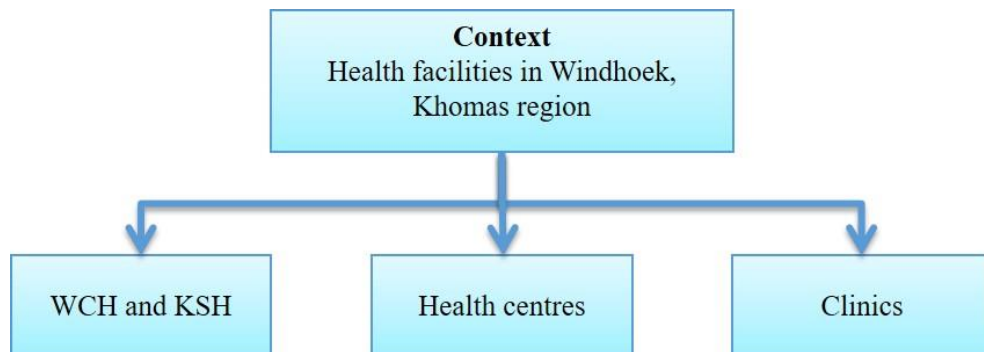


Figure 6: Context (health facilities)

In qualitative research, a naturalistic approach seeks to understand phenomena in context-specific settings; This means where the activity of interest takes place (Patton, 2001). In this study, the phenomenon was taking place at health facilities in Namibia, specifically in the Khomas Region. It was imperative to understand the events and relationships in the context of the actual environment. Thus, the research study aimed at providing a factual description about face-to-face knowledge of individuals in their natural settings of those health facilities.

Primary health care refers to first point of consultation for patients in the health care system (Thomas-Maclean *et al.*, 2014). These services are provided at health centres and clinics. Secondary and tertiary care is offered at district and tertiary hospitals. In Namibia, the patients must be referred from the primary care level to district level except in cases of emergency. Tertiary care provides specialised consultative health care where specialists conduct specific investigations for evaluation and further treatment (Cameron & Cameron, 2013).

Clinics are health facilities that focus on primary health care. These clinics are first entry points to health care and are usually designated to cover a demarcated catchment area (Dong *et al.*, 2011). Functions of clinics differ from country to

country and their sizes. Clinics are places where medical, care as well as advice about the disease condition and referrals to the next level are provided.

Table 7: Functions of health facilities

Facilities	Functions
Hospitals	<ul style="list-style-type: none"> • Deliver medical, nursing, and related health care services • Have organised professional staff • Offer varying ranges of acute, convalescent, and terminal care • Link with other services • Provide direct clinical services to individuals and the community (WHO, 2016)
Health centres	<ul style="list-style-type: none"> • Provide comprehensive health care services • Offer needs-tailored specific services • Carry out a range of promotive, curative, and rehabilitative activities • Provide social welfare, education, environmental, and occupational health services • Support and strengthen local primary health care • Integrate primary health care programmes to optimise resources
Clinics	<ul style="list-style-type: none"> • Provide promotive, preventive, and rehabilitative services • Offer primary and curative services • Support community-based health care activities • Provide outreach services • Refer patients to the next level
	National Referral Policy (2013) Kabongo, 2015

Health policy refers to decisions, plans, and actions that are undertaken to achieve specific health care goals in a society. It defines a vision for the future which helps to establish targets and points of reference for the short and medium term. Health policy relates to how to maintain and improve the health status of the population. An important goal of any national health policy is to improve the health and well-being of the citizens of the country.

Policies and procedures are designed to influence and determine all major decisions, actions, and activities that take place in their defined boundaries. Procedures are the specific methods employed to express policies in action. It is thus important to implement guidelines or policies for direction. It is also imperative that policies are developed, communicated, managed, updated, and enforced. Health care system policies, guidelines, and operational procedures ensure successful implementation of programmes.

Concluding statement on the contextual framework

The study was contextual and the outcomes of the guidelines were successful. There were active interactions between the facilitator (researcher) and recipients. The participants developed knowledge, skills, and values from first-hand experiences. There was rigorous engagement to ensure an awakening of self-awareness. The recipients had an opportunity to take initiative, make decisions, and learn from reality. For this study, it was a support system for applying knowledge and conceptual understanding to the real-world problems or situations where the agent directed learning. This educational programme was based on knowledge, activities, and reflection.

The activities were conducted in a context-specific environment. The findings of the study revealed a lack of experience and skills of the health care professionals at the health facilities pertaining to the management of FAS. In this study, the two hospitals, namely the Katutura State Hospital as a referral hospital and the Windhoek Central Hospital as a national referral hospital were the main domains. Those hospitals were referral and specialised hospitals of the country. The guidelines offered the health care professionals an opportunity to better understand FAS in their working environment. It was important to build the capacity of those health care professionals to manage FAS at those and other facilities.

The dynamics involved in the management of FAS aimed at providing quality care to the patients that took place in the realm of a professional ethical and legal framework. The empowerment of the health care professionals with knowledge, values, and skills would facilitate the proper management of FAS. They would utilise the developed guidelines to apply appropriate strategies in terms of managing FAS.

4.2.4 Dynamics

Dynamics are the source of energy to discharge an activity. It is the cohesive team effort to attain desired goals. In the health care system, dynamics play a critical role. It is important to cultivate positive dynamics among the health care professionals to effectively respond to the ever-changing health systems (Fernald & Duclos, 2005). In this study, the health care professionals expressed a lack of knowledge to manage FAS. Therefore, knowledge in any given situation is regarded as a tool for further development.

Knowledge is the appropriate collection of information, such that its intent is to be useful. Knowledge is useful when it is integrated to infer further knowledge. People who understand knowledge can undertake useful actions because they can synthesise new knowledge from what is already known. Understanding can build on currently held information, knowledge, and understanding.

The health care professionals need the knowledge and understanding to effectively provide quality care to the patients. Once the health care providers are empowered with knowledge, they will be able to manage FAS at the various levels of the health care system. This will assist with a comprehensive approach and the health care providers will also be knowledgeable about FAS (May *et al.*, 2004). Patients' expectations should be recognised by highly qualified professionals who provide health care (Asnani *et al.*, 2014).

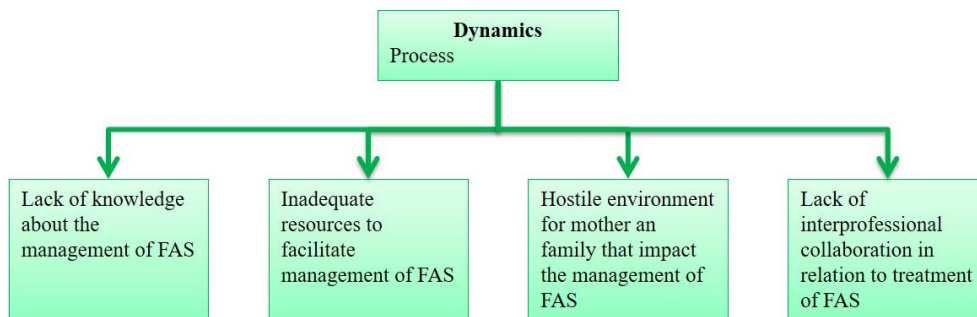


Figure 7: Dynamics

Figure 7 indicates forces or dynamics that stifle the accomplishment of the activity. The underlying forces stimulate the interactive facilitation of the context-specific process in the implementation of the guidelines developed for assisting health care professionals in this specific task. Dynamics are forces that cause action, effects, or changes to doing something. It is a branch that impacts of motions of positive change (Matthews, 2007).

Table 8: Dynamics (interactive facilitation)

Aspects	Descriptions
Lack of knowledge about the management of FAS	<ul style="list-style-type: none"> • Dynamics are the source of energy • Forces can stimulate the process of development, implementation, and evaluation of the guidelines • It was important to employ a cohesive team effort to obtain the desired goals • Health professionals will synthesise new knowledge into their existing knowledge base • Health care will become knowledgeable about the dynamics of FAS (May <i>et al.</i>, 2004)
Inadequate resources to facilitate the management of FAS (human resources)	<ul style="list-style-type: none"> • Shortage of staff in the health care system stifles proper care of patients • Staff complement with competencies create mutual trust, commit, and dedication (Pellegrino, 2000) • Patients expect to be cared for by highly qualified professionals (Asnani <i>et al.</i>, 2004) • Various resources should meet the needs of the population being served (WHO, 2000) • A thorough understanding of human resources is required (Diallo <i>et al.</i>, 2003) • Limited resources • Effective and efficient service delivery (Ham, 2003)
IEC	<ul style="list-style-type: none"> • IEC combine strategies, approaches, and methods to empower individuals, families, and communities • People make decisions and modify behaviour in

Aspects	Descriptions
	<p>social conditions</p> <ul style="list-style-type: none"> • IEC raise awareness and improve health knowledge
Unconducive environment (hostile)	<ul style="list-style-type: none"> • Women return to their own environment • It is mostly an impoverished and disempowered situation and the women continue to drink (Campbell & Mackay, 2007) • Mothers have little or no knowledge about the impact of alcohol • Influences on maternal drinking are complex • There are biological, familial, social, and psychological contributing factors (Hudges, 2002) • Mothers face multiple factors, such as poor education and a poor socioeconomic environment (De Waal, 2010)
Lack of interprofessional collaboration	<ul style="list-style-type: none"> • Effective working relationships among health practitioners, patients, families, and communities • Health care professionals of different professional backgrounds provide comprehensive services (Giger, 2016) • These are benefits to interprofessional teams (Nolte & Tremblay, 2005)
Competencies	<ul style="list-style-type: none"> • Concerns about quality and safety of health care delivery that continue to mount, and no health profession could address the deficiencies alone. (Bayten, 2001) • Health care professionals need competency-based training • The deficits in the health care system will be addressed • Trained health care professionals would deliver quality services • Patient satisfaction and needs are addressed

Globally in health care systems, there is increased attention being focus on human resource management. Besides physical and consumable resources, human resources play a critical role. There is a need to strike a balance between human resources and physical resources with an appropriate mix to meet the needs of the population being served (WHO, 2000). Human resources in a health care context can be defined as the different kinds of clinical and non-clinical staff members responsible for public and individual health interventions.

The performance and benefits the system delivers depend largely on the knowledge, skills, and motivation of the individuals who are responsible for delivering health services. The variation of size, distribution, and composition in the health care workforce of a country is of great concern. Health care professionals leave their work for better conditions, especially in the developing countries, such as Namibia. For health care professionals, the appeal of promotion also serves as an incentive to further their education. This situation accelerates an exodus of the needed health care professionals (Diallo *et al.*, 2003).

Since health care professionals ultimately deliver all health care to people, a strong understanding of human resource management issues is required to ensure the success of any health care system. Human resources remain a challenge in any given country, thus vigorous attention is needed, especially in cases like the management of FAS. Human resource management is the management of the workforce in an organisation. The institution has the responsibility to attract, select, train, assess, reward, and retain the workforce. There is also a need for overseeing organisational leadership and ensuring compliance with employment and labour laws (Ulrich,

2006). Human resources should possess a wide range of abilities, talents, appropriate, attitudes, competencies, and qualifications.

IEC combine strategies, approaches, and methods that enable people (individuals), families, as well as groups and communities to play active roles in achieving, protecting, and sustaining their own health. Embodied in IEC is the process of learning that empowers people to make decisions, modify behaviour, and change social conditions. It is of cardinal importance to consider the cultural, economic, and environmental conditions. Channels of communication include interpersonal communication, group discussions, mass media, counselling, TV, printed media, leaflets, brochures, posters, as well community meetings (Heimann *et al.*, 1999). The frequent exposure and access to clear, consistent messages from credible sources raise awareness and improve knowledge of the specific aspects of health (Elmendorf *et al.*, 2005).

In this study, the health care professionals stated the limited access to resources, such as IEC material to educate the patients. The health professionals were responsible for informing and educating the patients about FAS. There should be sufficient resources to support the educational process.

4.2.4.1 Lack of interprofessional collaboration

Interprofessional collaboration is the process of developing and maintaining effective interprofessional working relationships among health practitioners, patients, families, and communities to enable optimal health outcomes. Collaboration practice in health care occurs “when multiple health workers from different professional backgrounds provide comprehensive services to patients, their families, caregivers and community” (Giger, 2016).

Interprofessional teams from different health care disciplines work collaboratively towards common goals to meet the needs of the patient population. The team members meet the needs of patients and the population. The team members' work is based on their scope of practice. They share information and support one another's work. They also coordinate processes and interventions to provide many services. The optimisation of utilising human resources has been a constant theme in research over the past decades. It is clear that there are benefits to the collaboration of interprofessional teams (Nolte, 2005).

4.2.4.2 Competencies

Concerns about quality and safety of health care delivery are continuing to mount, and no single health profession could address the deficiencies alone. (Batten, 2014). It is of utmost importance that the health care professionals are trained in a way that suits the needs / demands of the recipients of the service. It came out clearly that the health care professionals included in the study lacked competency. Application of relationship-building values and the principles of team dynamics would assist with performing effectively in different team roles to plan and deliver safe, timely, efficient, effective, as well as equitable health care.

4.2.4.3 Unconducive environment

The children of these parents have been closely associated with the developmental problems that include inconsistent discipline, irritable explosive discipline, poor nutrition, and rigid discipline. As the baby with FAS matures and grows, the picture does not get any brighter. "Socially they show a lack of stranger anxiety, poor attention and hyperactivity" (Zevenbergen & Ferraro, 2001).

Concluding statement about dynamics

The dynamics indicate forces that stimulate resources to change. Furthermore, the agent as well as recipient and framework / context drive these forces in the implementation of the guidelines. This action will build the capacity of users with skills, knowledge, appropriate attitude, and values to carry out their duties effectively. The health care professional's role should be clarified. The agent should facilitate the accomplishment of the set goals. The management of FAS will be approach comprehensively. The guidelines assist with a better understanding of the management of FAS.

From the experiences of the health care professionals, it was clear that they understood their needs better than anybody else. That could only happen when they were empowered. It was equally important they had the confidence once the unique position of them had been strengthened with knowledge and skills. In this study, the health care professionals defined their needs and actions to meet the requirements for the specific service delivery.

4.2.5 Procedure

The learning process is fundamental to training. It was therefore vital that the researcher had an appropriate understanding of the process to assess the most effective approach to the given situation. Participants were involved in defining or refining their roles. The content focused on real problems that participants were facing.

Guidelines promote the development of caring for patients and equip those responsible for the challenges of a complex and rapidly changing medical world. The

guidelines are founded on shared values, actions, and commitment to addressing the needs of individual health care workers.

Policies provide direction for course of action and guidelines represent the factors that should be considered when developing, implementing, and evaluating a guideline. Feedback and reflection are two basic teaching methods used in clinical settings.

In the context of this study, the themes discussed in Chapter 3 were elaborated on. Procedures are referred as techniques or approaches applied in the performance of activities being carried out. The procedure followed, specifically in this study, was guidelines designed to equip the health care professionals with knowledge and skills.

Gouran and Hirokawa (1996) explain that decision-making groups appear in a broad range of medical and other areas. The aim is to synergistically combine individual expertise into optimised decisions. Thus, it is of pivotal importance how individual group members integrate their knowledge, opinions, and preferences into a common group decision.

Concluding statement about procedure

The study navigated the way of enabling the researcher to incorporate aspects of importance in the development of the guidelines. The researcher demonstrated effective communication between him and the recipients. He was mindful to take cognisance of good relationship with experts, thus enhancing the positive outcomes of the envisioned aim were ensured. The success of the guidelines depended on the kind and mutual understanding of the two parties involved.

The procedure will enhance health care professionals' knowledge and skills to manage FAS. This process affords the health care professionals an opportunity for the health care workers to improve their scope of practice. They will use this guideline to improve quality of health care for the clients, hence the implementation of these guidelines is of utmost importance.

4.2.6 Terminus

Terminus is the endpoint of an activity. It is about how an activity has been accomplished and the results completed successfully (Dickoff *et al.*, 1968). It was envisaged that guidelines would enlighten the health care professionals to manage FAS. In this study, the aim of the guidelines was based in the essence of professional growth of the health care professionals. They would be empowered with the knowledge and skills to keep up to date with the latest information. These knowledge and skills would provide them with clinical “knowhow” in their professional duties.

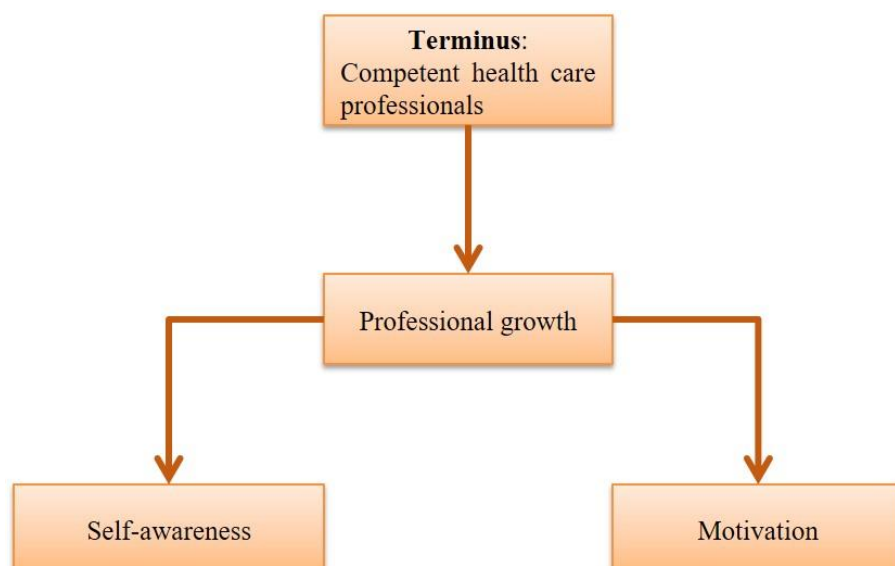


Figure 8: Terminus: Knowledgeable health care professionals

Competent health care professionals will share and transmit the knowledge and skills gained to their colleagues to improve quality care. Intrinsic motivation is essential to wellbeing because it enables an individual to fulfil three innate psychological needs. These needs include the need for competence, autonomy, and relatedness and form the basis of the self-determination theory (SDT) (Ryan & Deci, 1991).

Health care professionals need to be valued in an environment that supports professional development. Studies conducted by researchers and experts have revealed that health professionals should have specific skills to be responsive to the patients' needs (Greiner & Knebel, 2003).

Health professionals must engage in continual dialogue with patients and caregivers, guide, and support family members, and recognise their contributions towards health outcomes. They should also respect the patients' views, as well as provide timely and tailored expert opinion. It is required of the health care professionals to communicate with the patients openly when they are sharing information. The health professionals will better cope with the emotional, values, and life issues of the patients once they have been enabled to.

Terminus refers to finding out the effectiveness of guidelines after it has been implemented. The objectives of terminal evaluation are to determine the degree to which desired benefits and goals has been achieved. It provides feedback from the trainees and supervisors about the outcomes of training and measures how appropriate the training has been in changing behaviour of participants in real-life situations. Dickoff *et al.* (1968) explain that accomplishment of an activity is the terminus. It is also the result of the outcomes of the educational programme. The

health care workers will be able to communicate their knowledge and skills and apply them in their work settings.

The purpose of the guidelines was to equip the health care professionals in the following aspects: Self-awareness, motivation, knowledge, and skills.

4.2.6.1 Self-awareness

Self-awareness is having a clear perception of one's personality; including strengths, weaknesses, thoughts, beliefs, motivation, and emotions. Self-awareness allows one to understand other people, how they perceive you, your attitude, and your responses to them. People who are self-aware can make changes in their thoughts and interpretations. Self-awareness is an attribute of emotional intelligence, which is an important factor in achieving success. Creating self-awareness allows one to focus on one's attention, emotions, reactions, personality, and behaviour to make changes.

In health care, it is important to address and promote individual self-awareness, because it is important for personal and professional growth to successfully manage FAS (Gessler & Ferron, 2012). The researcher utilised these concepts to interact with the health professionals to develop the educational tool (guidelines) for them. The health professionals capitalised their inner thoughts to guide or direct the researcher to accomplish the set goals.

4.2.6.2 Motivation

Motivation encompasses beliefs, perceptions, values, interests, and actions that are closely related. Motivation refers to the reasons underlying behaviour. It is "the attribute that moves us to do or not to do something" (Broussard & Garrison, 2004).

The developed guidelines will support the health care professionals with providing quality health care to their patients.

4.2.6.3 Professional growth

Health workers should provide quality care and meet their communities ever changing health needs. It ensures continuing competence, extends knowledge and skills to new responsibilities and changing roles, and increase personal and professional effectiveness. CPD content should be evidence-based and relevant to the practice (Karle, 2008). Desired learning outcomes must be communicated to the target audience (Giri *et al.*, 2012). The key components of continuing competence programmes are: Determining the purpose of the programme, defining competence, developing assessment tools, the benefits of the education, as well as communication (Campbell & Mackay, 2001).

4.2.6.4 Knowledge and skills

Quality improvement requires a different approach that is fact-based learning and needs new knowledge and skills to put into practice. A strong sense of professionalism and commitment should motivate health care professionals, and possess the required qualifications. It is also important that they are good listeners, communicators, and teachers in relation to the relevant health issues. Health care professionals are expected to play an active role in knowledge acquisition, as well as interacting with patients, colleagues, and families.

Table 9: Knowledgeable health care professionals

Aspects	Description
Self-awareness	<ul style="list-style-type: none">• Personal and professional growth for the success of quality patient care (Gessler & Ferron, 2012)• Clear perception of one's personality; including strengths, weaknesses, thoughts, beliefs, motivation, and emotions
Motivation	<ul style="list-style-type: none">• Attribute to do something• Intrinsic motivation energises and sustains volitional action• Reinforcement contingencies govern extrinsic motivation• Active participation of health care professionals• Researcher ensures interest (Printrich & Sinatra, 2003)• Guidelines support health care professionals in delivery of quality health care
Professional growth	<ul style="list-style-type: none">• Update and enhance professional skills, knowledge, and attitude of health care professionals• CPD content should be evidence-based (Karle, 2008)• Transfer to clinical skills for effectiveness (Khan & Coomarasamy, 2006)• Patient-centred team-based care is reinforced (Pardue, 2013)
Knowledge and skills	<ul style="list-style-type: none">• Maximise the benefits and minimise risks involved in technical care• Pay attention to psychosocial aspects for coping mechanisms that relates to interpersonal care

These FAS guidelines are intended to enable health care professionals to manage FAS. They will be competent to apply appropriate knowledge in the management of FAS. The health care professionals will be able to manage the challenges of the ever-increasing alcohol impact on pregnant women. These guidelines for health care

professionals primarily enable them to provide high quality care to women from conception to birth, during the postnatal period, as well as their infants.

The health care that professionals are providing will apply scientific principles of a public health approach and enable women to make healthy choices (WHO, 2014). The researcher addressed the competencies of the health care professionals. Health care professionals have a pivotal role to play in quality care of patients born with FAS. The guidelines empowered the health care professionals with an improved understanding of FAS, improved professional preparedness to care for these patients, consensus among the various disciplines, and mobilised resources related to prevalence of alcohol effects on pregnancy (Rush & Thase, 2002).

