

INVESTIGATION AND DEVELOPMENT OF STRATEGIES TO STRENGTHEN
THE IMPLEMENTATION AND GOVERNANCE OF HEALTH RESEARCH
SYSTEMS (HRS) IN NAMIBIA

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DECLARATION

I, Hilma Nangombe hereby declare that the content of this thesis: Investigation for development of strategies to strengthen implementation and governance of Health Research Systems (HRS) in Namibia is my own work and all sources that I have used or quoted are indicated and acknowledged by means of complete references.

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Date

ACRONYMS

BREC	Biomedical Research Ethics Committee
CDC	Centres for Disease Control and Prevention
COHRED	Council on Health Research for Development
DCC & DRF	District Coordinating Committee and District Research Facilitators
ENHR	Essential National Health Research
ERCs	Ethics Review Committees
GCTHS	Guidelines on Clinical Trials in Human Subjects
GF	Global Fund Program
GRN	Government of the Republic of Namibia
HDI	Human Development Index
HR	Health Research
HRC	Hospitals Research Committee
HRP	Health Research Policy
SHRP	Strategic Health Research Plan
HRS	Health Research Systems
HSRC	Human Sciences Research Council
I-TECH	International Education and Education for Health
IRCs	Institutional Review Committees
IUM	International University of Management
LAC	Legal Assistance Centre
M&E	Monitoring and Evaluation
MoHSS	Ministry of Health and Social Services
MSH	Management Science for Health

NANGOF	Namibia NGOs Forum
NDP 3	Third National Development Plan
NIP	National Institute of Pathology
NNHRD	National Network of Health Research and Development
NRfHS	National Research for Health Systems
NUST	Namibia University of Science and Technology
PEPFAR	President's Emergency Plan for AIDS Relief
RMC	Research Management Committee
RMP	Research Management Policy
RRC	Regional Research Committee
SADC	Southern African Development Community
SMA	Social Marketing Association
SOEs	State Owned Enterprises
SPSS	Statistical Package for the Social Sciences
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNAM	University of Namibia
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHA	World Health Assembly
WHO	World Health Organization

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DEDICATION

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ABSTRACT

The overall aim of the study was to investigate the status of HRS in Namibia and to develop strategies that will contribute to strengthening its implementation and governance. This study was conducted within a positivist paradigm which employs quantitative research approach, exploratory, descriptive and non- experimental designs were employed. The study was conducted in 3 phases namely:

Phase 1: situational analysis comprised of document review using an adopted WHO checklist in phase 1 A and a survey in phase 1 B. The situation analysis was conducted to explore and describe the current approaches as well as the viewpoints of stakeholders with regard to HRS implementation and governance in Namibia. In addition, it was conducted to identify and describe factors that influence the implementation and governance of HRS in Namibia. The population for phase 1A comprised documents that guide the implementation and management of HRS in Namibia that is, the Research Management Policy which is the official policy document of the Ministry of Health and Social Services. In phase 1A, a checklist was developed based on the attributes set out in the WHO Health Research Systems Analysis Initiative (2010), checklist which is specifically developed to indicate which attributes should be in place per HRS functions which are: stewardship function and ensuring good governance, financing, capacity development, creating and sustaining resources as well as producing and using research findings functions.

In phase 1 B, respondents were persons responsible for the coordination of health research in Namibia, or institutions involved in health research (n=67). The population was divided into two sub-populations.

The first sub-population included persons from different departments/sectors within the Ministry of Health and Social Services. They are referred to as the ministerial respondents (n=52). The exo-ministerial sub-group comprises respondents/participants from institutions other than the Ministry of Health and Social Services, such as relevant government ministries, offices and agencies (O/M/As), state-owned enterprises, international organisations, tertiary education institutions and agencies of other governments. The constituents of the second subgroup are referred to as exo-ministerial respondents (n=15).

The main challenges that were identified from phases 1A and B include: gaps in legislative frameworks including the outdated Research Management Policy (RMP), lack of coordination of health research in the country. Challenges related to the ethic review committees in MoHSS, and the institutional review boards (composition and structure), lack of support and motivation; resources are donor-driven; and absence of an articulated research agenda, no health research vision, priorities. Furthermore, the findings indicated that only a few officials have received training in health research the Namibian government (GRN) is not doing enough to contribute towards the creation and sustaining of resources and human resources capacity development for health research, GRN is not providing incentives to researchers, funding from GRN is not provided in a way that is most appropriate for the country's research needs.