Concluding relation statement about the terminus

The health settings should provide a conducive environment for health care professionals' growth and their professional values, competence, and relatedness. In-service training must be a continual process of staff development. This process will equip the health care professionals for the benefit of the patients.

4.3 SUMMARY

This chapter describes the conceptual framework that was based on survey concepts as listed by Dickoff *et al.* (1968). The list comprises the agent, recipients, context, procedure, dynamics, and terminus. In this study, the researcher was the agent who developed the guidelines for health care professionals. Those health care professionals were from the Katutura State Hospital and the Windhoek Central Hospital who were working in the maternity sections. The guidelines were based on experiences of health care professionals who shared their opinions and feelings.

The health care professionals revealed their challenges related to the phenomenon under investigation. The dynamics of development of the guidelines entailed a real-world perspective of the health care professionals. Those guidelines empowered the health care professionals and equipped them with knowledge and skills. The next chapter describes the development and implementation of the guidelines based on the theoretical framework in this chapter.

CHAPTER 5

GUIDELINES FOR HEALTH PROFESSIONALS REGARDING THE MANAGEMENT OF FOETAL ALCOHOL SYNDROME (FAS) AT THE HEALTH FACILITIES IN NAMIBIA

5.1 INTRODUCTION

Chapter 4 describes the conceptual framework. This conceptual framework was used to develop the guidelines for health care professionals in Namibia. The guidelines were divided into four phases that were a situation analysis, exploration, design development, and evaluation (Chapter 2). The urgency and origin of the guidelines for the health care professionals emerged from the results of the situation analysis. Literature supported the study findings. There are other evidences, such as empirical and clinical scientific proof that showed prenatal exposure to alcohol caused damage to the developing foetus. FAS is commonly cited as the leading preventable cause of birth defects and disabilities (Kuczmarski, 2002). These guidelines discussed various approaches to foetal alcohol (FAS) along with foetal alcohol spectrum disorders. FAS are a serious public health and social concern.

5.2 DEVELOPMENT OF THE GUIDELINES

The aim of the study was to develop the guidelines for health professionals to facilitate the management of FAS in the context of health facilities in Namibia. This process was executed in four phases, namely a situational analysis (Phase 1) during which four themes and 12 sub-themes were identified. In the first theme, participants expressed their lack of knowledge regarding the management of FAS due to a lack of comprehensive policies and guidelines that led to an inadequate understanding of the

impact of FAS on the mother and family, as well as to the community in general. Secondly, one participant revealed that they experienced a lack of resources to facilitate the management of FAS. The problem arose due to inadequate or unavailable educational information, media for sharing information; inadequate space for health education, and a lack of staff development and training regarding FAS. The third one illustrated an uncondusive environment for mothers and families that impacted the management of FAS as result of limitations in knowledge of the mother regarding FAS. There was also inadequate support to the parents and families. In the last, one the participants revealed that there was a lack of interprofessional collaboration causing poor communication, lack of motivation and teamwork among health professionals, which was a major problem that delayed the speedy management of FAS.

The findings from Phase 1 served as basis of the development of the guidelines, which were conceptualised in Phase 2. using the Practice Theory. The conceptual findings were used as the basis for developing the guidelines for health care professionals, which was done in Phase 3. In Phase 4, the selected health professionals with expertise in the field evaluated the guidelines.

5.3 STRUCTURE OF THE GUIDELINES

5.3.1 Name of the guidelines

Foetal Alcohol Syndrome (FAS) guidelines for health care professionals to manage FAS at the Namibian public health facilities.

5.3.2 Aim

The aim of the guidelines is to provide standardised management guidelines for FAS. These guidelines will ensure consistency in assessment, diagnosis, management, and treatment of FAS for clinicians and other service providers in line with their scope of practice as stipulated in the Acts (HPCNA) at all levels or health facilities.

5.3.3 Objectives

The objectives of the guidelines are to:

- empower the health professionals with the basic aspects of FAS and provide evidence-based technical advice to health care professionals for management of FAS.
- promote prevention strategies to reduce FAS among women of childbearing age and define FAS and FAE for appropriate management of the condition.
- use universal management tools for FAS to identify early at-risk infants for early intervention programmes.
- assist health care professionals to recognise the disorders associated with foetal alcohol exposure and prevent secondary disabilities through early and accurate diagnosis (Streissguth, 1997).
- prevent future FAS children in affected families by offering interventions to families to abstain from alcohol use when planning or during pregnancy.

5.3.4 Target population

The health care professionals are the recipients of these guidelines for the management of FAS. Furthermore, the mothers who have given birth to children

with FAS, their families, and communities are ultimate beneficiaries. In this study, health care professionals (recipients) were from different professional backgrounds. They included medical doctors, nurses, social workers, psychologists, occupational therapists, physiotherapists, and speech therapists. These cadres are working at the health facilities of Windhoek, Namibia.

5.3.5 Recipients

Recipients in this study were the health care professionals. They were the frontline workers who needed the knowledge and skills to improve their competencies to provide quality health care. The recipients for this study were from different professional backgrounds. Those health care professionals at the health facilities had to deliver effective and efficient quality health care. The recipients were composed of medical doctors, nurses, social workers, psychologist, occupational therapist, physiotherapists, and speech therapists.

5.3.6 Beneficence

Beneficence is a concept in research ethics which states that researchers should have the welfare of research participants as a goal in any research project. It includes courtesy, kindness, charity, and all actions intended to benefit other people (Hawker, 2002).

The researcher adhered to the principles of beneficence to honour the safety of the participants throughout the study process. It was the sole responsibility of the researcher to follow the ethical conduct of the moral directives.

5.3.7 Context of the guidelines

In the study, the health facilities in Namibia were the context where guideline development was conducted. In this specific case, the context was the health care facilities that were providing health care services to patients in the domain of MoHSS. The guidelines would serve as an instrument for the management of FAS at referral, intermediate, and district hospitals, as well as at health centres and clinics. In the Namibian context, health care services are delivered at various levels.

a. National referral hospital

Health system structures differ from country to country. In specialised health care services, national referral hospitals provide highly specialised services and conduct consultations. This level is responsible for setting of standards and norms, and serves as a training institution for student interns, medical students, radiographers, and nurses.

b. Intermediate hospital (Class 1 and 2)

The intermediate hospitals provide curative, preventative, and rehabilitative care. These hospitals also provide support to district hospitals. District hospitals ensure and serve as a referral hub for health centres and clinics, while they are also taking part in operational research.

c. District hospitals

District hospitals ensure and serve as a referral hub for health centres, clinics, and participating in operational research.

d. Health centre

A health centre refers patients to the next level and provides promotive, preventative, and rehabilitative services to the communities. The health centres allow for conducting operational research, as well as preparing of budgets and plans.

e. Clinics

The clinics provide all other services at the health centre level and carry out supervisory support services to community-based health care activities. There are universal functions at all levels: Provide health promotion services, identify training needs, and conduct in-service training. Health facilities should collect, analyse, utilise, and report relevant health data. Equally important is the planning and budget preparation for the needs at the facilities. The health facilities role in prevention and control of FAS is critical. The PHC approach starts at the lowest level, especially for health promotion and behavioural communication efforts. Primary health care providers need to acquire knowledge and skills. They should be able to recognise signs and symptoms of FAS. The clinicians, nurses, and other health care professionals should also be trained to interrogate prenatal alcohol consumption (Astley, 2004).

5.3.8 Facilitator of the guidelines

The facilitator of the guidelines would be the researcher who developed the guidelines in collaboration with the supervisors of the study. He played a pivotal role in training the health professionals regarding general aspects of FAS and management thereof.

5.3.9 Management of FAS dynamics

The medical care for the child with FAS or FASD requires treatment of associated defects and intervention for potential cognitive behavioural abnormalities. Some children with FAS or FASD present with clinically significant impulsivity, hyperactivity, and oppositional behaviour. Medication may assist with these symptoms. However, successful use of medication may depend on the individual child's history and presentation.

This intervention should be accomplished with public health approaches. Selective prevention and intervention strategies are specifically intended to target individuals, such as women of reproductive age who drink alcohol and have the potential to become pregnant. This step aims at screening for alcohol use and treating alcohol dependence (Barker *et al.*, 2011).

5.4 GUIDELINES REGARDING GENERAL KNOWLEDGE FOR HEALTH PROFESSIONALS TO MANAGE FOETAL ALOCHOL SYNDROME (FAS) AT THE HEALTH FACILITIES IN NAMIBIA

5.4.1 What is FAS?

It is regarded as a congenital syndrome associated with excessive consumption of alcohol by the mother during pregnancy, and characterised by retardation of mental development and of physical growth, particularly of the skull and face.

5.4.2 Causes of FAS

When a pregnant women drinks alcohol, some of that alcohol easily passes across the placenta to the foetus. The body of a developing foetus doesn't process alcohol the same way as the body of an adult does. The alcohol is more concentrated in the foetus, and can prevent enough nutrition and oxygen from getting to the foetus' vital organs.

Table 10: Types of FAS

<p>FAS with confirmed maternal alcohol exposure</p> <ul style="list-style-type: none">• Patients in this category have the classic triad of growth retardation, characteristic facial dysmorphism and neurodevelopment abnormalities. This is often defined as full-blown FAS.
<p>FAS without confirmed maternal alcohol exposure</p> <ul style="list-style-type: none">• If the triad described in category 1 is present, a diagnosis is possible even without confirmed maternal drinking.
<p>Partial FAS with confirmed maternal alcohol exposure</p> <ul style="list-style-type: none">• Such patients may have only some of the characteristic facial anomalies plus growth retardation or central nervous system neurodevelopment abnormalities or behavioural / cognitive abnormalities.

FAS with confirmed maternal alcohol exposure and alcohol-related birth defects

- Patients in this category will have some congenital anomalies as result of alcohol toxicity.

FAS with confirmed maternal alcohol exposure and alcohol-related neurodevelopment disorder

- Patients in this category will have evidence of central nervous system neurodevelopment abnormalities or a complex pattern of behavioural / cognitive abnormalities, or both, but not necessarily any obvious physical changes.

5.4.3 Pathophysiology of FAS

During pregnancy, the growing baby is connected to the mother through the placenta. It allows gas and nutrient exchange between the mother and the baby. It also removes the excreted waste from the baby and puts it in the mother's blood. In essence, anything the mother puts into her body the baby is also receiving. This includes any food, medication, and alcohol the mother is consuming during her pregnancy.

It is also important to note that a foetus metabolises alcohol slower than adults. This means the blood alcohol concentration (BAC) in the baby's bloodstream will be higher than the BAC in the bloodstream of the expecting mother; even if she only consumes a glass of wine, for example. Alcohol interferes with the delivery of oxygen and nutrients to a growing baby. This can affect many different parts of the baby's body (Centers for Disease Control and Prevention, 2010).

During pregnancy, there are certain lengths of time known as sensitive periods. These sensitive periods are different for the many organs and systems of the body. During these times, the baby is more susceptible to damage that may occur.

Alcohol, during these sensitive periods, can interfere with the growth and development of certain organs. For example, the central nervous system (the brain and spinal cord) has a sensitive period that stretches from week 3 to week 20. Alcohol consumption, during this crucial time can lead to problems involving the central nervous system. In Figure 9 and Figure 10, one can see the week to week growth of the foetus. The black lines mark the sensitive periods for the different organs / systems of the baby's body.

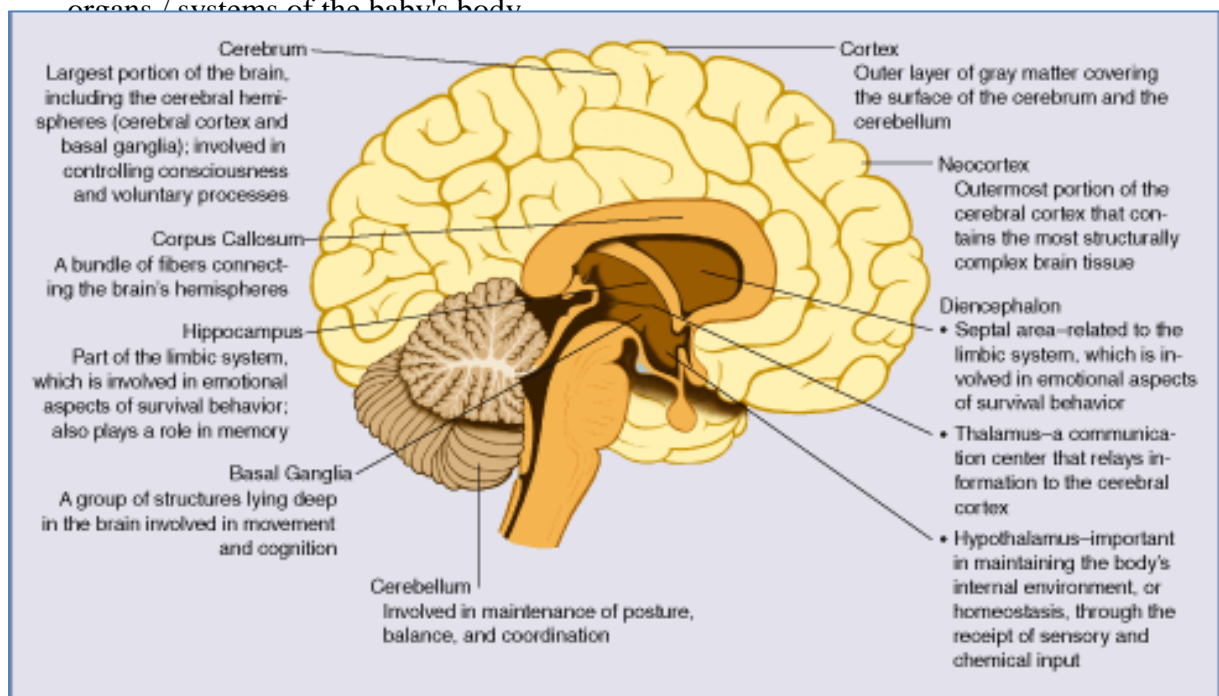


Figure 9: Brain structure

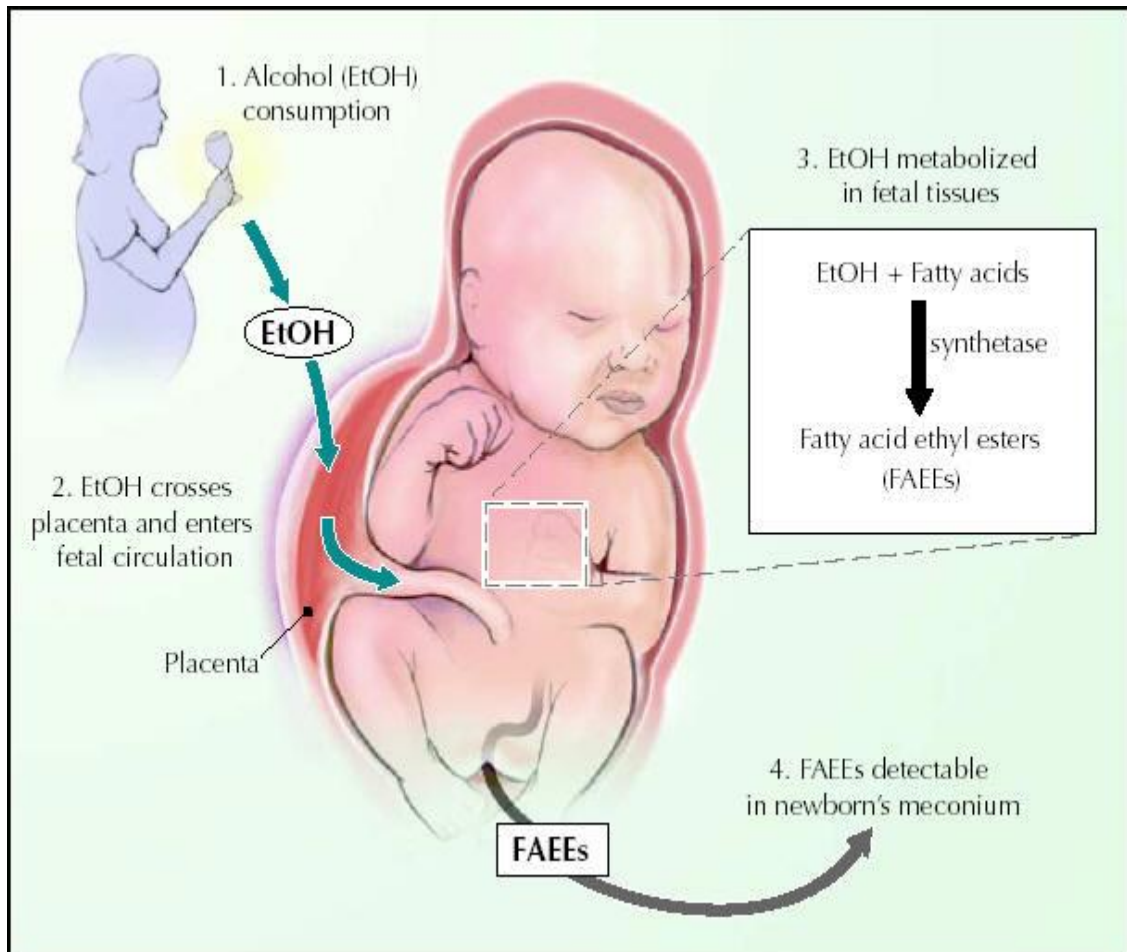


Figure 10: Neonatal Meconium assay for fatty acid ethyl esters (FAEEs)

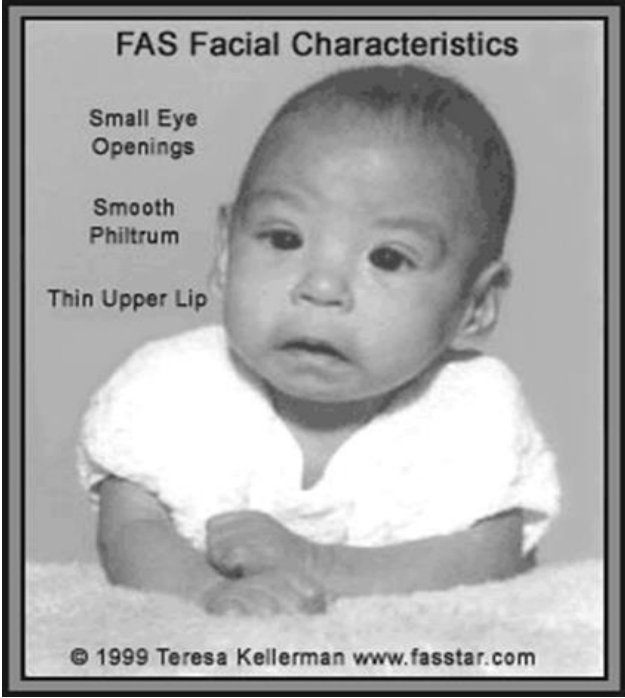
Source: JAMC, 25 Nov 2003, 169 (11), 1184

5.4.4 Symptoms of foetal alcohol syndrome

If a mother consumes alcohol during pregnancy, Foetal Alcohol Syndrome most certainly will develop. Foetal alcohol syndrome covers a wide range of problems, there are many possible symptoms. The severity of these symptoms ranges from mild to severe, and can include a small head, a smooth ridge between the upper lip and nose, small and wide-set eyes, a very thin upper lip, other abnormal facial features, below average height and weight, hyperactivity, a lack of focus, poor coordination, delayed development; as well as problems in thinking, speech,

movement, social skills, poor judgment. The clever anatomical systems of the human body can be affected, namely integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, immune, respiratory, as well as the digestive, urinary, and reproductive systems.

Table 11: FAS facial characteristics

	<p>Babies diagnosed with foetal alcohol syndrome may have some but not all the following physiological characteristics:</p> <ul style="list-style-type: none"> • Low birth weight • Small head circumference • Small, widely spaced eyes • Flat midface • Short, upturned nose • Smooth, wide philtrum • Thin upper lip <p>Note: Facial characteristics may not be as apparent immediately after birth or during adolescence or adulthood as they are between the ages of two and ten. Facial characteristics may not be present at all if the mother did not drink during the brief period that the midface was forming - around the 20th day of pregnancy.</p>
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Source: <http://www.come-over.to/FAS/faschar.htm> 12/7/2003 (Department of Environmental and Public Health, University of Wisconsin at Eau Claire, 2003-2004)

5.4.5 Diagnostic process of FAS

The diagnostic process consists of screening, referral, physical examination, differential diagnosis, neuro-behavioural assessment, treatment, and follow-ups.

5.4.6 Basic foetal alcohol syndrome diagnosis

The earlier the diagnosis, the better the outcomes. A physical examination of the baby may show a heart murmur or other heart problems. As the baby matures, there may be other signs that help confirm the diagnosis.

These include:

- slow rate of growth, abnormal facial features or bone growth, hearing and vision problems, slow language acquisition, small head size, and poor coordination.

5.4.7 Foetal alcohol syndrome diagnosis

Foetal alcohol spectrum disorders (FASDs) are a group of conditions that can occur in a person whose mother drank alcohol during pregnancy. These effects can range from mild to severe. They can affect each person in different ways and can include physical problems and problems with behaviour and learning. The term FASDs is not intended as a clinical diagnosis.

5.4.8 Guidelines for diagnosis of FAS

Health care professionals look for the following signs and symptoms when diagnosing FAS.

5.4.8.1 Abnormal facial features

A person with FAS has three distinct facial features:

- Smooth ridge between the nose and upper lip (smooth philtrum)
- Thin upper lip
- Short distance between the inner and outer corners of the eyes, giving the eyes a wide-spaced appearance.

5.4.8.2 Growth problems

Children with FAS have lower than normal (at or below the 10th percentile) height and / or weight. These growth issues might occur even before birth. For some children with FAS, growth problems resolve themselves early in life.

5.4.8.3 Central nervous system problems

The central nervous system is made up of the brain and spinal cord. It controls all the workings of the body. When something goes wrong with a part of the nervous system, a person can have trouble moving, speaking, or learning. He or she can also have problems with memory, senses, or social skills. There are three categories of central nervous system problems:

Structural: FAS can cause differences in the structure of the brain. Signs of structural differences are:

- Smaller-than-normal head size for the person's overall height and weight (at or below the 10th percentile).
- Significant changes in the structure of the brain as seen on brain scans such as magnetic resonance imaging (MRI) or computerised tomography (CT) scans.

Neurological: There are problems with the nervous system that cannot be linked to another cause. The examples include poor coordination, poor muscle control, and problems with sucking as a baby.

Functional: The person's ability to function is well below what is expected at his or her age, schooling, or circumstances. To be diagnosed with FAS, a person must have:

cognitive deficits (e.g., low IQ), or significant developmental delay in children who are too young for an IQ assessment, as well as

Problems in at least three of the following areas:

- **Cognitive deficits (e.g., low IQ) or developmental delays**

These symptoms cause specific learning disabilities (especially in mathematics), poor grades at school, performance differences between verbal and nonverbal skills, and slowed movements or reactions.

- **Executive functioning deficits**

These deficits involve the thinking processes that help a person manage life tasks. Such deficits include poor organisation and planning, lack of inhibition, difficulty grasping cause and effect, difficulty following multistep directions, difficulty doing things in a new way or thinking of things in a new way, poor judgment, and an inability to apply knowledge to new situations.

- a. **Motor functioning delays**

These delays affect how a person controls his or her muscles. These examples include delay in walking (gross motor skills), difficulty writing or drawing (fine motor skills), clumsiness, balance problems, tremors, difficulty coordinating hands and fingers (dexterity), and poor sucking in babies.

- b. **Attention problems or hyperactivity**

A child with these problems might be described as “busy”, overly active, inattentive, easily distracted, or having difficulty calming down, completing tasks, or moving

from one activity to the next. Parents might report that their child's attention changes from day to day (e.g. "on" and "off" days).

c. Problems with social skills

A child with social skills problems might lack a fear of strangers, be easily taken advantage of, prefer younger friends, be immature, show inappropriate sexual behaviour, and have trouble understanding how others feel.

d. Other problems

Other problems can include sensitivity to taste or touch, difficulty reading facial expressions, and difficulty responding appropriately to common parenting practices (e.g. not understanding cause-and-effect discipline).

5.4.8.4 Mother's alcohol use during pregnancy

Confirmed alcohol use during pregnancy can strengthen the case for FAS diagnosis. Confirmed absence of alcohol exposure would rule out the FAS diagnosis. It's helpful to know whether the person's mother drank alcohol during pregnancy. But confirmed alcohol use during pregnancy is not needed if the child meets the other criteria.

5.4.8.5 Medicine diagnostic criteria for foetal alcohol syndrome and alcohol-related effects

a. FAS with confirmed maternal alcohol exposure

A: Confirmed maternal alcohol exposure.

B: Evidence of a characteristic pattern of facial anomalies that includes features, such as short palpebral fissures and abnormalities in the premaxillary zone (e.g. flat upper lip, flattened philtrum, and flat midface).

C: Evidence of growth retardation in at least one of the following:

- Low birth weight for gestational age;
- Decelerating weight over time not due to nutrition; and
- Disproportional low weight-to-height ratio.

D: Evidence of central nervous system neurodevelopment abnormalities in at least one of the following:

- Decreased cranial size at birth; and
- Structural brain abnormalities (e.g. microcephaly, partial or complete agenesis of the corpus callosum, and cerebellar hypoplasia).
- Neurologic hard or soft signs (as age appropriate), such as impaired fine motor skills, neurosensory hearing loss, poor tandem gait, and poor eye-hand coordination.

b. FAS without confirmed maternal alcohol exposure

B, C, and D.

c. Partial FAS with confirmed maternal alcohol exposure

A: Confirmed maternal alcohol exposure.

B: Evidence of some components of the pattern of characteristic facial anomalies.

Either **C** or **D** or **E**.

C: Evidence of growth retardation in at least one of the following:

- Low birth weight for gestational age;
- Decelerating weight over time not due to nutrition; and
- Disproportionally low weight-to-height ratio.

D: Evidence of CNS neurodevelopment abnormalities, e.g.:

- decreased cranial size at birth;
- structural brain abnormalities (e.g. microcephaly, partial or complete agenesis of the corpus callosum, and cerebellar hypoplasia); and
- neurological hard or soft signs (as age appropriate); such as impaired fine motor skills, neurosensory hearing loss, poor tandem gait, poor eye–hand coordination.

E: Evidence of a complex pattern of behaviour or cognitive abnormalities that are inconsistent with the developmental level and cannot be explained by familial background or environment alone; e.g. learning difficulties, deficits in school performance, poor impulse control, problems in social perception, deficits in higher level receptive and expressive language, poor capacity for abstraction or metacognition, specific deficits in mathematical skills, memory problems, attention, and judgment.

- Other

e. Alcohol-related neurodevelopment disorder (ARND)

The specific congenital anomalies and malformations and dysplasia include areas (systems); such as cardiac, skeletal, renal, ovular, and auditory; and describe thoroughly in the management of FAS. The descriptions are under alcohol-related birth defects (ARBD).

Presence of A or B or both in PFAS with mother confirmed maternal exposure

A: Evidence of CNS neurodevelopmental abnormalities in any one of the following:

- decreased cranial size at birth;
- structural brain abnormalities (e.g. microcephaly, partial or complete agenesis of the corpus callosum, and cerebellar hypoplasia); and
- neurologic hard or soft signs (as age appropriate); such as impaired fine motor skills, neurosensory hearing loss, poor tandem gait, poor eye-hand coordination.

B: Evidence of a complex pattern of behaviour or cognitive abnormalities that is inconsistent with the developmental level and cannot be explained by familial background or environment alone; e.g. learning difficulties, deficits in school performance, poor impulse control, problems in social perception, deficits in higher level receptive and expressive language, poor capacity for abstraction or metacognition, specific deficits in mathematical skills, memory problems, attention, and judgment.

5.4.8.6 Multidisciplinary diagnostic team

The core team may vary according to the specific context. It requires professionals with appropriate qualifications, training, and experience in their particular discipline of practice.

- Coordinator for case management (Nurse and social workers);
- Physician specifically trained in FAS diagnosis;
- Psychologist;
- Occupational therapist;
- Speech and language therapist;
- Physiotherapist;
- Others can be child minders, councillors, mental health care workers, parents, and caregivers.

In the Namibian context, the health care professionals describe similar conditions as in the previously mentioned conditions. They describe conditions, such as:

- “Small head”;
- “Tiny child”;
- “Grandmother face”; and
- “Failing strive” during the interviews.

5.4.9 Services appropriate for affected individuals by FAS and their families

The services describe in this section are used in the developed countries regarding management of FAS.

a. Age-specific services

Basic child development informs clinicians and service providers that the abilities of any one individual change dramatically at different stages of development. Intervention research informs providers that the most effective programmes are the ones that are geared towards an individual's developmental level. There are specific "turning points" during which children demonstrate rapid and fundamental changes in their understanding of the world and in their problem-solving skills (e.g. development of object permanence or acquisition of formal operational thought). The services identified in the following sections include ones for both the child and the family, grouped broadly by developmental stage. It is recognised that many of these services span beyond a single age category with considerable overlap, especially for the family.

The clinicians and service providers follow the individuals at their different developmental stages. Interventions are geared towards individuals' developmental stages. It is important to keep in mind the rapid fundamental changes. These changes are "turning points" in understanding the child and the world surrounding him or her. This is the stage when the services span beyond age category, but overlap with the family institution.

b. Prenatal services

Significant development of all major organ systems occurs throughout gestation and it is imperative that women who drink during pregnancy are identified by the medical community as early as possible and be provided with intervention services. Findings have indicated that children born to women who stop drinking at any point during their pregnancy have better outcomes than the ones who continue to drink throughout pregnancy.

c. Services for birth to 3 years of age

The first years of life are an important time for physical, cognitive, and emotional development. Decades of research have consistently shown the benefits of early intervention for children with developmental disabilities. Clinicians working with this age group need to familiarise themselves with the state systems that service this population.

d. Services for children 3 to 6 years of age and school age

Some of the effective methods for prevention are a multicomponent approach that combines cognitive behavioural techniques with norms of clarification, education, and motivational enhancement. The interventions can be strengthened through feedback of personal risk, responsibility for control, advice to change, menu of ways to reduce drinking, an empathetic counselling style, and self-efficacy regarding reducing drinking (Miller *et al.*, 1993).

It is often during the toddler period that children with FAS will be identified and can be diagnosed. It is essential to establish FAS diagnostic centres or ensure that child evaluation centres have clinicians who are trained in the dysmorphic and other diagnostic criteria associated with prenatal exposure.

Following the families themselves, the educational system serves as the most constant service provider for individuals with FAS from early childhood to adolescence. Therefore, beginning with preschool programmes through to secondary education, generalised essential services can be delineated.

Children can receive various therapies, including physical therapy (usually most appropriate for very young children), speech and language therapy, occupational therapy, and social skills training. These last two areas are particularly helpful to children with FAS because of the visual-motor deficits and problems in social interactions they encounter.

Training parents to be effective educational advocates is essential to maximise the benefits of their child's special education and to understand their child's rights. The purposes of the are to insure access to appropriate and rehabilitation services (physical, occupational, speech, behavioural, mental health, and other related services) and to ensure that academic curricula are balanced with vocational training and skills of daily living (e.g. personal hygiene, money management, and family life education). In addition to training parents about the educational system, the preschool period, as well as elementary school years, parents need to become more acutely aware of their child's imitations. Reinforcement and updating of information learned in early parent education settings will benefit both the child and the parents. Reviewing lessons learned will help parents adjust their expectations for the child's current functioning, as well as his or her future possibilities.

As noted previously, it is important that school staff should be trained to recognise possible characteristics associated with FAS, as well as appropriate techniques for instructing students with FAS. Beyond services available through the educational system, families raising preschool and school-aged children continue to need services that promote positive family functioning. Such services might include behaviour management training, family (or child) counselling, parenting workshops that focus on the unique aspects of parenting a child with FAS, and other types of

continuing education. One service that becomes very important during these years is respite care. Such care allows a trained individual to stay with the affected child while caregivers or other family members take advantage of some time away from the child with FAS.

Respite care has been shown to significantly reduce family stress and improve family functioning (O'Connor *et al.*, 2006). Unfortunately, respite care, especially formalised and high-quality respite care, is not readily available in most communities. A clinician can help in this situation by working with the family to develop informal respite care situations, such as help from an extended family member working with the family and providing the necessary education about FAS to such a respite care provider.

e. Services for adolescents

Adolescence, and even preadolescence, is one of the major turning points in the life of an individual with FAS. His or her body is changing, cognitive abilities are changing, peer groups are changing, and community expectations are changing. Due to the confusing nature of all these changes, adolescence often is the period when behavioural and mental health problems become more pronounced. An individual might experience depression or anxiety, or both.

Foetal alcohol syndrome: Guidelines for Referral and Diagnosis struggles to cope with these changes. Increased opportunities to experience alcohol and / or drugs can lead to substance abuse problems. Families could become involved with juvenile or criminal justice systems.

It is often during adolescence that families experience high levels of stress and tension. As such, the need for individual counselling (for both child and parent), family counselling, and a strong support network become more crucial. However, this can be the exact stage at which agencies are reluctant to provide such services, especially if the FAS-related disability factor is not recognised. Because some amount of rebellion is expected during adolescence, the challenging behaviour of the teenager with FAS might be dismissed as transient. At the other end of the spectrum, the challenging behaviour of an adolescent with FAS could be so severe that it involves the criminal justice system.

Because adolescents will soon be leaving the safety and structure of the educational system, vocational and transitional services become essential during this stage. These services often represent a shift from academic skills and achievements to daily living skills, including employment skills. It is very important that these services are started

in early adolescence and not left until an individual is about to age-out of the educational system. In addition, beyond teaching the specific skills that go with a particular job, it might be necessary to explicitly teach those skills related to being a good employee (e.g. punctuality and minimised socialising). Most individuals will learn these skills through basic maturity and observational learning. Individuals with FAS often need explicit instructions, as well as lifestyle support (e.g. a job coach).

As for all adolescents, sexual behaviour often becomes a critical issue during this stage. The boundaries for appropriate interaction with the opposite sex, the subtle nature of social cues, and impulse issues are difficult for any adolescent, but more so for the adolescent with FAS. Close supervision is the first line of defence during the adolescent years. However, such supervision often conflicts with the adolescent's growing desire for independence. This must be navigated with care to avoid alienating the adolescent. Also, it is probably best to be open and explicit with the teenager with FAS concerning the issues of contraception, sexually transmitted diseases, and sexual harassment. Failure to address these issues can have serious and possibly life-threatening consequences for the affected individual, his or her family, and any children resulting from unintended pregnancies.

Their lack of executive functioning skills (i.e. poor judgment), fluid language skills, and naïve social skills make them particularly vulnerable to participating in criminal activity. However, these same deficits demand that when they do encounter the justice system, their deficits should be considered during all aspects of legal proceedings (i.e. charges, process, punishment, and rehabilitation). As such, the juvenile and criminal justice systems are major social systems in need of education regarding FAS. Special rehabilitation programmes with staff that is trained to work

with adolescents and young adults with FAS should be established. Such programmes should be created on scientifically-based research findings that evaluate practicality, as well as effectiveness.

The services address the strength-based approach and help the young person to overcome challenges during this period. These services are aimed at encouragement and acknowledgement of positive success in the school situation. The parents should follow a respite plan. The teachers should remove extraneous and distracting material. They have also to use appropriate teaching aids with the same staff members. It is extremely important to assess for frustration tolerance and adjust accordingly to minimise stress levels. This is the traditional period that needs attention. The children need help with organisational skills to cope with the daily task and activities. Equally imperative is the giving of direct instructions in thinking skills and teaching of analysing and synthesising skills.

The teaching environment should be adjusted to create a conducive atmosphere that adolescents can appreciate. Impulsivity and hyperactivity should be minimised and if medication is needed, the availability and provision must be secured. Recognising of pervasive developmental needs should be addressed because the adolescents can misunderstand changes. It is also important to consider the role of social responsiveness. The services should be able to create self-esteem to encourage the potential development of social justice.

f. Services for adults

Individuals with FAS are frequently diagnosed as children and require support throughout their lifetime (Chudley *et al.*, 2007). However, individuals without the more obvious physical features or cognitive delays may neither be diagnosed, neither receive support until adulthood (Streissguth *et al.*, 1997). FASD encompasses law, incarceration, drug dependency, and inappropriate sexual behaviour (Chudley *et al.*, 2007). Thus, the interventions for these individuals with FASD are critical to move towards achievement of success in life. There are a few evidence-based empirical interventions for adults with FASD. It is important that up-to-date interventions are applied. The individuals need adaptive skills training for becoming independent in the community. There is a lack of services for adults with FASD.

They need specialised services outside family settings. The focus should be on understanding what the caregivers require to assist the adults with FAS. The challenge is that these individuals do not have obvious features (Leenaars *et al.*, 2012). Furthermore, the demands and expectations increase, especially with independence during adulthood. Health care, social service needs, community involvement, employment, and daily living needs are concerns of the parents (Brabender & Fallon, 2013).

5.4.9.1 Treatments for foetal alcohol syndrome

No FAS child is alike. Different children may present with different symptoms or difficulties and need to be evaluated on an individual basis. Some treatments and other assistance that may be beneficial to a FAS child include corrective vision or hearing devices; plastic surgery; physical, occupational, and speech therapy;

nutrition advice; adjusted school work; social interaction; family therapy; support groups; cardiology examinations, and neurology screening.

While FAS is incurable, there are treatments for some symptoms. The earlier the diagnosis, the more effective the interventions would be. Depending on the symptoms a child with FAS exhibits, he or she may need many doctor or specialist visits. Special education and social services can help very young children. For example, speech therapists can work with toddlers to help them learn to talk.

At home: Children with FAS will benefit from a stable and loving home. They can be even more sensitive to disruptions in routine than an average child. Children with FAS are especially likely to develop problems with violence and substance abuse later in life if they are exposed to violence or abuse at home. These children do well with a regular routine, simple rules to follow, and rewards for positive behaviour.

Medication: There are no medication that specifically treats FAS. However, several medication interventions may address symptoms. Such medication includes antidepressants to treat problems with sadness and negativity; stimulants to treat lack of focus, hyperactivity, and other behavioural problems; neuroleptics to treat anxiety and aggression; and anxiety drugs to treat anxiety.

Counselling: Behavioural training may also help. For instance, friendship training teaches children social skills for interacting with their peers. Executive function training may improve skills; such as self-control, reasoning, and understanding cause and effect. Children with FAS might also need academic assistance, for example a mathematics tutor could help a child who struggles at school.

Parents and siblings might also need assistance with dealing with the challenges this condition can cause. Such assistance might include talk therapy or support groups. Parents can also receive parental training tailored to the needs of their children. Parental training teaches one how to interact with and care for one's child.

5.4.9.2 Prevention strategies for foetal alcohol syndrome

The prevention strategies include primary, secondary, and tertiary prevention. These strategies are applied in a comprehensive approach to ensure sustained care.

a. Primary prevention

In the case of FAS, this would include informing the public, particularly young people, about the dangers of drinking during pregnancy and on a broader level, addressing determinants of health regarding FAS. The education should include the adverse effects of alcohol on the foetus for all women and their partners. Female patients of childbearing age should be asked basic questions about their use of alcohol. The use of promotional materials in consulting rooms raises awareness and handouts for patients may contain information about the dangers of using alcohol during pregnancy. Mothers should be educated about the effects of alcohol on herself, and family of the unborn baby. They should be aware of and access community resources, as well as discuss and augment the access to contraceptive strategies for all women and their partners.

b. Secondary prevention

Strategies should include screening and early intervention programmes and services for pregnant women and women of childbearing age who may be at risk of having a child with FAS.

c. Tertiary prevention

Strategies should include diagnosis and programmes designed specifically for children with FAS and their caregivers, as well as treatment for women and their partners who already have one FAS child who plan to have more children. Identify women at risk and refer them for counselling and appropriate treatment, as well as provide them with health education about future pregnancies.

5.4.9.3 Behavioural and education therapy for FAS children

Behaviour and education therapies can be important parts of treatment for children with FASDs. Although there are many different types of therapy for children with developmental disabilities, only a few have been scientifically tested, specifically for children with FASDs. Behaviour and education therapies have shown to be effective for some children with FASDs:

a. Good friends

Children’s friendship training teaches individuals with an FASD child appropriate social skills. Children with FASDs often have difficulty learning subtle social skills from their own experiences; those kinds of skills are typically “learned by osmosis” on the playground, such as how to become part of a group, appropriate sharing, or dealing with teasing. This intervention uses a group approach to teach age-appropriate social skills over weekly sessions for parent and child. Sessions are organised around and toward each child who is inviting a classmate or peer to play (O’Connor *et al.*, 2006).

b. Families moving forward (FMF) programme to provide support to families who deal with challenging FASD behaviour

This intervention is most appropriate for children with severe, clinically significant behavioural problems based in part on positive behaviour support techniques. It is a feasible, low-intensity, sustained model of supportive consultation with a parent or caregiver (rather than directly with the child). The intervention lasts nine to 11 months, with at least 16 every-other-week sessions, typically lasting 90 minutes each. Services are carried out by specially trained mental health providers.

c. Mathematical interactive learning experience (MILE) programme to help with mathematics difficulties

Deficits in mathematical functioning have been reported consistently among alcohol-affected individuals. The MILE programme is designed to improve a child's mathematical knowledge and skills. Children complete six weeks of one-on-one tutoring using specifically adapted materials (e.g. vertical number line and timers) that are appropriate to their academic level. Parents also receive training about behavioural regulation techniques to optimise a child's readiness to learn (Abou, 2010).

d. Parents and children together (PACT): A neurocognitive rehabilitation programme to improve self-regulation and executive function

Building upon techniques developed from brain injury literature, this intervention happens during weekly sessions with parents and children to address and improve behaviour regulation and executive function (that is, planning, organising, and understanding other people). It uses a particularly engaging metaphor of "how does my engine run" to teach children awareness of their current behavioural circumstances and specific techniques to optimise opportunities of the current situation (Wells *et al.*, 2012).

5.4.9.4 Parent training

Children with FASDs might not respond to the usual parenting practices. Parent training has been successful in educating parents about their child's disability and about ways to teach their child many skills and help them cope with their FASD-related symptoms. Parent training can be done in groups or with individual families. Such programmes are offered by therapists or in special classes.

5.4.9.5 Recommendations for the management of FAS

The recommendations are based on certain principles, national context, and available resources.

a. Prioritising prevention

It is very critical during prevention, reduction, and during the postpartum phase to use specific interventions. The important element is applying a multidisciplinary approach with appropriate information about the risks of consuming alcohol during pregnancy.

b. Ensuring access to prevention and treatment services

The identification and management of the condition is of utmost importance. The opportunities offered to women should be valuable, affordable, and accessible. Specialised services should be an important component of the health care delivery system.

c. Respect for the autonomy of the patient

The decisions about treatment must be based on ethical principles. It is imperative to respect the privacy and confidentiality of women. Women have the right to participate in discussions about their treatment plans, as well as their foetuses. Comprehensive care provided for pregnant and breastfeeding women concentrates on the multiple needs, including child care needs, as well as comorbid mental and other medical conditions. The most appropriate services offered are comprehensive services that encompass sustained care.

In this specific case, the establishment of a clinician-patient relationship is critical. The services provided should be communicated in an appropriate manner, with respect, non-judgemental, non-stigmatising, sensitive to age, and with cultural sensitivity.

5.4.9.6 Assessment

a. Initial identification (screening and physical examination)

Initial recognition that a child or older individual with diminished developmental problems, facial malformation, and delay in growing are indicating possible maternal use of alcohol during pregnancy. Health professionals could use the four related criteria of facial malformation, growth abnormalities, neurodevelopment, and maternal alcohol use.

b. Referral

Once the professionals identified any abnormality or the combination of the problem based on the set criteria, referral to the specialist might be necessary for further assessment and for continued monitoring of changes in a child's health over time.

c. Diagnosis

- All pregnant and post-partum women should be screened for alcohol use with validated screening tools by relevant health care providers. Women at risk of heavy alcohol use should receive early briefing interventions (e.g. counselling) and abstinence should be recommended to all women during pregnancy, since a mother's continued drinking during pregnancy puts the foetus at risk of effects related to prenatal alcohol exposure. Referral of individuals for a possible FASD-related diagnosis should be made in the following situations:
- Presence of three characteristic facial features (short palpebral fissures, smooth or flattened philtrum, thin vermilion border) and evidence of significant prenatal exposure to alcohol at levels known to be associated with physical or developmental effects, or both.
- Presence of one or more facial features with growth deficits plus known or probable significant prenatal alcohol exposure.
- Individuals with learning or behavioural difficulties, or both, without physical or dysmorphic features and without known or appropriate professionals or speciality clinics should assess likely prenatal alcohol exposure by (e.g. developmental paediatrics, clinical genetics, psychiatry, and psychology) to identify and treat their problems.

5.4.9.7 Diagnosis

The diagnosis of the FAS related conditions requires the procedures that include facial dysmorphia, growth problems, central nervous system, structure of the babies, neurological problems, as well as global cognitive or intellectual deficits. These deficits may represent multiple domains of deficit (or significant developmental delay in younger children) and require a neurological look at cognitive or developmental deficits and discrepancies, maternal alcohol exposure, confirmed prenatal alcohol exposure, and unknown prenatal alcohol exposure.

5.4.9.8 Treatment and follow-up

Education of the patient and family members about features of FASD is important. The potential psychosocial tensions that might be expected to develop within the family because of the diagnosis should also be discussed. This must be done in a culturally sensitive manner using appropriate language.

5.4.9.9 Maternal alcohol history in pregnancy

Prenatal alcohol exposure requires confirmation of alcohol consumption by the mother during the index pregnancy based on reliable clinical observation, self-report, reports by a reliable source, or medical records about positive blood alcohol, alcohol treatment; or other social, legal, and medical problems related to drinking during the pregnancy.

5.5 GUIDELINES FOR MEDICAL DOCTORS

The guidelines for medical doctors comprise roles and responsibilities, management of FAS, management of the resources, and strengthening interprofessional collaboration regarding treatment of FAS.