In addition, the findings pointed out that there is a need for promotion and advocacy for HRS, to strengthen different cadre of professionals with the capacity to conceptualise, conduct, analyse, disseminate and translate the findings of various forms of health research, to secure international linkages and technical cooperation in

health research. These findings fashioned the basis for conceptualisation in phase 2 and development and verification of strategies in phase 3.

Phase 2: In this phase conceptualisation of the key findings on HRS from the study linking them to the Practice Theory of Dickoff, James and Wiedenbach (1968) was done. This practice-oriented theory, essentially, consists of concepts such agent, (the researcher) recipient, (all individuals and groups involved in health research in Namibia), context (the Ministry of Health and Social Services' internal and external environments), dynamics (challenges that emanated from the study findings), procedures (process followed by the agent in the development of strategies for effective implementation and governance of HRS), and terminus (implementation and governance of effective and efficient HRS in Namibia through the developed strategies). The conceptualised findings indicate that the issues of concern are mostly related to the context's internal environment therefore there is a need to create a conducive environment for HRS in the areas of policies and guidelines for HRS; human and financial capacity.

The challenges that emanated from the study are summarised under the dynamics as follows and include lack of: legal basis and regulatory mechanisms, coordination mechanisms for health research in the country, research capacity, human capacity development for health research, adequate financial support for the country's research needs, data dissemination to enhance a data sharing culture, and research ethics committees' coordination and inability to attract and retain researchers in the public health sector.

Phase 3: This phase outlines the procedures followed in developing the strategies after conceptualisation of findings from phases 1 & 2. In addition, the strategies in this study were developed using Howe's (c@ps), which was developed in 2011.

According to the Compass Aligned Performance System each strategy comprises of the following components: key performance indicators strategic objective/s, used to monitor implementation and measure achievement of each strategic objective, strategic objective that are providing directions towards realisation of the proposed strategies, and the proposed actions/critical success factors which are actions to be undertaken in order to achieve the strategic objectives, the compass also allows the developed strategies to be aligned to the values and the vision of the Ministry of Health and Social Services.

A one-day meeting was organised with the team of experts where a power point presentation of the proposed strategies was made by the researcher for inputs and finalization of the proposed strategies.

The study recommends that MoHSS provide a conducive environment for effective implementation and governance of HRS through effective leadership that guarantees fortification of: policies and guidelines for HRS; human and financial capacity. The research further recommends that MoHSS implement the following: establish a career advancement programme for researchers; provide a market related remuneration package and benefits for researchers; and offer attraction and retention strategies for health research human resources such as introducing incentives for researchers. It is further recommended that a training needs assessment be carried out by MoHSS to identify the training needs on HR at individual, institutional and

national levels. Lastly, it is recommended that the developed HRS strategies should be integrated into the overall MoHSS strategic plan.

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CHAPTER 1

INTRODUCTION AND RATIONALE OF THE STUDY

1.1 BACKGROUND INFORMATION OF THE STUDY CONTEXT

The focus of this research is on the investigation and development of strategies to strengthen implementation and governance of Health Research Systems (HRS) in Namibia. Literature reveals that developing countries are faced with challenges affecting Health Research Systems (HRS) such as lack of standard operating procedures, inadequate training and inconsistent funding as well as lack of ethical guidelines all of which have resulted in poorly conducted, inappropriate and unethical research (Kass, Hyder, Ajuwon, Appiah-Poku, Barsdorf, Elsayed et al, 2000; WHO, 2010). Namibia is no exception.

The study on HRS was conducted in Namibia. Namibia is in south west Africa and its neighbours are Angola to the north, Zambia and Zimbabwe to north-east, Botswana to the east and South Africa to the south and east. The country was previously known as South West Africa and covers a land area of 824,000 square kilometers. According to the 2011 population and housing census, the population was about 2.1 million with a growth rate of 1.4% per annum. Figure 1.1 on page 2 portrays the borders and the regions of Namibia.