5.5.1 Aim

The aim of guidelines is to equip medical doctors with necessary knowledge and skills regarding the management of FAS with the available resources, with latest technology, and updated evidence-based information at health facilities.

Roles and responsibilities

Doctors should assess, examine, diagnose, treat, and manage FAS. This must be done under their scope of practice as outlined in the Medical and Dental Act, 2004 (Act No. 10 of 2004). The doctors' roles and responsibilities will differ according to their specialities.

5.5.2 Management of FAS

The context of the medical doctor, management of FAS screening and physical examination, referrals, diagnosis, treatment, and follow-up should happen in a well-planned manner (Table 12).

Medical and Dental Act, 2004 (Act No. 10 of 2004)

Table 12: The management of FAS by the medical doctor

Management of FAS	Guiding action	Specific guidelines
<p>1. Initial identification (screening and physical examination)</p>	<p>Asses the child</p> <ul style="list-style-type: none"> • Facial <ul style="list-style-type: none"> • Small birth weight • Small head circumference • Small, widely spaced eyes • Flat midface • Short, upturned nose • Smooth, wide philtrum • Thin upper lip • Cardiac <ul style="list-style-type: none"> • Atrial septal defects • Aberrant great vessels • Ventricular septal defects • Tetralogy of Fallot • Skeletal <ul style="list-style-type: none"> • Hypoplastic nails • Clinodactyly • Shortened fifth digits • Pectus excavatum and carinatum • Radioulnar synostosis • Klippel-Feil syndrome • Flexion contractures • Hemivertebrae • Camptodactyly • Scoliosis 	<ul style="list-style-type: none"> • Should be done in corroboration with other health professionals • All pregnant and post-partum women should be screened for alcohol use with validated screening tools (e.g. T-ACE, TWEAK) by relevant health care providers. Women at risk for heavy alcohol use should receive early briefing intervention (e.g. counselling). • Abstinence should be recommended to all women during pregnancy, as the mother's continued drinking during pregnancy will put the foetus at risk for effects related to prenatal alcohol exposure. • Referral of individuals for a possible FASD-related diagnosis should be made in the following situations: <ul style="list-style-type: none"> • Observed presence of three characteristic facial features (short palpebral fissures, smooth or flattened philtrum, thin vermilion border). • Observed evidence of significant prenatal exposure to alcohol at levels known to be associated with physical or developmental effects, or both. • Observed presence of one or more facial features with growth deficits plus known or probable significant prenatal alcohol exposure. • Observed presence of one or more facial features

Management of FAS	Guiding action	Specific guidelines
	<ul style="list-style-type: none"> • Renal <ul style="list-style-type: none"> • Aplastic, dysplastic, • Hypoplastic kidneys • Ureteral duplications • Horseshoe kidneys • Hydronephrosis • Ocular <ul style="list-style-type: none"> • Strabismus • Retinal vascular anomalies • Refractive problems • secondary to small globes • Auditory <ul style="list-style-type: none"> • Conductive hearing loss • Neurosensory hearing loss 	<p>with one or more central nervous system deficits plus known or probable significant prenatal alcohol exposure.</p> <ul style="list-style-type: none"> • Observe presence of one or more facial features with pre- or postnatal growth deficits, or both (at the 10th percentile or below [1.5 standard deviations below the mean]), and one or more central nervous system deficits plus known or probable significant prenatal alcohol exposure. • Individuals with learning or behavioural difficulties, or both, without physical or dysmorphic features and without known or likely prenatal alcohol exposure should be assessed by appropriate professionals or specialty clinics (e.g. developmental paediatrics, clinical genetics, psychiatry, and psychology) to identify and treat their problems.
	<p>Maternal alcohol exposure</p> <ul style="list-style-type: none"> • Confirmed prenatal alcohol exposure <ul style="list-style-type: none"> • clinical observation • self-report • reports by a reliable source or documented medical records • positive blood alcohol • alcohol treatment legal or medical problems related to drinking during the pregnancy. • Unknown prenatal alcohol exposure 	<ul style="list-style-type: none"> • Prenatal alcohol exposure requires confirmation of alcohol consumption by the mother during the index pregnancy based on reliable clinical observation, self-report, reports by a reliable source, or medical records documenting positive blood alcohol, alcohol treatment or other social, legal, or medical problems related to drinking during the pregnancy. • The number and type(s) of alcoholic beverages consumed (dose), the pattern of drinking, and the frequency of drinking should all be documented when available. • Hearsay, lifestyle, other drug use or history of alcohol exposure in previous pregnancies cannot, in isolation, be informative of drinking patterns in the index pregnancy. • However, co-occurring disorders, significant psychosocial stressors and prenatal exposure to other substances (e.g. smoking and licit or illicit drugs) in the index and previous pregnancies should still be recorded, based on known

Management of FAS	Guiding action	Specific guidelines
		<p>interactive effects of these variables on the severity of pregnancy outcomes for both the mother and her offspring.</p>
2. Referral	<p>Once the professionals identified that any or a combination of the problem(s) based on the set criteria, the following should be done:</p>	<ul style="list-style-type: none"> • Referral to the specialist for further assessment. • Continue to monitor changes in a child's health over time.
3. Diagnosis	<ul style="list-style-type: none"> • Abnormal facial features • Growth problems • Central nervous system problems <ul style="list-style-type: none"> • Structural • Neurologic • Functional • Cognitive deficits • Motor functioning delays • Problems with social skills • Mother's alcohol use during pregnancy 	<ul style="list-style-type: none"> • Facial dysmorphism: Smooth philtrum, thin vermilion border, and small palpebral fissure. • Growth problems: Confirmed with prenatal or postnatal height or weight or below the 10th percentile, documented at any one point in time (adjusted for age, sex and gestational age, and race or ethnicity). • Central nervous system abnormality • Structure of the babies: This includes head circumference (OFC) at or below the 10th percentile adjusted for age and sex as well as clinically significant brain abnormalities observable through imaging. • Neurological: Neurological problems not due to a postnatal insult or fever, or other soft neurological signs outside normal limits. • Functional: Cognitive or developmental deficits or discrepancies, executive functioning deficits, motor functioning delays, problems with attention or hyperactivity, and social skills. • Other; such as sensory problems, pragmatic language problems, and memory deficits. • FAS with confirmed maternal alcohol exposure: Patients in this category have the classic triad of growth retardation, characteristic facial

Management of FAS	Guiding action	Specific guidelines
		<p>dysmorphology, and neurodevelopmental abnormalities. This is often defined as full-blown FAS.</p> <ul style="list-style-type: none"> • FAS without confirmed maternal alcohol exposure: If the triad described in Category 1 is present, a diagnosis of FAS is possible even without confirmed maternal drinking. • Partial FAS with confirmed maternal alcohol exposure: Such patients may have only some of the characteristic facial anomalies plus growth retardation or central nervous system neurodevelopmental abnormalities, or behavioural/cognitive abnormalities. • FAS with confirmed maternal alcohol exposure and alcohol related birth defects: Patients in this category will have some congenital anomalies because of alcohol toxicity. • FAS with confirmed maternal alcohol exposure and alcohol related neurodevelopmental disorder: Patients in this category will have evidence of central nervous system neurodevelopmental abnormalities or a complex pattern of behavioural/cognitive abnormalities, or both, but not necessarily any obvious physical changes.
<p>4. Treatment and follow up</p>	<p>Types of medication based on the condition presented</p> <ul style="list-style-type: none"> • Stimulants • Antidepressants • Neuroleptics • Anti-anxiety drugs 	<ul style="list-style-type: none"> • Education of the patient and family members about features of FASD is crucial. The potential psychosocial tensions that might be expected to develop within the family due to the diagnosis should also be discussed. This must be done in a culturally sensitive manner using appropriate language. • A member of the diagnostic team should follow up outcomes of diagnostic assessments and treatment plans within a reasonable length of time to assure that their commendations have been addressed. • Diagnosed individuals and their families should

Management of FAS	Guiding action	Specific guidelines
		<p>be linked to resources and services that will improve outcomes. However, where services are limited in the community, an individual should not be denied an assessment for diagnosis and treatment. Often, the diagnosis of an individual is the impetus that leads to the development of resources.</p> <ul style="list-style-type: none"> • Stimulants: This type of medication is used to treat symptoms; such as hyperactivity, problems paying attention, poor impulse control, as well as other behavioural issues. • Antidepressants: This type of medication is used to treat symptoms; such as sad mood, loss of interest, sleep problems, school disruption, negativity, irritability, aggression, and anti-social behaviour. • Neuroleptics: This type of medication is used to treat symptoms; such as aggression, anxiety, and certain other behavioural problems. • Anti-anxiety drugs: This type of medication is used to treat symptoms of anxiety.

5.5.3 Management of the resources

The resources that health care professionals would use are the ones that are supporting the medical doctors to execute their task regarding the management of FAS.

Human resources: An imbalance in the health workforce creates a vacuum in the service delivery in many countries, especially in the developing countries (Zohoori *et al.*, 2004). The aim of human resources management is to comprehensively improve health outcomes and delivery of health care services. The performance and benefits of the health care system depend largely upon the knowledge, skills, and motivation

of those professionals who are responsible for delivering health services (Soliman & Spooner, 2000). Strategies aim at promoting equity in relation to needs that require a more systematic planning of health services (Martinez-Mier *et al.*, 2004). In this study, the input of various health care providers was essential. Health care is ultimately delivered by people to people; a thorough understanding of human resource management is required to ensure success of the management of FAS. Doctors are tasked with the responsibility of leadership and management. They are in a unique position and can influence staff members, patients, and the wider public (Lee & Cummings, 2008).

Infrastructure: Doctors are a significant and vital segment of the health care workforce. To manage FAS, the doctors need space to interact with the mothers with children born with FAS and the families. Infrastructure should be appropriate for the doctors to discharge their duties. It has also to be understood that integration of FAS management requires that the space of existing infrastructure should be expanded.

Finance: Children born with FAS have unique needs. They are living with lifelong disabilities, especially in financial needs backed up by the necessary documentation. The parents and families should be referred to the appropriate networks for assistance. Since the children will also have other conditions, it is of utmost importance that financial and different resources are considered and provided.

Equipment: FAS have serious, lifelong consequences for affected children and their families. A variety of professionals deal with persons who have FAS. Early diagnosis is important for the affected children to receive the support they need in a protective environment. The health care professionals need specific equipment as required per professional category (Clarren *et al.*, 2010).

5.5.4 Management of the environment for mother and family

Home visit by doctors: FASD is a serious health care issue affecting children and families. Doctors must link the other health care professionals with people affected by FAS. This will increase their knowledge about signs of alcohol use and abuse in women and symptoms of prenatal alcohol exposure. Doctors must become familiar with resources available to families and professionals to address the myriad of issues that accompany a diagnosis of FAS. Doctors can assist parents with becoming more knowledgeable while they are trying to cope with the condition. Doctors can assist family with coping strategies for stress and refer them to appropriate resources, including parent-to-parent support and counselling (Taanila *et al.*, 2002).

At risk families: Both parents are unemployed, parents / family lead a poor-quality life, parents have mental health problems, and the family has a low income. The doctors must capture the complete history of the family for further assessment and assistance.

Health and development: The core purpose is to assess strengths, needs, and risks of the family; give parents the opportunity to discuss their concerns and aspirations; assess growth and development; and provide guidance and support.

In children and family: Assess physical health, growth, and development; assess speech and language, hearing, vision, immunisation status, and parental attachment; as well as assess parenting skills, discuss family health, and assess risk factors in the family. The doctors are also assessing alcohol consumption, nutrition status, dental health, hazards, and attitudes and refer or connect them to appropriate services (Cho *et al.*, 2004).

Networking: Networking is an important element of the management of FAS. It is a forum that provides an opportunity for information sharing, referral issues, and provision of support mechanisms. A family empowerment network (FEN) includes provision of resources to families, training and education to affected families, and increasing opportunities for diagnosis and intervention (Wilton & Plane, 2006).

5.5.5 Strengthen interprofessional collaboration regarding treatment of FAS

The strengthening of the interprofessional collaboration should be done in a holistic manner that includes value / ethics, practice, and responsibilities as stipulated by the Health Professionals Acts through proper communication to develop health care students as future interprofessional team members. Complex medical issues can be best addressed by interprofessional teams. The doctors should be encouraged to focus on values / ethics for interprofessional practice, roles/responsibilities, and interprofessional communication. During the execution of their tasks, teams and teamwork should be encouraged as a cornerstone for the management of FAS.

Types of medical specialists that might be included in the context of Namibia; are nurses social workers, paediatricians, primary health care providers, dysmorphologists, otolaryngologists, audiologists, immunologists, neurologists, mental health professionals (child psychiatrists and psychologists, school psychologists, behavioural management specialists), ophthalmologists, plastic surgeons, endocrinologists, gastroenterologists, nutritionists, geneticists, speech-language pathologists, occupational therapists, and physical therapists. All these professionals can make a valuable contribution to special education and social services.



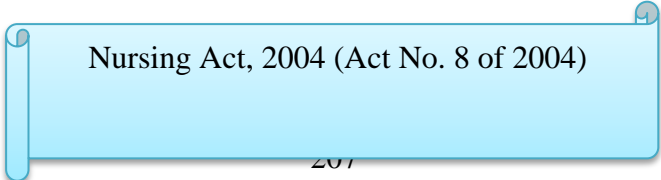
5.6 GUIDELINES FOR NURSES

5.6.1 Aim

The aim of guidelines is to equip nurses with the necessary knowledge and skills regarding the management of FAS with the available resources at all levels in the health facilities. The management of the environment, mother, and family should be done through interprofessional collaboration.

5.6.2 Roles and responsibilities

The role and responsibilities of the nurses in this study are in line with the scope of practice as outlined in the Nursing Act, 2004 (Act No. 8 of 2004). Nurses' duties vary in accordance with the areas of their expertise. They play a key role in promoting the wellness by performing a wide range of services. The nurses mainly focus on caring for and educating the patients and their family members about recovery and ways of preventing diseases. Hence, nurses assess patients' health problems and needs, develop and execute nursing care plans, and maintain medical records. They observe and record patients' behaviour, as well as coordinate with physicians and other health care professionals for creating and evaluating customised care plans.



Nursing Act, 2004 (Act No. 8 of 2004)

5.6.2.1 Scope of practice of registered nurses

The scope of practice of a registered nurse includes the scientific application of the principles of nursing and health care related to the prevention of illness and the care of patients that include the scientifically based physical, psychological, social, educational, chemical, and technological means applicable to health care practice (Nursing Act, 2004; Act No. 8 of 2004). Nurses also prescribe and administer standard prescribed medicines and treatment under a licence in accordance with subsection (1) of section 31 of the Medicines and Related Substances Control Act, 2003 (Act No. 13 of 2003).

5.6.2.2 Scope of practice of an enrolled nurse

The scope of practice of an enrolled nurse includes the scientific application of the principles of nursing and health care related to the prevention of illness and the care of patients during illness, initiated by a registered nurse, midwife, or accoucheur in accordance with sub-regulation (2) of the Nursing Act, 2004 (Act No. 8 of 2004).

5.6.2.3 Scope of practice of an enrolled midwife or accoucheur

In this regulation, a “patient” includes a mother or a child. The scope of practice of an enrolled midwife or accoucheur includes the scientific applications of the principles of nursing and midwifery, as part of the midwifery regimen planned and initiated by a registered nurse, midwife, or accoucheur in accordance with sub-regulation (2) of the Nursing Act, 2004 (Act No. 8 of 2004).

The Act referred to in sub-regulation (1) describes the duties of an enrolled midwife or accoucheur under the direct or indirect supervision of a registered nurse, midwife, or accoucheur.

The scope and of practice of an enrolled nurse includes the scientific application of the principles of nursing and health care related to the prevention of illness and the care of patients during illness, initiated by a registered nurse, midwife or accoucheur in accordance with sub-regulation (2) of the Nursing Act, 2004 (Act No. 8 of 2004).

The Act referred to in sub-regulation (1) describes the duties of an enrolled nurse under direct or indirect supervision of a registered nurse, midwife, or accoucheur.

The management of FAS in this study should be done in accordance with the nursing process. This includes assessment, diagnosis, planning, implementation, and organisation.

5.6.2.4 Assessment

Assessment includes collecting, organising, validating, and documenting data related to the condition of FAS and establishes a database about the clients and their families. The database for FAS includes nursing health history of a client and his or her family, physical assessments, clients record reviews; review of the literature,

family consultations, updating data, organising data, validating data, and communicating / documenting data.

5.6.2.5 Diagnosis

The diagnosis includes an analysis and synthesis of data that are related to FAS to identify the client strengths and health problems that can be prevented or resolved by collaboration and depend on nursing interventions to develop a list of nursing and collaborative problems specific to FAS.

The nurses should interpret and analyse the data of the client with FAS by comparing data against the nursing standard, cluster and group data that are related to one another, identify gaps and inconsistencies based on the presentation of the clients, as well as the impact on family and the community. The nurses should formulate nursing diagnoses and collaborative problem statements for the clients, as well as the families.

5.6.2.6 Planning

Planning should be aiming at prevention, reducing, or resolving the identified client and family problems; supporting the strengths; and implementing nursing interventions in an organised, individualised, and goal-directed manner. Develop an individualised care plan that specifies client goals, desired outcomes, and related nursing interventions. Consult other health professionals for the best desired outcomes.

5.6.2.7 Implementation

The nurses should carry out or delegate and document the planned nursing intervention for the clients, as well as families to assist the clients and their families to meet desired goals / outcomes, promote wellness, prevent the conditions and diseases that result from FAS, restore health, facilitate coping with altered functions, reassess the client to update the database, perform planned nursing interventions, and give verbal reports as necessary.

5.6.2.8 Organisation

The nurses should measure the degree to which goals / outcomes have been achieved and identify factors that positively or negatively influence goal achievement. Nurses should determine whether to continue, modify, or terminate the planned care of the client and the family. The activity should be carried out in collaboration with the client. They should also document achievement of outcomes and modification of the care plan.

5.6.2.9 Health promotion

It includes primary, secondary, and tertiary prevention.

a. Primary prevention

Primary prevention should be tailored to include informing the public, particularly young people, about the dangers of drinking during pregnancy and on a broader level, addressing determinants of health. Specific attention should also be paid in terms of engagement with the family, community, and specifically the women and youth.

b. Secondary prevention

Secondary prevention strategies should include screening and early intervention programmes and services for pregnant women and women of childbearing potential who may be at risk of having a child with FAS. It is the responsibility of the nurses to identify women who are using alcohol during pregnancy and assess the level of risk, counsel pregnant women who are using alcohol about the effects on the foetus and their own health, and counsel pregnant women regarding the benefits of stopping or reducing the use of alcohol at any time during pregnancy.

c. Tertiary prevention

Tertiary prevention strategies should include diagnosis and programmes designed specifically for children with FAS and their caregivers, as well as treatment for women and their partners who already have one FAS child and plan to have more children.

5.6.3 Management of resources

The resources that health care professionals are focusing on are the ones supporting the nurses to execute their tasks regarding the management of FAS.

5.6.3.1 Human resources

Imbalances in the health workforce create a vacuum in the service delivery in many countries, especially in developing countries (Martinez-Mier *et al.*, 2004). Nurses are the backbone of the health care system.

Nurses are task with the responsibility of leadership and management. They are in a unique position and can influence staff, patients, and the wider public (Lee &

Cummings, 2008). It is a national priority to invest in people in terms of training and appropriate mix of individuals to meet the challenges of ever increasing health needs (Pelletier & Duffield *et al.*, 2003).

5.6.3.2 Infrastructure

Nursing and midwifery personnel are a significant and vital segment of the health care workforce. To manage FAS, the nurses need space to interact with the mothers with children born with FAS and their families. Infrastructure should be appropriate for the nurses to discharge their duties. The integration of FAS management needs a critical expansion of space.

5.6.3.3 Finance

Children born with FAS have unique needs. They are living with lifelong disabilities; especially in financial needs backed up by the necessary documentation. The parents and families should be referred to the appropriate networks for assistance. Since the children will also have other conditions, it is of utmost importance that financial and different resources will be required.

5.6.3.4 Equipment

FAS have serious, lifelong consequences for affected children and their families. A variety of professionals deal with persons who have FAS, including paediatricians, general practitioners, neurologists, psychiatrists, speech therapist, social workers, gynaecologists, occupational therapists, and psychologists. Early diagnosis is important so that the affected children can receive the support they need in a protective environment.

Some of the criteria used are: measurement tape for head circumferences weight and length; weighing scales for BMI to measure and transparent ruler to measure palpebral fissure length (Clarren *et al.*, 2010).

In essence, there are multiple methods to confirm the FAS in these children, thus it essential to involve participation of professionals with different professional backgrounds. This assist in comprehensive expert consensus. This assist in comprehensive expert consensus. Equally important is the management of this equipment.

5.6.4 Management of the environment for mother and family

Management of the environment is done through:

5.6.4.1 Home visit by nurses

FASD is a serious health care issue affecting children and families. Nurses must increase their knowledge about signs of alcohol use and abuse in women, symptoms of prenatal alcohol exposure. Nurses must become familiar with resources available to families and professionals to address the myriad of issues that accompany a diagnosis of FAS. Nurses can help parents become more knowledgeable and assist them as they cope with the condition. Nurses can also assess family coping strategies and stress and refer to appropriate resources, including parent-to-parent support and counselling (Taanila *et al.*, 2002).

5.6.4.2 Inspection

Nurses play a critical role in inspection and management of children with FAS. The aim is to: help parents develop a strong bond with children, encourage care that

keeps children healthy and safe, protect children from serious diseases through screening and immunisation, encourage mothers to breast-feed and to identify and help children with problems that might affect their chances later in life (Weare *et al.*, 2013).

5.6.4.3 At risk families

In case of both parents being unemployed, the family will lead poor-quality life. The parents can also have mental health problems

5.6.4.4 Health and development

The core purpose is to: assess family strengths, needs and risks, give parents the opportunity to discuss their concerns and aspirations, assess growth and development and provide guidance and support.

5.6.4.5 In children and family

The nurses should assess' physical health, growth and development and any other problems. Nurses should assess parenting skills, inspect housing issues, discuss family health, and assess risk factors in the family. The nurses are also assessing alcohol consumption, nutrition status, dental health, hazards, and attitudes and refer or connect them to appropriate services (Cho *et al.*, 2004). They should also connect the families with service networks (Wilton & Plane, 2006).

5.6.5 Strengthen interprofessional collaboration regarding treatment of FAS

The strengthen the interprofessional should be done in holistic way that includes value/ethics, practice, responsibilities as stipulated by the health professionals Acts through proper communication.

- Develop health care students as future interprofessional team members and a recommendation suggested by the Institute of Medicine. Complex medical issues can be best addressed by interprofessional teams
- Training future health care providers to work in such teams will help facilitate this model resulting in improved health care outcomes for patients.
- The nurses should be encouraged to focus on values/ethics for interprofessional practice; roles/responsibilities, interprofessional communication during the execution of their task
- Teams and Teamwork should be encouraged as corner stone in management of FAS.