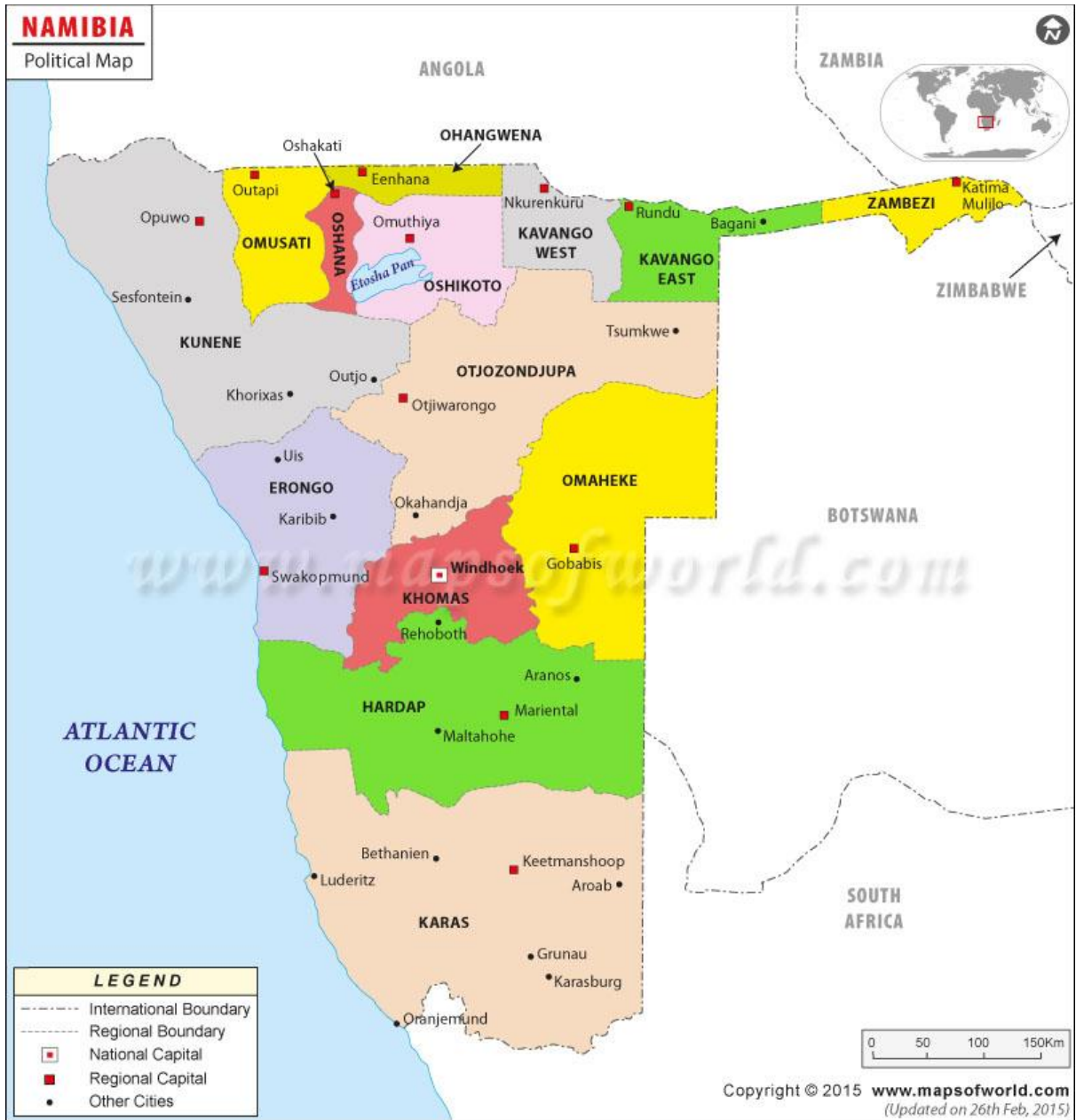


Figure 1.1: Map of Namibia (Source: www.mapsofworld.com)

Namibia gained its independence in March 1990 and with independence the name changed to Namibia. After independence, the country was divided into 13 regions for administrative purposes, which have now been increased to fourteen (14), i.e. Erongo, Hardap, //Kharas, Kavango East and West, Kunene, Khomas, Ohangwena, Omaheke, Oshana, Oshikoto and Otjozondjupa regions.

Various ministries and state-owned enterprises (SOEs) were established since independence. These are ministries of: Education; Defence; Gender Equality and Child Welfare; Labour; Justice; Lands and Resettlement; Safety and Security and there are other entities like the National Planning Commission (NPC), all of which may participate in health-related research.

In addition, institutions of higher learning such as the University of Namibia (UNAM), the Polytechnic of Namibia (now the National University of Science and Technology) and International University of Management (IUM) are involved in health research through their different programmes.