5.7 GUIDELINES FOR SOCIAL WORKER AND PSYCHOLOGIST

5.7.1 Aim

The aim of guidelines is to equip social workers with necessary knowledge and skills regarding management of FAS with the available resources within the health facilities at all levels, management of the environment or mother and family this should be done through interprofessional collaboration.

5.7.2 Roles and responsibilities

Social workers conduct their roles and responsibilities as outlined or stipulated under Act. No.6 2004, Social work and Psychology Act, 2004. Their scope of practice is in line within the respective Act of their profession.

Social Work and Psychology Act, 2004 (Act No. 6 of 2004)

Social workers conduct direct counsel to patients, families, and groups is only one aspect of their broader set of responsibilities. Social workers will often serve as liaise between different institutions to assist patients and collaborate with other health professionals to ensure patient wellness. They will become familiar with, and refer clients to, community resources. They also engage in research, policy development and advocacy for services. Social workers must maintain case history records and prepare reports. Some of the many professional roles in Social Work are:

Social workers serve as brokers that are involved in the process of making referrals to link a family or individual to needed resources. They are also advocates to fight rights of others and work to obtain needed resources by convincing others of the legitimate needs and rights of members of society. Social workers are also managing cases of various natures in collaboration with the other health professionals. They are playing educator role in terms of how to develop particular skills such as budgeting, the caring discipline of children, effective communication, the meaning of a medical diagnosis, and the prevention of violence. They organise facilitate and manage FAS cases at all levels

5.7.2.1 Management of FAS

The management of FAS in this study should be done in line with the Social worker process. This includes assessing, planning, implementing and organising.

a. Assessing

Assessment includes collecting, organising, validating and documenting data related to the condition of FAS and establishes a data base about the clients and family. The data base for FAS includes, nursing health history of client and family, conduct a physical assessment, reviews clients record; review the literature, consults family, update data needed, organise data and validating data and communicate/document data.

b. Planning

Planning should be aiming at prevention, reducing, or resolving the identified client and family problem and to support the strength and implementing nursing intervention in an organised, individualised and goal- directed manner. Develop and individualised care plan that specified client goals, desired outcomes, and related nursing interventions. Consults other health professionals for the best desired outcomes.

c. Implementing

The nurses should carry out or delegate and documenting the plan intervention for the clients as well as family to, assist the clients and family to meet desired goals/outcomes, by promoting wellness, and prevention of the conditions and diseases as results of FAS, restore health and facilitating coping with altered functions, reassess the client to update the database, perform planned nursing interventions and give verbal reports as necessary.

d. Organising

The social workers should measure the degree to which goals/outcomes have been achieved and identify factors that positively or negatively influences goal achievements. Social workers should determine whether to continue, modify or terminate the plan care of the client and the family. The activity should be carried out in collaboration with the client and collect data related to desired outcomes. They should also document achievement of outcomes and modification of the care plan.

e. Health promotion

It includes primary, secondary, and tertiary prevention.

Primary prevention:

Primary prevention should be tailored to include informing the public, particularly young people, about the dangers of drinking during pregnancy and on a broader level, addressing determinants of health. Specific attention should also be paid in terms of engagement with the family, community and specifically the women and youth.

Secondary prevention:

Secondary prevention strategies should include screening and early intervention programs and services for pregnant women and women of childbearing potential who may be at risk for having a child with FAS. It is the responsibility of the social workers to identify women who are using alcohol during pregnancy and assess level of risk, counsel pregnant women who are using alcohol about the effects on the

foetus and their own health, counsel pregnant women regarding the benefits of stopping or reducing the use of alcohol at any time during pregnancy.

Tertiary prevention:

Tertiary prevention strategies should include diagnosis and programs designed specifically for children with FAS and their caregivers, as well as treatment for women and their partners who already have one FAS child and plan to have more children.

- **Management of the resources**

The resources that we are embarking upon are the one that are supporting the social workers to execute their task regarding the management of FAS.

- **Human resources**

Imbalance in health workforce creates a vacuum in the service delivery in many countries especially in the developing countries. The aim of human resources management is to improve overall health outcomes and delivery of health care services. Human resources play a pivotal role in health care for public and individual health intervention.

The performance and benefits of the health care system depends largely upon the knowledge, skills, and motivation of those responsible for delivering health services (Soliman & Spooner, 2000). Strategies aims at promoting equity in relation to needs require more systematic planning of health services.

In this study, various health care providers input is essential. Health care is ultimately delivered by people to people, a strong understand of human resource management is required to ensure success of the management of FAS. Social workers are task with the responsibility of leadership and management. They are in a

unique position and can impact on staff, patients, and the general public (Lee & Cummings, 2008). It is a national priority to invest in people in terms of training and appropriate mix of individuals to meet the challenge of ever increasing health needs (Duffield *et al.*, 2003).

- **Infrastructure**

Social workers are significant and vital segment of the health care workforce. To manage FAS the social workers need space to interact with the mothers with children born with FAS and the families. Infrastructure should be appropriate so that the social workers can discharge their duties. It has also to be understood that integration of FAS management is critical but with expansion of space.

- **Finance**

Children born with FAS have unique needs. They are living with lifelong disabilities are, especially in terms of financial needs back-up by the necessary documentations. The parents and families should be referred to the appropriate networks for assistance. Since the children will also have other conditions it is of utmost importance that financial and different resources will be required.

- **Equipment**

FAS have serious, lifelong consequences for affected children and their families. A variety of professionals deal with persons who have FAS; including paediatricians, general practitioners, neurologists, psychiatrists, speech therapists, social workers, gynaecologists, occupational therapists, and psychologists. Early diagnosis is important, since the affected children should receive the support they need in a protective environment.

5.7.3 Management of the environment for mother and family

5.7.3.1 Home visit by social workers

FASD is a serious health care issue affecting children and families. Social workers must increase their knowledge about signs of alcohol use and abuse in women, and symptoms of prenatal alcohol exposure. Social workers must become familiar with resources available to families and professionals to address the myriad of issues that accompany a diagnosis of FAS. Social workers can help parents to become more knowledgeable and assist them while they are trying to cope with the condition. Social workers can also assess family coping strategies and stress and refer them to appropriate resources, including parent-to-parent support and counselling (Taanila *et al.*, 2002).

5.7.3.2 Inspection

Social workers play a critical role in inspection and management of children with FAS. The aim is to help parents develop a strong bond with children, encourage care that keeps children healthy and safe, protect children from serious diseases through screening and immunisation, encourage mothers to breast-feed, and identify and assist children with problems that might affect their chances later in life (Ware *et al.*, 2013).

5.7.3.3 At risk families

In case of both parents being unemployed, the family will lead poor-quality life. The parents can also have mental health problems.

5.7.3.4 Health and development

The core purpose is to assess family strengths, needs and risks; give parents the opportunity to discuss their concerns and aspirations; assess growth and development; and provide guidance and support.

5.7.3.5 Children and family

The social workers should assess physical health, growth and development, and any other problems. Social workers should assess parenting skills, inspect housing issues, discuss family health, and assess risk factors in the family. The social workers are also assessing alcohol consumption, nutrition status, dental health, hazards, and attitudes with the view of referring or connecting them to appropriate services (Cho *et al.*, 2004). They should also connect the families with service networks (Wilton & Plane, 2006).

5.7.4 Strengthen interprofessional collaboration regarding the treatment of FAS

The strengthening of the interprofessional should be done in a holistic manner that includes value / ethics, practice, and responsibilities as stipulated by the Health Professions Acts through proper communication. Develop future interprofessional team members as recommended / suggested by the Institute of Medicine. Complex medical issues can be best addressed by interprofessional teams; training future health care providers to work in such teams will help facilitate these guidelines resulting in improved health care outcomes for patients. The social workers should be encouraged to focus on values / ethics for interprofessional practice, roles / responsibilities, and interprofessional communication during the execution of their

task. Teams and teamwork should be encouraged as a cornerstone for the management of FAS.

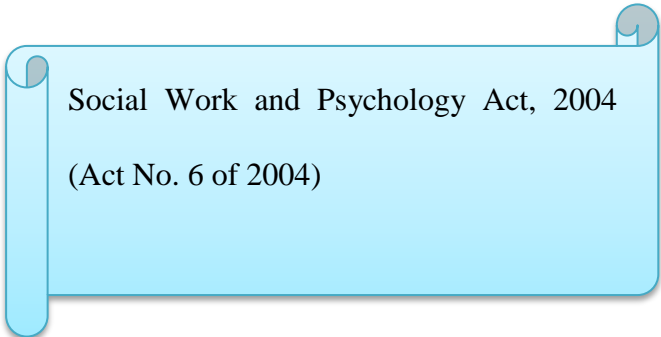
5.8 GUIDELINES FOR OCCUPATIONAL THERAPISTS

5.8.1 Aim

The aim of these guidelines is to equip occupational therapist with the necessary knowledge and skills regarding the management of FAS with the available resources at all levels in the health facilities, as well as the management of the environment, mother, and family. This should be done through interprofessional collaboration.

5.8.2 Roles and responsibilities

Occupational therapist should assess, diagnose, treat, and manage FAS. This must be done in accordance with scope of practice as outlined in the Medical and Dental Act, 2004 (Act No. 10 of 2004). The doctors' roles and responsibilities will differ in relation to their specialities. Establish support groups to offer support, create partnerships with churches, substance abuse programmes, educate congregations, and advocate for FASD families.



Social Work and Psychology Act, 2004
(Act No. 6 of 2004)

5.8.3 Management of FAS

Occupational therapists assist children with FAS with developing self-care. They are assisting with teaching activities related to daily living. These activities include a wide range of areas; such as dressing, toileting, feeding, and grooming. Furthermore, difficulties in recognising similarities and differences in patterns are also given attention. The other aspects are difficulties in sensory integration; namely resist touch by other people, difficulties with adapting to change, eye-hand coordination, and appearing clumsy and easily distracted.

In terms of cognitive behaviour, the occupational therapist assists with attention span, concepts learning, following of directions, and compensatory techniques. An occupational therapist also assists with carrying out activities pertaining to cooperative behaviour, leisure interest, self-expression, and coping skills in the domain of psychosocial issues. The occupational therapist and physiotherapist are collaborating with other professionals to assist patients with FASD.

These activities include assessment, planning, implementation, and organisation.

5.8.3.1 Assessment

- Assessment includes collecting, organising, validating, and documenting data related to the condition of FAS for the client, as well as the family within the community.
- Establish a database about the clients with FAS and their families and manage it at the specific level of health facilities.
- A database for FAS includes health history of client and family, physical assessment, client's record review; literature review, family consultations,

updating data, organising data, validating data, and communicate / document data to colleagues for discussion.

5.8.3.2 Planning

Since FASD has varying dimensional conditions, it is imperative to compose a team of health care professionals as indicated in the list above, which is still not exhausted. It is of great importance to develop an inclusive care plan in consultation with other health care providers; it is the key to the positive outcomes of the care plan. Equally, it is clear that team approach to assessment and intervention can provide a change in attitude of the family members and the community.

5.8.3.3 Implementation

Early diagnosis and provision of services can help improve a child's ability to function. AN occupational therapist assesses the occurrence of drinking during the pregnancy, physical appearance and distinguishing features, cognitive ability and learning, language development difficulties, health issues. alcohol-related neurodevelopment disorder, and intellectual disabilities.

5.8.3.4 Organisation

The occupational therapist should measure the degree to which goals / outcomes have been achieved and document factors that positively or negatively influences goal achievement.

An occupational therapist must determine whether to continue, modify, or terminate the planned care of the client and the family in collaboration with the client, collect

data related to desired outcomes, establish whether goals / outcomes have been achieved, and relate the occupational therapist's action to the client and family.

5.8.4 Management of the resources

The resources should support occupational therapists to execute their task regarding the management of FAS.

5.8.4.1 Human resources

An imbalance in the health workforce creates a vacuum in the service delivery in many countries, especially in the developing countries. The aim of human resource management is to comprehensively improve health outcomes and delivery of health care services. Human resources play a pivotal role in health care for public and individual health interventions.

They are in a unique position and can influence staff members, patients, and the wider public (Lee & Cummings, 2008). It is a national priority to invest in people in terms of training and an appropriate mix of individuals to meet the challenges of the ever-increasing health needs (Duffield *et al.*, 2003).

5.8.4.2 Infrastructure

Occupational therapists are significant and a vital segment of the health care workforce. To manage FAS, the occupational therapist needs space to interact with the mothers with children born with FAS and the families. Infrastructure should be appropriate to enable the occupational therapists to discharge their duties. It has also to be understood that integration of FAS management requires the existing infrastructure to be expanded in terms of space.

5.8.4.3 Finance

Children born with FAS have unique needs. They are living with lifelong disabilities and especially their financial needs should be backed up by the necessary documentation. The parents and families should be referred to the appropriate networks for assistance. Since the children will also have other conditions, it is of utmost importance that financial and different resources will be needed.

5.8.4.4 Equipment

FAS have serious, lifelong consequences for affected children and their families. A variety of professionals deal with persons who have FAS; including paediatricians, general practitioners, neurologists, psychiatrists, speech therapists, social workers, gynaecologists, and psychologists. Early diagnosis is important for the affected children to receive the support they need in a protective environment.

In essence, there are multiple methods to confirm the FAS in these children, thus it is essential to involve professionals from different professional backgrounds.

5.8.5 Management of the environment for mother and family

5.8.5.1 Home visits by an occupational therapist

FASD is a serious health care issue affecting children and families. An occupational therapist must link the other health care professionals with people affected by FAS. This would increase their knowledge about signs of alcohol use and abuse in women, and symptoms of prenatal alcohol exposure. An occupational therapist must become familiar with resources that are available to families and professionals to address the myriad of issues that accompany a diagnosis of FAS. An occupational therapist can

assist parents with becoming more knowledgeable to cope with the condition. An occupational therapist can assist family with coping strategies, stress, and referral to appropriate resources, including parent-to-parent support and counselling (Taanila *et al.*, 2002).

5.8.5.2 Networking

Networking is an important element of the management of FAS. It is a forum that provides an opportunity for information sharing, referral issues, and provision of support mechanisms.

A family empowerment network (FEN) includes:

- Provision of resources to families;
- Training and education to affected families; and
- Increasing opportunities for diagnosis and intervention (Wilton & Plane, 2006).

5.8.6 Strengthen interprofessional collaboration regarding treatment of FAS

The strengthening of interprofessional collaboration should be done in a holistic manner that includes value / ethics, practice, and responsibilities as stipulated by the Health Professions Acts through proper communication. Develop future interprofessional team members as recommended / suggested by the Institute of Medicine. Complex medical issues can be best addressed by interprofessional teams; training future health care providers to work in such teams will help facilitate these guidelines resulting in improved health care outcomes for patients. The occupational therapists should be encouraged to focus on values / ethics for interprofessional practice; roles / responsibilities, and interprofessional

communication during the execution of their task. Teams and teamwork should be encouraged as a cornerstone for the management of FAS.

5.9 GUIDELINES FOR SPEECH THERAPIST

5.9.1 Aim

The aim of the speech therapist is to assess, diagnose, treat, and help prevent speech, language, cognitive communication, voice, swallowing, fluency, and other related disorders.

5.9.2 Roles and responsibilities

A speech therapist evaluates and diagnoses speech, language, cognitive communication, and swallowing disorders. They analyse and diagnose the extent of speech, language, and other impairments. The speech therapist also treat individuals with disorders at all levels. They treat individuals from infants to the elderly by utilising an individualised plan with both long-term goals and short-term goals for any individual's needs.

Clinical services could be provided individually or within groups, depending on an individual's needs. The speech therapist works with a variety of clients but not limited to infants, toddlers with delayed language development, pre-schoolers, and school age children with articulation and phonological disorder. They are also working with individuals who stutter, the ones with voice disorders, as well as the ones with other impairments.

5.9.3 Management of FAS

It is important to understand that early diagnosis and intervention are positively correlated with better long-term outcomes for the children and their families. Appropriate diagnosis results in the children receiving relevant and targeted interventions. These interventions significantly improve their functioning, adoptability, self-awareness, and self-esteem (Streissguth *et al.*, 2004).

The children with FAS can present with “good superficial speech and sociability that belie deficits in both language and peer relationships” (Weinberg & Tronik, 1997). The speech therapists assess and treat the children with FAS and implement an effective plan. This is done in collaboration with other health professionals. It is equally important to have effective behavioural management techniques for the parents and professionals.

To address the lack of knowledge about FASD, it is imperative to provide relevant services (Kjellmer & Olswang, 2013).

5.9.4 Management of the resources

Resources assist speech therapists in their day-to-day practice to make their decision-making easier. It connects speech therapists to access information, management, and evidence to guide the clinical decision-making.

5.9.5 Management of the environment for mother and family

The impact of the environment could have effects on the family life for children with FAS. It is the responsibility of the health professionals to ensure a conducive environment for the mother and family. This should take place in the community.

The importance of interpersonal relationships in women who have FAS children is critical.

5.9.6 Strengthen interprofessional collaboration regarding treatment of FAS

Teamwork and interprofessional collaboration are important to provide effective health care delivery. It results in better patient care and provider satisfaction. Health professionals should work comfortably in teams based on their expertise and practice areas. It is for the team members to manage and plan to attain the desired goals. In the case of FAS management, it is extremely important to engage a multidisciplinary team if the required results are to be achieved. These specific characteristics that are essential in interprofessional collaboration are a common vision and understanding of competencies, clear roles, and a medium for knowledge sharing. It is also a forum that facilitates scarce resources sharing and stakeholder validation and consultation for different points of view to solutions.

5.10 EVALUATION AND VALIDATING THE GUIDELINES FOR HEALTH PROFESSIONALS

The evaluation of the guideline was carried out in accordance with the criteria set by Chinn and Kramer Avant (1991 p. 129-137); namely how clear, simple, general, accessible, and important the guidelines are. Five experts in the field – two medical doctors, two registered nurses (one from the hospital), one social worker, and two enrolled nurses – were nominated. The nomination was done at the discretion of the researcher in terms of the availability and knowledge of the professional in the field. The draft guideline booklet was used to conduct the evaluation. Evaluators were from the Katutura State Hospital and the Windhoek Central Hospital.

The content of the guidelines consisted of a cover page, table of contents, guidelines regarding general knowledge for health professionals to understand the guidelines and manage foetal alcohol syndrome (FAS), and individual guidelines for each profession: Medical doctors, nurses (registered and enrolled nurses), social workers, and psychologists, occupational therapists, and speech therapists. The guidelines for the professionals comprised the aim, roles, and responsibilities of the management of resources, and the environment for mother, strengthening family ties, and interprofessional collaboration regarding management of children with FAS. The role and the responsibilities of the professionals were compiled in respect of the Namibia Health Professional Council Acts.

The nominated experts in the field were afforded an opportunity to evaluate the general guidelines about the knowledge specific to their respective professions. The copies of the guidelines were distributed. The purpose of the booklet was clearly indicated in accordance with the requirements of this PhD research project. Table 13 illustrates the outcomes.

Table 13: Comments from the expert in the field

Categories of the professional	Comments
Medical doctors	<ul style="list-style-type: none"> • <i>“The booklet is very informative”</i> • <i>“Easy to understand”</i> • <i>“Clear content”</i> • <i>“Informative content”</i> • <i>“Need to be simplified because no time to read the big document”</i> • <i>“This book should be adopted for training purpose”</i> • <i>“The content is very much informative”</i> • <i>“Pamphlet should be developed and distribute in all</i>

Categories of the professional	Comments
	<p><i>hospitals, clinics and health centre”</i></p> <ul style="list-style-type: none"> • <i>“I have enjoy [sic] the part of diagnosis, treatment, etc.”</i> • <i>“Training is needed in FAS at large”</i> • <i>“Please provide us with the copies”</i> • <i>“it is good manual for health professionals”</i> • <i>“Should be used for training”</i>
Nurses (registered and enrolled nurses)	<ul style="list-style-type: none"> • <i>“The content is easy to understand”</i> • <i>“Please start training the nurse in this condition”</i> • <i>“More picture should be add[ed] to facilitate the understanding”</i> • <i>“The algorithm for management of FAS should be added”</i> • <i>“This thing (condition) are new to us”</i> • <i>“It is a good and informative booklet”</i> • <i>“I have learn[t] a lot”</i> • <i>“Small pamphlet for the nurses and patient should be developed”</i> • <i>“There should also components for mother and family not only for nurses and doctors”</i> • <i>“Community participation should also be indicated”</i> • <i>“Ministry should adopt this booklet”</i> • <i>“good book and simple to understand”</i>
Social worker	<ul style="list-style-type: none"> • <i>“It is also a good thing that Acts included”</i> • <i>“Good book but I will get time to read it”</i> • <i>“A good manual, easy to read and understanding”</i>
Psychologist;	Did not provide their comments
Occupational therapist	Did not provide their comments
Speech therapist	Did not provide their comments

In conclusion and based on the observations of the comments, the evaluators seemed to be pleased with the content and format of the booklet. Their input was incorporated in the final edition of the booklet.

5.11 SUMMARY

The chapter describes the development of the guidelines for the management of FAS. It gives an overview of how the guidelines were developed. The structure of the guidelines was described in the following way: Name of the guidelines, aim, objectives, target population of the guidelines, recipients and beneficiaries, as well as the context. The researcher discussed the process of the development of the guidelines, which included the various aspects of FAS. The process is described in detail and the guidelines for the specific professionals are also described relating to their scope of practice according to the HPCNA (2004).

CHAPTER 6

CONCLUSIONS, RECOMMENDATIONS, LIMITATIONS, AND CONTRIBUTIONS

6.1 INTRODUCTION

The previous chapter presents the development of the guidelines for the management of FAS in Namibia. The guidelines that were developed were intended to assist health care professionals with managing FAS in Namibia. The development of the guidelines employed the Practice Orientated Theory of Dickoff (1968). In this theory, six survey list activities were used to develop the FAS guidelines. Furthermore, this chapter describes the guidelines based on the experiences of the health care professionals working in the specified context of the WCH and the KSH (Chapter 4). The previous chapter discusses the purpose, objectives, as well as development of FAS guidelines for health care professionals in Namibia.

This chapter describes the conclusion, recommendations, limitations, and contributions of the study. The outcomes of the conclusions are based on the results that emerged from a situation analysis in this study. The conceptual framework provided the way the guidelines were developed (Chapter 5).

Furthermore, this chapter describes the development process of the FAS guidelines. These guidelines are based on the information obtained from the health care professionals working in the maternity sections of the KSH and the WCH. These health care professionals shared their experiences in managing FAS in the respective hospitals, namely the KSH and the WCH.

It became evident from the interviews conducted with the health care professionals as stated in the following statements:

“There are no protocols or guidelines.”

“We don’t have information, leaflets, and pamphlets like for TB in different languages.”

“But they are doing the same story at Katutura where they are living.”

Foetal alcohol syndrome (FAS) results from maternal alcohol use during pregnancy and carries lifelong consequences. Early recognition of FAS can result in better outcomes for persons who have been diagnosed. Thus, these guidelines provide direction when and how to refer a person suspected of having problems related to prenatal alcohol exposure. The guidelines seek to provide guidance for assessing and creating supportive environments that might impact positively on the ecomap of the families. The guidelines are intended to facilitate early identification of persons with FAS for them and their families to receive services that would enable them to achieve healthy lives and reach their full potential (Bertrand *et al.*, 2005).

6.2 CONCLUSION

The conclusions are based on the aim and objectives of the study, as well as from the experiences of the health care professionals.

6.2.1 Aim of the study

The main purpose of this study was explored to describe how health care professionals manage individuals with FAS at public health facilities in the Khomas Region, Namibia. The purpose of the study has been achieved through using an

explorative, descriptive, as well as contextual research design. The developed guidelines seek to enhance the knowledge and skills of health care professionals. Furthermore, the guidelines serve as a reference point for health care professionals who are taking care of individuals / children born with FAS. The primary aim of the guidelines is to empower health care professionals for managing FAS comprehensively at the health facilities in Namibia.

Objective 1: To explore and describe the experiences of health care professionals regarding the management of FAS in the Khomas Region, Namibia.

In-depth interviews, focus group discussions, and field notes accomplished this objective. The researcher used in-depth interviews and focus group discussions as data collection methods. The findings revealed that the health care professionals lacked knowledge and skills to properly manage FAS. Health care professionals needed the knowledge and skills to provide quality care to the patients. The study findings demonstrated the dire need for training of health care professionals. The acquired knowledge and skills would equip them with competencies to discharge their duties with confidence.

Objective 2: To develop a conceptual framework to facilitate the development of guidelines for the health professionals.

The researcher used the six practice orientated theory components (Dickoff & Wiedenbach, 1968). These components were the agent, recipients, context, dynamics, procedure, and terminus. The conceptualisation process is described in detail in Chapter 4. The researcher successfully attained this objective by using the above-mentioned practice orientated theory.

Objective 3: To develop guidelines that empower health care professionals to manage FAS in the Khomas Region of Namibia.

The researcher achieved this objective through development of seven guidelines for the health care professionals. The development process of the guidelines followed the theoretical framework of Dickoff and Wiedenbach (1968). The developed guidelines were based on the identified gaps, as well as limitations of the health care professionals. The guidelines consisted of the aim, roles and responsibilities, management of FAS, management of resources, and strengthening interprofessional collaboration.

In this study, the practice as stipulated in the various Acts was the basis of the duties and responsibilities of the professional categories. This study has responded to the challenges faced by health care professional regarding the management of FAS. The experiences of the health care professionals became the cornerstones of the guidelines.

Objective 4: To evaluate and validate the guidelines for management of FAS in the Khomas Region, Namibia.

The experts in the field provided tangible inputs based on their experiences. The obstetricians and gynaecologists expressed the need for a change in basic assumptions; not only at facility level, but also at PHC level.

The study responded to the call of the health care professionals, namely to develop these guidelines to manage FAS. The guidelines took into account the sentiments and concerns, as well as expert opinions of the health care professionals relating to the management of FAS.

6.3 LIMITATIONS

Limitations are defined as restrictions of a study. These limitations are lowering factors of generalisability of the results (Burns & Grove, 2001). Furthermore, it is important to address limitations in a study. The limitations generate fruitful discussions of the findings (Polit & Beck, 2004). It is the responsibility of a researcher to identify and describe the limitations of his / her study findings.

Limitations are influences that cannot be controlled by a researcher, which place restrictions on the methodology and conclusions and the researcher should mention them. In this study, the researcher collected data by employing observation, interviews, and focus group discussions. Equally, the number of participants was small and an open-ended tool was used to guide the interview process. The research tool required answers how and why questions and were not based on what, when, and who questions. It is also imperative to keep in mind that the findings cannot be generalised to the study population or community. To generalise, a more time-consuming research methodology is needed that requires difficult data collection and analysis processes. However, this qualitative method provides detailed information on complex issues and is cost efficient.

Methodological limitations restrict the generalisability of the findings. Certain factors limited the study. These factors encompass various limitations; such as issues with external validity, time constraints, and value-driven results. A qualitative analysis is limited in the research scope, since it is difficult to assess the impact it has on the real-world situation (Velez, 2008).

The limitations of the study are those characteristics of design or methodology that impact or influence the interpretation constraints on generalisability, applications to

practice, as well as utility of findings as initially designed. Equally, it also deals with the ways the study method was established to ensure internal and external validity. In this study, the activities were confined to hospitals in the capital city. This was due to financial and time constraints.

6.3.1 Population

In this study, the population of interest was the health care professionals working in the maternity sections of the KSH and the WCH between 2012-2014. The researcher used the concept of saturation, whereby no new information was obtained.

In this study, it was not possible to generalise the results to the entire country because the study was confined to the Khomas Region only. However, it should be considered that intermediate and national referral hospitals in Windhoek were used as referral hubs for the country. The patients are referred to these two hospitals in Windhoek for complex conditions for further assessment, diagnosis, treatment, and management. The participants in this study indicated that the findings were contextual, however, the results were valuable as reference for future research.

6.3.2 Sample size

In simple terms, it is the number of individuals that are to be included in the sample. In qualitative research, such as this one, the strategy used is purposive sampling. The participants should fit the research question. Sample size is affected by available resources, study time, objectives, and determined by “theoretical saturation” (Bernard, 2011). In this study, saturation determined the sample size. The interview process was saturated when no new information was gathered, which was also called the redundancy criterion.

The pilot study was conducted at the Rehoboth District Hospital and 12 health professionals were interviewed. The shortage of staff was experienced country wide but the researcher was fortunate enough to include two social workers.

6.3.3 Data analysis and presentation of the findings

During the development of the guidelines, it was clear that the roles and responsibilities of the various health care professionals needed updated knowledge. The challenges they faced are stipulated in Chapter 4. These challenges were emerging from the experiences of the participants in this study.

Qualitative data analysis took place concurrently with data collection to allow researcher to generate an emerging understanding of the phenomenon in question. The iterative process of data collection and analysis led to a point where no new categories or themes emerged. That signals that the data was saturated.

The researcher created a data base to generate findings that transformed the raw data into new knowledge. That was done by active engagement in the analysis processes throughout all phases of the research project. The researcher relied on inductive reasoning processes to interpret and structure the meanings from derived data, and was concerned with uncovering knowledge how people think and feel about their experiences.

The reason for data analysis was to certain procedures on a large body of information. This is to synthesise, interpret, and communicate the obtained data. That data was more complex than quantitative data. A researcher should be sensitive, creative, and have insight. Groenewald (2004) focuses on qualitative analysis processes in search of meanings and relationships among categories and themes.

Tesch's method of data analysis was used (Creswell, 2008). In a qualitative study, various strategies can be used, however, the most common method for data collection is interviews.

6.3.4 Health professionals

Health professionals are the ones who are providing health care at the facilities, thus their knowledge and skills are paramount. They should be properly trained to deliver quality health care to the patients. This is congruent to the challenges expressed by them in terms of knowledge. The researcher is recommending in-service training workshops and managers should lead these training events. The priority areas are the maternity sections and primary health care services. It is also advised to develop a programme that will be evaluated periodically. The periodical revision will help to provide updated information to the health care professionals.

6.4 RECOMMENDATIONS

Recommendations are suggestions that are based on the experiences of the participants. The value of the study is appreciated by the users in terms of knowledge acquired (Lobiondo-Wood & Haber, 2010).

Recommendations are based on the direct information provided by health care professionals in the field. Furthermore, the recommendations are lessons learned during the situational analysis and the existing gaps in the field.

6.4.1 Policymakers

Management of FAS should be based on a comprehensive approach. It is important to identify FAS at an early stage to prevent complications of the various systems. In

this study, there was a dire need for the health professionals to acquire knowledge appropriate to managing FAS at the health facilities. The guidelines developed are the instruments to apply for the multidimensional aspects of FAS. Equally, the guidelines have described the roles and responsibilities of each professional in relation to his or her scope of practice under the auspices of the HPCNA (2004).

Management should provide resources for the health professionals to discharge their duties effectively. Equally paramount, is the creation of a conducive environment in which the health professional operates, thus space for interaction with patients, as well appropriate tools are required. Therefore, the researcher urges the management to implement policies and guidelines that should be transformed into a training agenda and dissemination of FAS information. The management should also be involved in interprofessional collaboration and be proactive to ensure effectiveness of these policies and guidelines in terms of action.

6.4.2 Education

The patient-centred health care needs skilled and competent health care professionals. It is in this sense that the health care professionals should be trained to address the challenges of the existing health care system (Institute of Medicine, 2001).

The health care professionals training institutions should include foetal alcohol syndrome management in the curricula. The health care professionals should be well prepared before entering the service. Challenges in health care require profound changes in how health systems are designed. It should be understood that skilled health care professionals are the key to quality health care delivery. In turn, this

ensures that the patients' needs are addressed and satisfaction of the patients is secured (Institute of Medicine (IOM), 2001).

The health care professionals should provide quality care with dignity, respect, values, expressed needs, and a focus on population health. The growing needs of chronic conditions such as foetal alcohol syndrome need specific training (Wu & Green, 2000).

In this study, it was imperative to work in a multidisciplinary team to address the multifaceted condition (Weaver & Morse, 2006). Health care professionals should use evidence-based practice for the maximum utilisation of resources.

The researcher recommends that the health care professionals are updated with the latest knowledge that is based on research outcomes (findings). In this study, it was clear that the participants were lagging in terms of knowledge and skills about the management of FAS. Thus, there is an urgent call to train the health care professionals to be knowledgeable. The training institutions are recommended to include FAS in their curricula.

6.4.3 Research

Research is a creation of new knowledge and / or the use of existing knowledge in a new and creative way to generate new concepts, methodologies, and understanding (Murphy, 2002). Qualitative research creates a stepping stone for future researchers. The researcher recommends further in-depth studies in this specific area. There is already an existing point of reference available.

It is the responsibility of the management to establish a research agenda to generate new thoughts and new ideas. The management should secure financial resources to

ensure that Namibia follow the latest trends relating to FAS management. The new data generated will assist in decision-making, since available information is extremely limited. Although the research was conducted only in the Khomas Region, the results / findings portrayed a tangible wealth of information for future research.

6.5 CONTRIBUTIONS

This study has provided a unique contribution and has added new knowledge and ideas to the body of knowledge. There are no guidelines to manage FAS in Namibia, therefore, the developed guidelines for the health care professionals will improve quality health care regarding the management of children with FAS in the Khomas Region. This information available can be used to strengthen interprofessional collaboration and professional growth. It will assist with understanding interactions and processes of managing FAS at the health facilities (Sinuff *et al.*, 2007).

During past decades, evidence-based practice has created research methods that are used to study human phenomena in their naturalistic settings. This evidence-based information forms an integral part of clinical research and relates to the patient values (Sackett *et al.*, 2000). The guidelines developed are the first in Namibia.

There is no information on foetal alcohol syndrome available in Namibia, which makes the contribution of the study unique. Furthermore, the guidelines will influence the management practice of the health care professionals nationally and in the SADC Region too. The conceptual framework was based on the original concepts of Dickoff *et al.* (1968).

6.6 SUMMARY

The purpose and objectives of the study were met. The researcher was committed and was interested in conducting this study and has completed the study in line with the objectives as indicated in Chapter 1. The researcher described the conclusion, restated the objectives, aim, situational analysis, conceptualisation, development of the guidelines, as well as evaluation and validation of the FAS guidelines for health care professionals. Furthermore, he described the limitations regarding population, sample size, data analysis, and findings. It was equally important for the researcher to make recommendations based on the developed guidelines. The researcher used a qualitative research design that was systematic and was appropriate for the study.

REFERENCES

- Abadia, C. E., & Oviedo, D. G. (2009). Bureaucratic itineraries in Colombia. A theoretical and methodological tool to assess managed-care health care systems. *Social Science & Medicine*, 68(6), 1153-1160.
- Alvarez, G., & Coiera, E. (2005). Interruptive communication patterns in the intensive care unit ward round. *International journal of medical informatics*, 74(10), 791-796.
- Amir, L. H., Forster, D. A., Lumley, J., & McLachlan, H. (2007). A descriptive study of mastitis in Australian breastfeeding women: incidence and determinants. *BMC Public Health*, 7(1), 1.
- Anderson, L. Bennett. N (2003), *Developing educational leadership: using evidence for policy and practice*, British Educational Management and Administration Society, London:Sage.
- Anderson, C. (2010). Presenting and evaluating qualitative research. *American journal of pharmaceutical education*, 74(8), 141.
- Anderson, C., Wales, A. W., & Horne, J. A. (2010). PVT lapses differ according to eyes open, closed, or looking away. *Sleep*, 33(2), 197-204.
- Anderson, Joan M., and Elizabeth Kenny McCann (2002). "Toward a post-colonial feminist methodology in nursing research: Exploring the convergence of post-colonial and black feminist scholarship." *Nurse Researcher* 9.3: 7-27. *Approaches*. SAGE Publications, Incorporated.

- Asnani, M. R., Quimby, K. R., Bennett, N. R., & Francis, D. K. (2014). Interventions for patients and caregivers to improve knowledge of sickle cell disease and recognition of its related complications. *The Cochrane Library*.
- Asnani, V., Pandey, U. D., & Sawhney, M. (2004). Social support and occupational health of working women. *Journal of Health Management*, 6(2), 129-139.
- Astley, S. J. (2013). Validation of the fetal alcohol spectrum disorder (FASD) 4-Digit Diagnostic Code. *J Popul Ther Clin Pharmacol*, 20(3), e416-e467.
- Babbie, E., & Mouton, J. (2001). The practice of social science research. *Belmont, CA: Wadsworth*.
- Babbie, E., & Mouton, J. (2002). Social research. *Belmont, CA: Wadsworth Group*.
- Babbie, E.R. (2013) *The practice of social research*, 13 ed. United States of America, Cengage Learning. Health Professions Councils of Namibia, 2004.
- Barth, K., & Hubbard, D. (2009). Alcohol and youths: Suggestions for law reform (No. 4). Gender Research & Advocacy Project, Legal Assistance Centre.
- Batalden, P. B., & Davidoff, F. (2007). What is “quality improvement” and how can it transform healthcare? *Quality and safety in health care*, 16(1), 2-3.
- Bate, R., Tren, R., Hess, K., Mooney, L., & Porter, K. (2009). Pilot study comparing technologies to test for substandard drugs in field settings. *African Journal of Pharmacy and Pharmacology*, 3(4), 165-170.

- Batten, G., Oakes, P. M., & Alexander, T. (2014). Factors associated with social interactions between deaf children and their hearing peers: A systematic literature review. *Journal of Deaf Studies and Deaf Education, 19*(3), 285-302.
- Beauchamp, T. L., & Childress, J. F. (2001). *Principles of biomedical ethics*. Oxford university press.
- Berger, P., & Luckmann, T. (2012). *La construction sociale de la réalité*. Armand Colin.
- Bertrand, M., & Mullainathan, S. (2005). Implicit discrimination. *The American Economic Review, 95*(2), 94-98.
- Bezuidenhout, R. M., Davis, C., & Du Plooy-Cilliers, F. (2014). Research Matters. Quantitative Data analysis, 228-251.
- Borrill, C., West, M., Shapiro, D., & Rees, A. (2000). Team working and effectiveness in health care. *British Journal of Healthcare Management, 6*(8), 364-371.
- Botes, A. C. (1995). A model for research in nursing. *Johannesburg: Rand Afrikaans University, 3-17*.
- Bradley, E. H., Curry, L. A., & Devers, K. J. (2007). Qualitative data analysis for health services research: developing taxonomy, themes, and theory. *Health services research, 42*(4), 1758-1772.
- Branch Jr, W. T., & Paranjape, A. (2002). Feedback and reflection: teaching methods for clinical settings. *Academic Medicine, 77*(12, Part 1), 1185-1188.

- Brennan, T. A. (2000). The Institute of Medicine report on medical errors—could it do harm? *New England Journal of Medicine*, 342(15), 1123-1125.
- Bridges, D. R., Davidson, R. A., Odegard, P. S., Maki, I. V., & Tomkowiak, J. (2011). Interprofessional collaboration: three best practice models of interprofessional education. *Medical education online*, 16.
- Broussard, S. C., & Garrison, M. E. (2004). The relationship between classroom motivation and academic achievement in elementary-school-aged children. *Family and Consumer Sciences Research Journal*, 33(2), 106-120.
- Brown, M. E., & Treviño, L. K. (2006). Ethical leadership: A review and future directions. *The leadership quarterly*, 17(6), 595-616.
- Burns, J. M. (2003). *Transforming leadership: A new pursuit of happiness* (Vol. 213). Grove Press.
- Burns, N., & Grove, S. K. (2001). *The practice of nursing research, conduct, critique, and utilization*, WB Saunders. *Philadelphia, Pa.*
- Burns, N., & Grove, S. K. (2009). *The practice of nursing research: Appraisal. Synthesis and Generation of Evidence*. 6th Edition St Louis: Saunders Elsevier.
- Burns, N., & Grove, S. K. (2009). *The practice of nursing research: Appraisal. Synthesis, and Generation of Evidence*, 6th Edition, States of America: Saunders.
- Byrne-Armstrong, H., Higgs, J., & Horsfall, D. (2001). *Critical moments in qualitative research*. Butterworth-Heinemann Medical.

- Cameron, J. L., & Cameron, A. M. (2013). *Current surgical therapy*. Elsevier Health Sciences.
- Campbell, B., & Mackay, G. (2001). Continuing competence: An Ontario nursing regulatory program that supports nurses and employers. *Nursing Administration Quarterly*, 25(2), 22-30.
- Carr, L. T. (1994). The strengths and weaknesses of quantitative and qualitative research: What method for nursing? *Journal of advanced nursing*, 20(4), 716-721.
- Carson, D., Gilmore, A., Perry, C., & Gronhaug, K. (2001). *Qualitative marketing research*. Sage.
- Casey, D., & Murphy, K. (2009). Issues in using methodological triangulation in research:
- Checkoway, B., Richards-Schuster, K., Abdullah, S., Aragon, M., Facio, E., Figueroa, L., ...& White, A. (2003). Young people as competent citizens. *Community Development Journal*, 38(4), 298-309.
- Chigurupati, S., Mughal, M. R., Chan, S. L., Arumugam, T. V., Baharani, A., Tang, S. C., ... & Greig, N. H. (2010). A synthetic uric acid analog accelerates cutaneous wound healing in mice. *PLoS One*, 5(4), e10044.
- Chinn, P. L., & Kramer, M. K. (1991). *Theory and nursing: a systematic approach*. St. Louis: Mosby-Year Book.

- Chudley, A. E., Conry, J., Cook, J. L., Loock, C., Rosales, T., & LeBlanc, N. (2005). Fetal alcohol spectrum disorder: Canadian guidelines for diagnosis. *Canadian Medical Association Journal*, 172(5 suppl), S1-S21.
- Chudley, A. E., Conry, J., Cook, J. L., Loock, C., Rosales, T., & LeBlanc, N. (2005). Fetal alcohol spectrum disorder: Canadian guidelines for diagnosis. *Canadian Medical Association Journal*, 172(5 suppl), S1-S21.
- Claire-Jehanne Dubouloz, O. T., Jacinthe Savard, O. T., Burnett, D., & Paulette Guitard, O. T. (2010). An interprofessional rehabilitation university clinic in primary health care: a collaborative learning model for physical therapist students in a clinical placement. *Journal of Physical Therapy Education* Vol, 24(1).
- Coady, N., & Lehmann, P. (2008). An overview of and rationale for a generalist-eclectic approach to direct social work practice. Theoretical perspectives for direct social work practice: A generalist-eclectic approach, 3-40.
- Cope, D. G. (2014, January). Methods and meanings: credibility and trustworthiness of qualitative research. In *Oncology nursing forum* (Vol. 41, No. 1).
- Creswell, J. (2009). Research design: Qualitative, quantitative, and mixed methods
- Creswell, J. W. (2012). Qualitative inquiry and research design: Choosing among five approaches. Sage.
- Creswell, J. W., & Clark, V. L. P. (2007). Designing and conducting mixed methods research.

- Creswell, J. W., & Garrett, A. L. (2008). The " movement" of mixed methods research and the role of educators. *South African Journal of Education*, 28(3), 321-333.
- Creswell, J. W., & Garrett, A. L. (2008). The " movement" of mixed methods research and the role of educators. *South African journal of education*, 28(3), 321-333.
- Creswell, J. W., Hanson, W. E., Plano, V. L. C., & Morales, A. (2007). Qualitative research designs selection and implementation. *The counseling psychologist*, 35(2), 236-264.
- David, M., & Sutton, C. D. (2004). *Social research: The basics*. Sage.
- Davies, B., & Bansel, P. (2007). Neoliberalism and education. *International journal of qualitative studies in education*, 20(3), 247-259.
- De Villiers, B. (2009). Psycho-educational guidelines for the use of music in a group anger management programme for children in residential care in Gauteng.
- De Vos, A. S., Delpont, C. S. L., Fouché, C. B., & Strydom, H. (2011). *Research at grass roots: A primer for the social science and human professions*. Van Schaik Publishers.
- Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE handbook of qualitative research*. Sage.
- Denzin, N. K., & Lincoln, Y. S. (2011). *The Sage handbook of qualitative research*. Sage.

- Deussom, R., Jaskiewicz, W., Adams, E., & Tulenko, K. (2012). Ensuring a positive practice environment: occupational safety and health for health worker productivity. *Technical Brief Number, 4*.
- Diallo, K., Zurn, P., Gupta, N., & Dal Poz, M. (2003). Monitoring and evaluation of human resources for health: an international perspective. *Human resources for health, 1*(1),1.
- Dickoff, J., & James, P. (1968). A theory of theories: a position paper. *Nursing Research, 17*(3), 197-203.
- Dickoff, J., James, P., & Wiedenbach, E. (1968). THEORY IN A PRACTICE DISCIPLINE: PART I. PRACTICE ORIENTED THEORY. *Nursing research, 17*(5), 415-434.
- Dictionary, O. E. (2004). Oxford English dictionary online. *Mount Royal College Lib.*, Calgary, 14.
- Dictionary, O. E. (2013, April). Oxford UP, 2013.Web.
- Dong, L., Yan, H., & Wang, D. (2011). Drug prescribing indicators in village health clinics across 10 provinces of Western China. *Family practice, 28*(1), 63-67.
- Dowling, M. (2006). Approaches to reflexivity in qualitative research. *Nurse researcher, 13*(3), 7-21.
- Drummond, M. F., Sculpher, M. J., Claxton, K., Stoddart, G. L., & Torrance, G. W. (2015). *Methods for the economic evaluation of health care programmes*. Oxford university press.

- Dympna Casey and Kathy Murphy explore the advantages and disadvantages of using triangulation. *Nurse researcher*, 16(4), 40-55.
- Eisenberg, L. (2000). Is psychiatry more mindful or brainier than it was a decade ago? *The British journal of psychiatry*, 176(1), 1-5.
- Elmendorf, A. E., Jensen, E. R., & Pisani, E. (2005). *Evaluation of the World Bank's Assistance in Responding to the AIDS Epidemic: Indonesia Case Study*. World Bank.
- Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of advanced nursing*, 62(1), 107-115.
- Entwistle, V. A., McCaughan, D., Watt, I. S., Birks, Y., Hall, J., Peat, M., ...& Wright, J. (2010). Speaking up about safety concerns: multi-setting qualitative study of patients' views and experiences. *Quality and Safety in Health Care*, 19(6), e33-e33.
- EWCA 1554; (2015) 1 QB 459 (Lord Justice Treacy MR, Lady Justice King). *Psychiatry, Psychology and Law*, 23(2), 165-172.
- Fernald, D. H., & Duclos, C. W. (2005). Enhance your team-based qualitative research. *The Annals of Family Medicine*, 3(4), 360-364.
- Field, M. J., & Lohr, K. N. (1992). A provisional instrument for assessing clinical practice guidelines.
- Fixsen, D. L., Naoom, S. F., Blase, K. A., & Friedman, R. M. (2005). Implementation research: a synthesis of the literature.

- Fong, V. L. (2008). The other side of the healthy immigrant paradox: Chinese sojourners in Ireland and Britain who return to China due to personal and familial health crises. *Culture, Medicine, and Psychiatry*, 32(4), 627-641.
- Fossey, E., Harvey, C., McDermott, F., & Davidson, L. (2002). Understanding and evaluating qualitative research. *Australian and New Zealand journal of psychiatry*, 36(6), 717-732.
- Freckelton, I. (2016). Fetal Alcohol Spectrum Disorders and Criminal Injuries Compensation Entitlements: CP (A Child) v First Tier Tribunal (Criminal Injuries Compensation) [2014].
- Galford, R., & Maruca, R. (2010). How legacy thinking makes better leader today. *Boston Business*.
- Gallicano, G. I., & Mishra, L. (2010). Hepatocytes from induced pluripotent stem cells: a giant leap forward for hepatology. *Hepatology*, 51(1), 20-22.
- Gelling, L., & Chatfield, D. (2002). Research collaboration. *Nurse researcher*, 9(2), 4-16.
- Germain, R. (2004). An exploratory study using cameras and Talking Mats to access the views of young people with learning disabilities on their out-of-school activities. *British Journal of Learning Disabilities*, 32(4), 170-174.
- Gerring, J. (2006). *Case study research: Principles and practices*. Cambridge University Press.
- Gessler, R., Rosenstein, A., & Ferron, L. (2012). How to handle disruptive physician behavior. *Am Nurse Today*, 7(11), 8-10.

- Giger, J. N. (2016). *Transcultural nursing: Assessment and intervention*. Elsevier Health Sciences.
- Gill, R., & Pratt, A. (2008). In the social factory? Immaterial labour, precariousness and cultural work. *Theory, culture & society*, 25(7-8), 1-30.
- Giri, K., Frankel, N., Tulenko, K., Puckett, A., Bailey, R., & Ross, H. (2012). Keeping up to date: Continuing professional development for health workers in developing Countries. *Intra Health International*.
- Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The qualitative report*, 8(4), 597-606.
- Goleman, D. (1998). *Working with emotional intelligence*. Bantam.
- Gouran, D. S., & Hirokawa, R. Y. (1996). Functional theory and communication in decision-making and problem-solving groups. An expanded view. *Communication and group decision making*. Sage, Thousand Oaks, CA, 55-80.
- Green, L. W., & Glasgow, R. E. (2006). Evaluating the relevance, generalization, and applicability of research: issues in external validation and translation methodology. *Evaluation & the health professions*, 29(1), 126-153.
- Green, L. W., & Kreuter, M. W. (2005). *Health program planning: An educational and ecological approach*.
- Greenbank, P. (2003). Collaboration in the assessment process: an initial evaluation of collaboration on an undergraduate business and management course. *Teaching in Higher Education*, 8(3), 317-331.

- Greenhalgh, T., Robert, G., Bate, P., Macfarlane, F., & Kyriakidou, O. (2008). *Diffusion of innovations in health service organisations: a systematic literature review*. John Wiley & Sons.
- Greiner, A. C., & Knebel, E. (2003). The core competencies needed for health care professionals.
- Groenewald, T. (2004). A phenomenological research design illustrated. *International journal of qualitative methods*, 3(1), 42-55.
- Guba, E. G. and Lincoln, Y. S. (1994). "Competing paradigms in qualitative research." In NK Denzin and YS Lincoln (eds.) *Handbook of Qualitative Research*. pp. 105-117.
- Ham, L. S., & Hope, D. A. (2003). College students and problematic drinking: A review of the literature. *Clinical psychology review*, 23(5), 719-759.
- Heiman, F., Pinard, P., Werback, A., & Shiba, M. (1999). *U.S. Patent No. 6,002,918*. Washington, DC: U.S. Patent and Trademark Office.
- Henning, E., Van Rensburg, W., & Smit, B. (2004). *Finding your way in qualitative research* (pp. 19-22). Pretoria: Van Schaik.
- HIV, C. AIDS Surveillance Report. Atlanta, GA: US Department of Health and Human Services, CDC; 2004.
- Hojat, M. (2009). Ten approaches for enhancing empathy in health and human services cultures. *Journal of health and human services administration*, 412-450.

- Holloway, I., & Galvin, K. (2016). *Qualitative research in nursing and healthcare*.
John Wiley & Sons.
- Holloway, I., & Wheeler, S. (2002). Ensuring trustworthiness and quality. *Holloway I, Wheeler S. Research in nursing*. 2nd Ed. Blackwell Publishing, India 1996, 250-63.
- Homan, G. F., Davies, M., & Norman, R. (2007). The impact of lifestyle factors on reproductive performance in the general population and those undergoing infertility treatment: a review. *Human reproduction update*, 13(3), 209-223.
- Homan, G. F., Davies, M., & Norman, R. (2007). The impact of lifestyle factors on reproductive performance in the general population and those undergoing infertility treatment: a review. *Human reproduction update*, 13(3), 209-223.
- Hsiung, P. C. (2012, January). The globalization of qualitative research: Challenging Anglo-American domination and local hegemonic discourse. In *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* (Vol. 13, No. 1).
- Huberman, M., & Miles, M. B. (2002). *The qualitative researcher's companion*. Sage. Pg. 253
- Hudelson, P., Cleopas, A., Kolly, V., Chopard, P., & Perneger, T. (2008). What is quality and how is it achieved? Practitioners' views versus quality models. *Quality and Safety in Health Care*, 17(1), 31-36.
- Hughes, R. G., & Hughes, R. G. (2008). Tools and strategies for quality improvement and patient safety.

- Huitt, W. (2004). Maslow's hierarchy of needs. *Educational psychology interactive*.
- Humphrey, J. A., & White, J. W. (2000). Women's vulnerability to sexual assault from adolescence to young adulthood. *Journal of Adolescent Health, 27*(6), 419-424.
- Hurwitz, B. (1999). Legal and political considerations of clinical practice guidelines. *British Medical Journal, 318*(7184), 661.
- Hurwitz, B. (1999). Legal and political considerations of clinical practice guidelines. *BMJ: British Medical Journal, 318*(7184), 661.
- Institute of Medicine (US) (2001). Committee on Quality of Health Care in America. Crossing the quality chasm: a new health system for the 21st century. National Academy Press.
- International conference on health promotion, Ottawa, 21 November 1986. *Geneva: WHO*.
- Jaeschke, A., den Camp, H. J. O., Harhangi, H., Klimiuk, A., Hopmans, E. C., Jetten, M. S., ... & Damsté, J. S. S. (2009). 16S rRNA gene and lipid biomarker evidence for anaerobic ammonium-oxidizing bacteria (anammox) in California and Nevada hot springs. *FEMS microbiology ecology, 67*(3), 343-350.
- Jaye, D. J. (2002). *U.S. Patent No. 6,415,322*. Washington, DC: U.S. Patent and Trademark Office.
- Jernigan, D. H., Monteiro, M., Room, R., & Saxena, S. (2000). Towards a global alcohol policy: alcohol, public health and the role of WHO. *Bulletin of the World Health Organization, 78*(4), 491-499.

Joint Commission on Accreditation of Healthcare Organizations.

(2003). *Comprehensive Accreditation Manual for Home Care, 2004 2005*. Joint Commission on.

Kabongo, L. (2015). " No Woman Should Die While Giving Birth". A Discussion on the Progress Made and Limitations on Achieving the MDG5 in Namibia. GRIN Verlag.

Kamali, A. M. A. (2014, June). The Value of Mixed Research Method for Investigating a new Technology. In European Conference on Research Methodology for Business and *Management Studies* (p. 192). Academic Conferences International Limited.

Kanouse, D. E. (2005). Perceived discrimination in clinical care in a nationally representative sample of HIV-infected adults receiving health care. *Journal of general internal medicine, 20*(9), 807-813.

Karle, H. (2008). International recognition of basic medical education programmes. *Medical education, 42*(1), 12-17.

Khan, K. S., & Coomarasamy, A. (2006). A hierarchy of effective teaching and learning to acquire competence in evidenced-based medicine. *BMC medical education, 6*(1), 1.

Khan, S. A., Bhatti, R., & Khan, G. (2011). Information-Seeking Behavior of Law Practitioners: A Survey of Bahawalpur City.

- King, C. A. (2008). Community resilience and contemporary agri-ecological systems: reconnecting people and food, and people with people. *Systems Research and Behavioral Science*, 25(1), 111-124.
- Koda-Kimble, M. A. (2012). *Koda-Kimble and Young's applied therapeutics: the clinical use of drugs*. B. K. Alldredge, R. L. Corelli, & M. E. Ernst (Eds.). Lippincott Williams & Wilkins.
- Kulig, J. C. (2000). Community resiliency: The potential for community health nursing theory development. *Public Health Nursing*, 17(5), 374-385.
- Latif, S., Ayub, Z., & Siddiqui, G. (2013). Seasonal variability of phytoplankton in a coastal lagoon and adjacent open sea in Pakistan. *Turkish Journal of Botany*, 37(2), 398-410
- Lawal, M. (2009). Reconciling methodological approaches of survey and focus group: Muili Lawal explains how to use two research methodologies with different philosophical underpinnings. *Nurse Researcher*, 17(1), 54-61.
- Le Gall, L., Payri, C. E., Bittner, L., & Saunders, G. W. (2010). Multigene phylogenetic analyses support recognition of the Sporolithales ord. nov. *Molecular Phylogenetics and Evolution*, 54(1), 302-305.
- LeBeau, Debie, and P. Stanley Yoder (2009). "Alcohol consumption sexual partners and HIV transmission in Namibia."
- Ledermann, J., Harter, P., Gourley, C., Friedlander, M., Vergote, I., Rustin, G., ...& Matei, D. (2012). Olaparib maintenance therapy in platinum-sensitive relapsed ovarian cancer. *New England Journal of Medicine*, 366(15), 1382-1392.

- Ledford, G. E., Gerhart, B., & Fang, M. (2013). Negative effects of extrinsic rewards on intrinsic motivation: more smoke than fire. *World at Work Journal, Second Quarter*.
- Lew, R. (2010). Online dictionaries of English.
- Lightfoot, E., Maree, M., & Ananias, J. (2009). Exploring the relationship between HIV and alcohol use in a remote Namibian mining community. *African Journal of AIDS Research, 8*(3), 321-327.
- Lincoln, Y. S., & Denzin, N. K. (2003). Turning points in qualitative research: Tying knots in a handkerchief. Rowman Altamira.
- Lincoln, Y. S., & Guba, E. G. (1988). Naturalistic inquiry. 1985. *VALLES, M. Técnicas, 20*.
- Littauer, H., Sexton, H., & Wynn, R. (2005). Qualities clients wish for in their therapists. *Scandinavian Journal of Caring Sciences, 19*(1), 28-31.
- Litwin, M. S. (1995). How to measure survey reliability and validity (Vol. 7). Sage Publications.
- LoBiondo-Wood, G., & Haber, J. (2010). Reliability and validity. *Nursing research: Methods and critical appraisal for evidence-based practice, 285-308*.
- Lohr, K. N., & Field, M. J. (Eds.). (1990). *Clinical practice guidelines: directions for a new program* (Vol. 90, No. 8). National Academies Press.
- Longo-Mbenza, B., Ngoma, D. V., & Fuele, S. M. (2010). Low birth weight, metabolic syndrome and their associations with the global crisis of 1930-1945,

- rapidly growing economy and coronary heart disease in Central Africa. *International Journal of Nutrition and Metabolism*, 2(1), 001-010.
- Luoma, M. (2006). Increasing the motivation of health care workers. *Capacity Project Technical Brief*, 7.
- Mack, N., Woodson, C., MacQueen, K. M., Guest, G., & Namey, E. (2005). *Qualitative research methods: a data collector's field guide*.
- Malterud, K. (2001). Qualitative research: standards, challenges, and guidelines. *The lancet*, 358(9280), 483-488.
- Manser, T. (2009). Teamwork and patient safety in dynamic domains of healthcare: a review of the literature. *Acta Anaesthesiologica Scandinavica*, 53(2), 143-151.
- Marzano, M. (2007). Informed consent, deception, and research freedom in qualitative research. *Qualitative Inquiry*, 13(3), 417-436.
- Masys, D. R., Brennan, P. F., Ozbolt, J. G., Corn, M., & Shortliffe, E. H. (2000). Are medical informatics and nursing informatics distinct disciplines? *Journal of the American Medical Informatics Association*, 7(3), 304-312.
- Matthews, P. H. (2007). *The concise Oxford dictionary of linguistics*. Oxford University Press.
- Maurage, P., Grynberg, D., Noël, X., Joassin, F., Philippot, P., Hanak, C., ...& Campanella, S. (2011). Dissociation between affective and cognitive empathy in alcoholism: a specific deficit for the emotional dimension. *Alcoholism: Clinical and Experimental Research*, 35(9), 1662-1668.

- May, P. A., & Phillip Gossage, J. (2011). Maternal risk factors for fetal alcohol spectrum disorders: not as simple as it might seem. *Alcohol Research and Health, 34*(1), 15.
- May, P. A., Blankenship, J., Marais, A. S., Gossage, J. P., Kalberg, W. O., Barnard, R., & Manning, M. (2013). Approaching the prevalence of the Full Spectrum of Fetal Alcohol Spectrum Disorders in a South African population-based study. *Alcoholism: Clinical and experimental research, 37*(5), 818-830.
- May, P. A., Gossage, J. P., Marais, A. S., Adnams, C. M., Hoyme, H. E., Jones, K. L., ... & Viljoen, D. L. (2007). The epidemiology of fetal alcohol syndrome and partial FAS in a South African community. *Drug and alcohol dependence, 88*(2), 259-271.
- McColl, M. A., Law, M., Baptiste, S., Pollock, N., Carswell, A., & Polatajko, H. J. (2005). Targeted applications of the Canadian occupational performance measure. *Canadian journal of occupational therapy, 72*(5), 298-300.
- McDonald, R. P. (2014). *Factor analysis and related methods*. Psychology Press.
- McGloin, S. (2008). The trustworthiness of case study methodology: With the validity of qualitative research currently under scrutiny, this paper by Sarah McGloin considers the contribution of the case study to the evidence base in health care. The author argues that case study methodology offers a creative and credible approach to help underpin contemporary practice. *Nurse Researcher, 16*(1), 45-55.
- McQueen, R. A., & Knussen, C. (2002). *Research methods for social science: A practical introduction*. Pearson Education.

- Merton, R. K. (2008). *Focused interview*. Simon and Schuster.
- Mickan, S. M. (2005). Evaluating the effectiveness of health care teams. *Australian Health Review*, 29(2), 211-217.
- Miles, M. B., Huberman, A. M., & Saldana, J. (2013). *Qualitative data analysis: A methods sourcebook*. SAGE Publications, Incorporated.
- Miles, M. B., Huberman, A. M., & Saldana, J. (2013). *Qualitative data analysis*. Sage.
- Minichiello, V., Aroni, R., & Hays, T. (2008). In-depth interviewing: Principles, techniques, *analysis*. Pearson Education Australia.
- Mouton, J. W., Dudley, M. N., Cars, O., Derendorf, H., & Drusano, G. L. (2005). Standardization of pharmacokinetic/pharmacodynamic (PK/PD) terminology for anti-infective drugs: an update. *Journal of antimicrobial Chemotherapy*, 55(5), 601-607.
- Mouton, J., Marais, H. C., Prinsloo, K. P., & Rhodie, N. J. (1990). *Basiese begrippe: metodologie van die geesteswetenskappe*. Pretoria: Raad vir Geesteswetenskaplike Navorsing.
- Munhall, P. L. (2007). Nursing research: A qualitative approach. *Nursing Research: A Qualitative Approach*.
- Murphy, K. R., Landau, S. M., Choudhury, K. R., Hostage, C. A., Shpanskaya, K. S., Sair, H. I., & Alzheimer's Disease Neuroimaging Initiative. (2013). Mapping the effects of ApoE4, age and cognitive status on 18F-florbetapir

- PET measured regional cortical patterns of beta-amyloid density and growth. *Neuroimage*, 78, 474-480.
- Murphy, M. (Ed.). (2002). The OECD small and medium enterprise outlook. OECD Publishing.
- Muzio, D., & Kirkpatrick, I. (2011). Introduction: Professions and organizations-a conceptual framework. *Current Sociology*, 59(4), 389-405.
- Myers, M. D. (1997). Qualitative research in information systems. *Management Information Systems Quarterly*, 21(2), 241-242.
- Nardi, P. M. (2015). *Doing survey research*. Routledge.
- Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence Based Nursing*, 18(2), 34-35.
- Nolte, J., & Tremblay, M. (2005). Enhancing interdisciplinary collaboration in primary health care in Canada. *Enhancing Interdisciplinary Collaboration in Primary Health Care*.
- Norman, A. L., Crocker, N., Mattson, S. N., & Riley, E. P. (2009). Neuroimaging and fetal alcohol spectrum disorders. *Developmental disabilities research reviews*, 15(3), 209-217.
- Onwuegbuzie, A. J., & Collins, K. M. (2007). A typology of mixed methods sampling designs in social science research. *The qualitative report*, 12(2), 281-316.

- O'Reilly, J. R., & Reynolds, R. M. (2013). The risk of maternal obesity to the long-term health of the offspring. *Clinical endocrinology*, 78(1), 9-16.
- Oster, W. (2003). *U.S. Patent No. 6,644,973*. Washington, DC: U.S. Patent and Trademark Office.
- Östman, J. O., Verschueren, J., & Versluys, E. (Eds.), (2007). *Handbook of pragmatics* (Vol.11). John Benjamins Publishing.
- Owens, R. E., Metz, D. E., & Haas, A. (2007). *Introduction to communication disorders: A lifespan perspective*. Allyn & Bacon.
- Parahoo, K. (2006). *Nursing Research: Principles. Process and*, (2nd).
- Pardue, K. T. (2013). Not left to chance: Introducing an undergraduate interprofessional education curriculum. *Journal of interprofessional care*, 27(1), 98-100.
- Patel, V., MAJ, M., Flisher, A. J., Silva, M. J., Koschorke, M., Prince, M., & Risco, L. (2010). Reducing the treatment gap for mental disorders: a WPA survey. *World Psychiatry*, 9(3), 169-176.
- Patton, M. Q. (2001). Evaluation, knowledge management, best practices, and high quality lessons learned. *The American journal of evaluation*, 22(3), 329-336.
- Patton, M. Q. (2002). Two decades of developments in qualitative inquiry a personal, experiential perspective. *Qualitative social work*, 1(3), 261-283.
- Pilot, G., Lacombe, B., Gaymard, F., Chérel, I., Boucherez, J., Thibaud, J. B., & Sentenac, H. (2001). Guard Cell Inward K⁺ Channel Activity in Arabidopsis

Involves Expression of the Twin Channel Subunits KAT1 and KAT2. *Journal of Biological Chemistry*, 276(5), 3215-3221.

Pintrich, P. R., & Sinatra, G. M. (2003). Future directions for theory and research on intentional conceptual change.

Polit, D. F., & Beck, C. T. (2004). *Nursing research: Principles and methods*. Lippincott Williams & Wilkins.

Polit, D., Beck, C., & Hungler, B. P. T. (2006). *Essentials of nursing research: methods, appraisal, and Utilization*.

Pope, C., Ziebland, S., & Mays, N. (2000). Analysing qualitative data. *Bmj*, 320(7227), 114-116.

Professionals—A guide to effective smoking cessation interventions for the health care system. *Thorax*, 53(suppl 5), S1-S18.

Rakich, L., Darr. (2000). *Managing Health Services Organizations*.

Raw, M., McNeill, A. N. N., & West, R. (1998). *Smoking Cessation Guidelines for Health*

Repko, A. F., & Szostak, R. (2016). *Interdisciplinary research: Process and theory*. Sage Publications.

Rigoli, F., & Dussault, G. (2003). The interface between health sector reform and human resources in health. *Human resources for health*, 1(1), 1.

- Robards, M. D., & Lovecraft, A. L. (2010). Evaluating Comanagement for Social-Ecological Fit: Indigenous Priorities and Agency Mandates for Pacific Walrus. *Policy Studies Journal*, 38(2), 257-279.
- Robinson, K. (2011). *Out of our minds: Learning to be creative*. John Wiley & Sons.
- Romanow, R. J. (2002). *Building on values: the future of health care in Canada*.
- Rossouw, T. M., Anderson, R., & Feldman, C. (2015). Impact of HIV infection and smoking on lung immunity and related disorders. *European Respiratory Journal*, ERJ-00353.
- Rubin, H. R., Pronovost, P., & Diette, G. B. (2001). The advantages and disadvantages of process-based measures of health care quality. *International Journal for Quality in Health Care*, 13(6), 469-474.
- Rush, A. J., & Thase, M. E. (2002). Psychotherapies for Depressive. *Depressive disorders*, 161.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, 55(1), 68.
- Sackett, D. L., Straus, S. E., Richardson, W. S., Rosenberg, W., & Haynes, R. B. (2000). *How to practice and teach EBM*. Edinburgh: Churchill Livingstone.
- Saunders, M. & Lewis, P. (2007). Thornhill. 2007. *Research methods for business students*, 4.

- Sayon-Orea, C., Martinez-Gonzalez, M. A., & Bes-Rastrollo, M. (2011). Alcohol consumption and body weight: a systematic review. *Nutrition reviews*, 69(8), 419-431.
- Schilling, J. (2006). On the pragmatics of qualitative assessment. *European Journal of Psychological Assessment*, 22(1), 28-37.
- Schnell, U., Cirulli, V., & Giepmans, B. N. (2013). EpCAM: structure and function in health and disease. *Biochimica et Biophysica Acta (BBA)- Biomembranes*, 1828(8), 1989-2001.
- Schwandt, T. A. (2007). *The Sage dictionary of qualitative inquiry*. Sage.
- Scott, D. L. (2009). *The American heritage dictionary of business terms*. Houghton Mifflin Harcourt.
- Seaman, J., Beightol, J., Shirilla, P., & Crawford, B. (2010). Contact theory as a framework for experiential activities as diversity education: An exploratory study. *Journal of Experiential Education*, 32(3), 207-225.
- Searle, J. R. (2004). *Mind: a brief introduction*. Oxford University Press.
- Semont, A., Nowak, E. B., Lages, C. S., Mathieu, C., Mouthon, M. A., May, E., & Boussin, F. D. (2004). Involvement of p53 and Fas/CD95 in murine neural progenitor cell response to ionizing irradiation. *Oncogene*, 23(52), 8497-8508.
- Shamdasani, P. N., & Balakrishnan, A. A. (2000). Determinants of relationship quality and loyalty in personalized services. *Asia Pacific Journal of Management*, 17(3), 399-422.

- Shelton, J. N., Richeson, J. A., Salvatore, J., & Trawalter, S. (2005). Ironic effects of racial bias during interracial interactions. *Psychological Science, 16*(5), 397-402.
- Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for information, 22*(2), 63-75.
- Shuttleworth, M. (2008). Survey Research Design. *Explorable Psychology Experiments*.
- Silverman, D. (Ed.). (2010). *Qualitative research*. Sage.
- Singh, K. (2007). Quantitative social research methods. Sage.
- Sinuff, T., Cook, D. J., & Giacomini, M. (2007). How qualitative research can contribute to research in the intensive care unit. *Journal of critical care, 22*(2), 104-111.
- Smith, R., Álvarez, M. M., & Chanda, R. (2011). Medical tourism: a review of the literature and analysis of a role for bi-lateral trade. *Health Policy, 103*(2), 276-282.
- Speziale, H. J. S., & Carpenter, D. R. (2007). Action research method. *Qualitative research in nursing. Advancing the humanistic imperative, 327-347*.
- Spradley, E., Johnson, A., Sochalski, J., Fritz, M., & Spencer, W. (2000). The Registered Nurse Population, March 2000: Findings From the National Sample Survey of Registered Nurses. *US Department of Health and Human Services. Retrieved July, 29, 2004*.

- Stetson, P. D., McKnight, L. K., Bakken, S., Curran, C., Kubose, T. T., & Cimino, J. J. (2001). Development of an ontology to model medical errors, information needs, and the clinical communication space. In *Proceedings of the AMIA Symposium* (p. 672). American Medical Informatics Association.
- Stewart, S. (2006). Cultural competence in health care. *Sydney: Diversity Health Institute*.
- Streissguth, A. P. (1997). Fetal alcohol syndrome: A guide for families and communities. Paul H Brookes Publishing.
- Streissguth, A. P., Bookstein, F. L., Barr, H. M., Sampson, P. D., O'Malley, K. I. E. R. A. N., & Young, J. K. (2004). Risk factors for adverse life outcomes in fetal alcohol syndrome and fetal alcohol effects. *Journal of Developmental & Behavioral Pediatrics, 25*(4), 228-238.
- Sumpter, T. B. (2004). Elementary assistant principals' perspectives of their instructional leadership role.
- Temple, B., & Young, A. (2004). Qualitative research and translation dilemmas. *Qualitative research, 4*(2), 161-178.
- Tewksbury, R. (2011). Qualitative methodology. *The Routledge Handbook of Deviant Behaviour, 75*.
- Thomas, K. (2003). Religion and the decline of magic: studies in popular beliefs in sixteenth and seventeenth-century England. Penguin UK.
- Thomas-MacLean, R., Tarlier, D., Ackroyd-Stolarz, S., Fortin, M., & Stewart, M. (2014). No cookie-cutter response: conceptualizing primary health care.

- Thorne, S., & Darbyshire, P. (2005). Land mines in the field: A modest proposal for improving the craft of qualitative health research. *Qualitative Health Research*, 15(8),1105-1113.
- Thornton, A., & Young-DeMarco, L. (2001). Four decades of trends in attitudes toward family issues in the United States: The 1960s through the 1990s. *Journal of marriage and family*, 63(4), 1009-1037.
- Thyme, K. E., Wiberg, B., Lundman, B., & Graneheim, U. H. (2013). Qualitative content analysis in art psychotherapy research: Concepts, procedures, and measures to reveal the latent meaning in pictures and the words attached to the pictures. *The Arts in Psychotherapy*, 40(1), 101-107.
- Tjale, A., & De Villiers, L. (2004). Cultural issues in health and health care: A resource book for Southern Africa. Juta and Company Ltd.
- Tobin, G. A., & Begley, C. M. (2004). Methodological rigour within a qualitative framework. *Journal of advanced nursing*, 48(4), 388-396.
- Tongco, M. D. C. (2007). Purposive sampling as a tool for informant selection.
- Tourish, D., & Hargie, O. (2009). Strategy, research and pedagogy. *Auditing Organizational Communication: A Handbook of Research, Theory and Practice*, 393.
- Tye, M. (1997). Qualia.
- Ulrich, R. S. (2006). Essay: evidence-based health-care architecture. *The Lancet*, 368, S38-S39.

- Vanaki, Z., & Memarian, R. (2009). Professional ethics: beyond the clinical competency. *Journal of Professional Nursing*, 25(5), 285-291.
- Velez, A. M. (2008). Evaluating research methods: Assumptions, strengths, and weaknesses of three educational research paradigms. *Academic Exchange—Extra*, 9.
- Weaver, K., & Morse, J. M. (2006). Pragmatic utility: Using analytical questions to explore the concept of ethical sensitivity. *Research and theory for nursing practice*, 20(3), 191-214.
- Weber, M. K., Floyd, R. L., Riley, E. P., & Snider Jr, D. E. (2002). National Task Force on fetal alcohol syndrome and fetal alcohol effect. *MMWR Recomm Rep*, 51, 9-12.
- Wengraf, T., & Chamberlayne, P. (2006). Interviewing for life-histories, lived situations and personal experience. The biographicnarrative interpretive method (BNIM) on its own and as part of a multi-method full spectrum psychosocial methodology. *Short Guide to BNIM interviewing and interpretation*.
- WHO, G. (2011). Guidelines for drinking-water quality. *World Health Organization*, 216, 303-4.
- Willis, J. W., Jost, M., & Nilakanta, R. (2007). Foundations of qualitative research: Interpretive and critical approaches. Sage.

- Willis-Shattuck, M., Bidwell, P., Thomas, S., Wyness, L., Blaauw, D., & Ditlopo, P. (2008). Motivation and retention of health workers in developing countries: a systematic review. *BMC health services research*, 8(1), 247.
- Wong, L. P. (2008). Focus group discussion: a tool for health and medical research. *Singapore Med J*, 49(3), 256-60.
- World Health Organization (WHO). (2016). A global brief on hypertension: silent killer, global public health crisis. *World*.
- World Health Organization. (1986). The Ottawa charter for health promotion: first
- World Health Organization. (2000). The world health report 2000: health systems: improving *performance*. World Health Organization.
- World Health Organization. (2000). *The world health report 2000: health systems: improving performance*. World Health Organization.
- World Health Organization. (2002). WHO (2002). *The world health report*, 81-92.
- World Health Organization. (2002). The world health report 2002: reducing risks, promoting *healthy life*. World Health Organization.
- World Health Organization. (2010). PMTCT strategic vision 2010-2015: preventing mother-to-child transmission of HIV to reach the UNGASS and Millennium Development Goals: moving towards the elimination of paediatric HIV, December 2009.
- World Health Organization. (2011). Rapid advice: Diagnosis, prevention and management of cryptococcal disease in HIV-infected adults, adolescents and

children. Geneva: World Health Organization, 2011. *Geneva: World Health Organization.*

World Health Organization. (2014). *Global status report on alcohol and health.*

World Health Organization.


Wu, S. Y., & Green, A. (2000). Projection of chronic illness prevalence and cost inflation. Santa Monica, CA: RAND Health, 18.

Xyrichis, A., & Ream, E. (2008). Teamwork: a concept analysis. *Journal of advanced nursing, 61*(2), 232-241.

Yin, Robert K. *Case study research: Design and methods.* Sage publications, 2013.

Zevenbergen, A. A., & Ferraro, F. R. (2001). Assessment and treatment of fetal alcohol syndrome in children and adolescents. *Journal of Developmental and Physical Disabilities, 13*(2), 123-136.

ANNEXURE A: INSTITUTIONAL APPROVAL FROM THE POST-GRADUATE SCHOOL COMMITTEE OF THE UNIVERSITY OF NAMIBIA

☎ (+264 61) 206 3111 Website: www.unam.na		310 Mandume Ndamufayo Avenue Private bag 13301 Windhoek NAMIBIA
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Enquiries: Dr. H. J. Amukugo Private Bag 13301 Mandume Ndamufayo Windhoek	Tel. No.: 061- 2054617 Fax No.: 051- e-mail: h.amukugo@unam.na
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All correspondence must be addressed to the Office of the Associate Dean

**LETTER OF PERMISSION:
POST GRADUATE STUDENTS**

Date: 27th September 2013

Student Name: Mr M Goraseb
Student number: 201212694

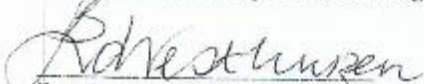
Dear Student

The post graduate studies committee has approved your research proposal.

Development of a Fetal Alcohol Syndrome (FAS) best practice manual for Health Practitioners towards relief of burden of illness in Namibia

It may be required that you need to apply for additional permission to utilize your target population. If so, please submit this letter to the relevant organizations involved. It is stressed that you should not proceed with data collection and fieldwork before you have received this letter and got permission from the other institutions to conduct the study. It may also be expected that these organizations may require additional information from you.

Please contact your supervisors on a regular basis.


Deputy Associate Dean (SoNPH)

To: Mrs Landine Karunga-Beukes
Director (Specialized Services)
Ministry of Health & Social Services

Approved

09/10/2015

From: Dr. M. Goraseb
Box 169
Windhoek

Date: 28 September 2015

Subject: Request for permission to conduct actual study

I am Dr. Marcus Goraseb, Lecturer in the Department of Family & Community Medicine, pursuing a PhD Degree in Public Health student number **201212694** at the University of Namibia.

The pilot study phase has been completed, conducted in Rehoboth Roman Catholic District Hospital in August 2015. Currently preparations are taking place to commence the actual data collection process in Windhoek Central Hospital and Katutura State Hospital.

The process of data collection will commence in October 2015 that will last till the middle of November 2015 in the two respective hospitals.

It is in the light of the above your good office is requested for assistance to contact the managers of the two (2) hospitals to accommodate me for this study.

Thank you for your co-operation.

Yours sincerely

Dr. M. Goraseb
Cell: 0811270252/061 228546

UNIVERSITY OF NAMIBIA
FACULTY OF HEALTH SCIENCES
SCHOOL OF MEDICINE
MEMORANDUM

TO : THE CHAIRPERSON;
STAFF DEVELOPMENT COMMITTEE
FROM : FACULTY OF HEALTH SCIENCES
SCHOOL OF MEDICINE
DATE : OCTOBER 09, 2014
SUBJECT : APPLICATION: FOR STAFF DEVELOPMENT LEAVE 2015,
FOR PHD.

The Faculty at its Board Meeting held 02 October 2014 recommended the following submission to the Staff Development Committee for consideration.

Dr M Goroseb:

Staff Development leave to do PhD in 2015 Full-time mode. Resolution: (FB/FoH/21/03/14)

Thank you.



Dean:
Prof P Nyarang'o
Faculty of Health Sciences
School of Medicine



Faculty Officer:
F Mario



**ANNEXURE B: APPROVAL FROM THE RESEARCH COMMITTEE
OF THE MINISTRY OF HEALTH AND SOCIAL
SERVICES**



S - 00001

REPUBLIC OF NAMIBIA

Ministry of Health and Social Services

Private Bag 13198
Windhoek
Namibia

Ministerial Building
Harvey Street
Windhoek

Tel: 061 - 203 2510
Fax: 061 - 222558
E-mail: esheama@mhs.na

OFFICE OF THE PERMANENT SECRETARY

Ref: 17/3/3
Enquiries: Ms. E. Shaama


Date: 05 June 2014

Dr. M. Goraseb
Private Bag 13301
University of Namibia
Windhoek

Dear Dr. Goraseb

Re: Development of a Fetal Alcohol Syndrome (FAS) best practice manual for Health Practitioners towards relief of burden of illness in Namibia

1. Reference is made to your application to conduct the above-mentioned study.
2. The proposal has been evaluated and found to have merit.
3. Kindly be informed that permission to conduct the study has been granted under the following conditions:
 - 3.1 The data to be collected must only be used for completion of your PhD degree;
 - 3.2 No other data should be collected other than the data stated in the proposal;
 - 3.3 A quarterly report to be submitted to the Ministry's Research Unit;
 - 3.4 Preliminary findings to be submitted upon completion of the study;
 - 3.5 Final report to be submitted upon completion of the study;
 - 3.6 Separate permission should be sought from the Ministry for the publication of the findings.

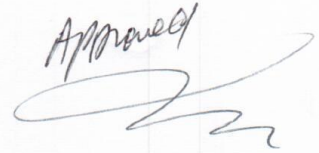
Yours sincerely,

Andrew Ndshishi (Mr)
Permanent Secretary

"Health for All"

**ANNEXURE C: APPROVAL FROM THE DIRECTORATE
SPECIALISED AND CLINICAL SERVICES TO
CONDUCT THE RESEARCH STUDY**

To: Mrs Landine Karunga-Beukes
Director (Specialized Services)
Ministry of Health & Social Services



Approved

09/10/2015

From: Dr. M. Goraseb
Box 169
Windhoek

Date: 28 September 2015

Subject: Request for permission to conduct actual study

I am Dr. Marcus Goraseb, Lecturer in the Department of Family & Community Medicine, pursuing a PhD Degree in Public Health student number **201212694** at the University of Namibia.

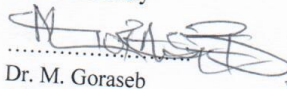
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The process of data collection will commence in October 2015 that will last till the middle of November 2015 in the two respective hospitals.

It is in the light of the above your good office is requested for assistance to contact the managers of the two (2) hospitals to accommodate me for this study.

Thank you for your co-operation.

Yours sincerely



Dr. M. Goraseb
Cell: 0811270252/061 228546

**ANNEXURE D: INTRODUCTION LETTER TO PARTICIPANTS AND
CONSENT FORMS**

CONSENT FORM

Participant's informed consent form (In-depth interview)

Title: Guidelines for health care professionals to manage Foetal Alcohol Syndrome in public health facilities in the Khomas Region, Namibia

Name of the student: M. Goraseb

Student Number: 201212694

Position: Lecturer at the Medical School of the University of Namibia

INTRODUCTION

My name is Marcus Goraseb, pursuing a PhD Degree in Public Health at the University of Namibia. The requirement of the University of Namibia is to complete and submit a dissertation. Your participation in this research study is of utmost importance. Please read the information provided below and ask any questions you may have before agreeing to participate in the research study.

PURPOSE OF THE STUDY

The purpose of the study is to gather information to develop a manual for management and treatment of foetal alcohol syndrome.

MY TASK

Is if you grant me your informed consent and sign this form, conduct an interview with you. The interview will cover your experience in management and treatment of foetal alcohol syndrome. The interview will take approximately 20-30 minutes to complete. With your permission, I will also tape-record the interview.

RISK AND BENEFITS

There will be no risks involve pertaining to your professional career. The benefit of this study is that health care professionals will enrich their care professionals will enrich their professional growth through the manual that will be developed to guide them in management and treatment of foetal alcohol syndrome. Also in turn new knowledge will be added to the body of knowledge on the subject matter. The manual is original contribution is the alleviation of the disease burden for the Namibian population.

CONFIDENTIALITY

Confidentiality will be maintained, and no information divulged on your identity. Only the researchers will have access, the information will be kept in a safe file with anonymity. The tape-recorded interviews will be transcribed.

Title: Development of Foetal Alcohol Syndrome Manual for Health Care Workers in Namibia

PARTICIPATION IS VOLUNTARY

Participation in this study is totally voluntary. If you agree to participate in the study, you are also free to withdraw at any time, without hesitation and clarification. If you have any questions, please feel free for clarifications.

STATEMENT OF CONSENT

I have read the information, and received answers to my questions. I consent to participate in the study. In addition to agreeing to participate, I also consent to having the interview tape-recorded.

Signature of participant:

Date:

DR/RN/ER/SW:

Researchers signature:

Date:

CONSENT FORM

Participant's informed consent form (Focus Group Discussion)

Title: Guidelines for health care professionals to manage Foetal Alcohol Syndrome in public health facilities in the Khomas region, Namibia.

Name of the student: M. Goraseb

Student Number: 201212694

Position: Lecturer at the Medical School of the University of Namibia

INTRODUCTION

My name is Marcus Goraseb, pursuing a PhD Degree in Public Health at the University of Namibia. The requirement of the University of Namibia is to complete and submit a dissertation. Your participation in this research study is of utmost importance. Please read the information provided below and ask any questions you may have before agreeing to participate in the research study.

PURPOSE OF THE STUDY

The purpose of the study is to gather information to develop a manual for management and treatment of foetal alcohol syndrome.

MY TASK

Is if you grant me your informed consent and sign this form, conduct an interview with you. The interview will cover your experience in management and treatment of foetal alcohol syndrome. The interview will take approximately 20-30 minutes to complete. With your permission, I will also tape-record the interview.

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Participation in this study is totally voluntary. If you agree to participate in the study, you are also free to withdraw at any time, without hesitation and clarification. If you have any questions, please feel free for clarifications.

STATEMENT OF CONSENT

I have read the information, and received answers to my questions. I consent to participate in the study. In addition to agreeing to participate, I also consent to having the interview tape-recorded. I agree to the focus group discussion.

Signature of participant:

Date:

DR/RN/ER/SW:

Researchers signature:

Date:

DISCUSSION PROCEDURES (In-depth interview)

Title: Guidelines for health care professionals to manage Foetal Alcohol Syndrome in public health facilities in the Khomas region, Namibia.

Name of the student: M. Goraseb

Student Number: 201212694

Position: Lecturer at the Medical School of the University of Namibia

INTRODUCTION

My name is Marcus Goraseb, pursuing a PhD Degree in Public Health at the University of Namibia. The requirement of the University of Namibia is to complete and submit a dissertation. Your participation in this research study is of utmost

importance. Please read the information provided below and ask any questions you may have before agreeing to participate in the research study.

Step 1

Good morning/Afternoon. Thank you for coming to participate in the Research Study Interview. Please feel welcome and comfortable we are just going to discuss or you will inform me about your experiences on the topic under investigation. Please feel free to raise uncertainties if there are any before we proceed.

Step 2

Can you tell me what was your experience in managing and treating children with FAS? Just to explain: Children with FAS are born from mothers who consumed alcohol during pregnancy and born with FAS.

Step 3

The researcher will not ask leading questions, he will only probe for further in-depth information.

ANNEXURE E: TRANSCRIPT OF A FOCUS GROUP DISCUSSION

Transcript of a FGD about the experiences of health care workers on foetal alcohol syndrome: Diagnosis, treatment, and management at the Katutura State Hospital and the Windhoek Central Hospital in the Khomas Region, Namibia

Participant no: 7

Date: 11 September 2015

Time: 8:00

Language of interview: English

Place: KSH (Maternity ward)

Researcher: Good morning participant. My name is Marcus Goraseb, a lecturer at the Medical School at UNAM. I am pursuing a PhD degree in Public Health. My research is about the experiences of health care workers on foetal alcohol syndrome diagnosis, treatment, and management. The study's aim is providing me with clear understanding of the experiences of you to make recommendations to MoHSS in terms of addressing the foetal alcohol syndrome in Namibia.

I am assuring you of keeping your identity, anonymity as well as privacy. Your name will not appear anywhere in any reports, presentations as well as publications. The study is for benefit of the Namibian population. I am seeking for your permission to interview you. If there are clarifications needed I am open to do that before proceeding with the process once you have granted me your permission and signed the consent form.

Participant: Participants read through the consent forms and granted the permission.

Researcher: Can we proceed with the interview?

Participant: Yes, we can proceed.

Researcher: Good morning. So, as it is based on the facts that we should look at what is happening in terms of FAS in your settings, how you diagnose, treat, and

manage the patients. We would like to hear from you, your experience. We are just here to be educated by you as you are sitting with the experience and you know what is happening around this issue even if you have been working in another section, this big section of yours, so if you can just tell us what is your experience?

Participant 1: Haaah... “At the Central hospital FAS is too much they receive babies like that. In this week Saturday night, one patient was admitted but baby was normal, weight 2.4kg and is discharge. But for me it’s better to see something but I didn’t came across. Those people sitting from 5H00 for the whole day drinking “tombo”.

Researcher: Something more?

Participant 2: What I read FAS is when mother using alcohol during pregnancy, when baby is born with some abnormality, the shape like a elephant, child is not growing well. Walking it will take time. The only treatment is to remove the child from the breast and took it in a foster care. Child is not functioning well. The country I was put that type of children in a foster care. Women is pregnant when she comes here we the health worker need to help more, telling them alcohol is dangerous the awareness some didn’t really know what can it cause, it will destroyed [sic] your life. Something read in the book it refers diagnose statistics manual head even growth of the child, even intelligency [sic] will very low some even reaches 5 years. Few things I can rely on are foster house in United States.

Researcher: Furthermore

Participant 3: Hmmm.... Dealing with this on Friday, one (1) year old baby was looking like a 6 month baby. But I’m worried about the baby. She was referred to a social worker and had a positive attitude I try to follow up. People are sitting the whole day in single quarters drinking tombo the whole day. And she (23 years old) was referring to a social worker.

Researcher: Ooohoooo.....

Participant 4: Nurses talk to a 22year old, she given birth to a baby and we talk to her but we don’t know. FAS, where the child’s suffer from mental symptoms,

physical symptoms. It appears the eyes small, small head or some big, when they grow up the weight is low, don't concentrate, lack of focus, don't allow breastfeeding, sometimes, they grow up sometimes not and not ending up normal.

Participant 5: Sometimes things like this you will find at ANC they tell us that tombo is good because it gives appetite. We have to re-enforce, we have to go deeper in the community and educate one knowledgeable person to further educate the others. I went to single quarter to buy chicken a pregnant women sitting with big glass container tombo. They think alcohol is more joy able. Developing a manual it needs a lot of interviews people of mental health can more given information, school kids can be educate. Social workers are there to calm this situation, do they know the environment, where are they coming from.

Researcher: Is that all?...

Participant: I think so... laughing.

Participant 6: "Foetal alcohol syndrome is mothers taking alcohol when they are pregnant a heavy usually drinker. What you can notice after that it's supposed to be a fulltime baby, its sometimes look like a premature baby while it's not. You can see from your observation that the eyes and heads are small, and sometimes they have a strange cry voice, sometimes glittering, the baby itself looks so strange. Our side what can we do, after birth we admit baby in premature ward, for close monitoring. Depending on conditions providing baby with supplements, we have to give breast milk that contains vitamins. And when our advice to the mother she's now breastfeeding and she is still continue drinking, baby will be affected".

Researcher: Is there anything you want to add?

Participant: I suppose that was all I wanted to tell.

Participant 7: "In my position as a EN I'm not really sure but we treat them normally just there's no specific treatment and I notice the psychological part for the mother for the babies we don't have any treatment or special care. Everything that I know FAS I notice low birth weight compared to other babies they also take slow to

grow than other babies. We treat them as premature babies, and leave hospital with 1.8kgs and we give them supplements for normal weight. It all I know”

Researcher: Do you think you have exhausted the topic?

Participant: At this point in time I think we told you what we know.

Researcher: Ok.. In such a case we have to thank you very much for your contribution. As I have said your anonymity, confidentiality is respected. Thank you.