Namibia is classified by the United Nations as an upper middle-income country with an average per capita income of US\$8.200 per annum. The Human Development Index (HDI) was 0.686 (medium human development) in 2013 and the country ranked 132nd out of 182 countries on the HDI scale. However, this average figure masks the fact that there are certain segments of the Namibian society whose HDIs may fall under the low human development category.

A high per capita GDP, relative to the region, hides one of the world's most unequal income distributions, a GINI coefficient index of 59.7 in 2010 indicates that the

country has one of the highest income disparities in the world (CIA, 2014, Zere, Tumusiime, Walker, Kirgizia, Mwikisa, & Mbeeli, 2010).

Despite been classified by the United Nations as an upper middle-income country, unemployment and poverty are the major problems confronting the Namibian people today. The unemployment rate was estimated at 27.4% in 2012 and, 28.7 % of the population lived below the poverty line at that time (CIA, 2014). Consequently, Namibia is not able to meet all its socioeconomic goals and needs, due to several factors such as inadequacy of the government's allocation for health research. This is a major constraint towards achievement of HRS financing, particularly because there is no budget line for health research under the Policy Planning and Human Resource Development in the MoHSS.

Moreover, whilst a number of international development partners do provide funding for health research this is usually aligned to their areas of interest. This leads to the neglect of important research areas. Donor-driven research relates to the priorities and programmes of the donors and limits the possibility of MoHSS to prioritize research needs according to its own requirements. Moreover, financial support is not adequately coordinated as there are no policy guidelines providing direction.

The problems outlined above impact the health of the population, thus there is a need for a functioning HRS to examine and reveal through research the effect of these social determinants of health on the population.

Since research for health cuts across many sectors, development partners in the health sphere provide funding and technical assistance to the MoHSS. Among them are: World Health Organization (WHO), United Nations Children Fund (UNICEF), Centre for Disease Control (CDC), Global Fund Program (GF), United Nations Population Fund (UNFPA), United States Agency for International Development (USAID), Management Science for Health (MSH), Social Marketing Association (SMA), Joint United Nations Programme on HIV/AIDS (UNAIDS), President's Emergency Plan for AIDS Relief (PEPFAR) and International Education for Health (I-TECH). These different organisations address public health challenges, which highlight the need for a well-established operational HRS.

In order to deal with well-established operational health research in the MoHSS, the Directorate of Policy Planning and Human Resource Development is entrusted with the coordination of health research through the Research Coordination Unit for HRS governance and implementation. Although this directorate and the research unit do exist there is a need to develop strategies to strengthen the existing HRS mechanisms.

Research as a crucial component is provided for in the Third National Development Plan (NDP 3), Volume I & II (2007/2008-2011/12) under Programme 1, which covers research and policy analysis. The programme supports relevant policy and analytical skills of member institutions of the macroeconomic working group to better enable them to fulfil their mandates and responsibilities for undertaking policy research and for providing recommendations to policy makers. The MoHSS is a

member institution that is mandated with the coordination of health research, a responsibility that requires a well-established HRS.

World Health Organisation (WHO) outlined (2008) in the Algiers Declaration on Research for Health in the African region that at least 2% of national health expenditure and 5% of external aid be allocated to health projects and programmes to building research capacity to improve health systems. However, this has yet not been implemented in Namibia.

If the importance of health research which is to be achieved through an HRS that responds to contemporary health research needs was appreciated, the government would be basing its economic and social policies on long-term planning. At a ministerial level, the National Health Policy Framework 2010-2020 indicates specific strategic responses in relation to information and research which are: the assignment of adequate human and other resources for information and research aiming at reaching 5% and 2% of total health budget respectively, and the consolidation of a system for research management. The above discussion indicates that in order to establish an HRS that will be able to fulfil its functions, many factors need to be considered. Of paramount importance are the determinants of health and the socioeconomic status of the country.

1.2 BACKGROUND INFORMATION ON HEALTH RESEARCH SYSTEMS

World Health Organisation (2001) defines Health Research System (HRS) as a system for planning, coordinating, monitoring and managing health research resources and activities; and for promoting research for effective and equitable

national health development. Health Research Systems could be the means that can enable Health Systems Research (HSR) to constantly produce evidence that can guide decision makers on how to address health inequities and problems, health sector reform, improve delivery of health services, and address staffing needs of the health system in Namibia.

Health Systems Research furthermore supports the health system to address many other challenges it faces as it plays a key role in developing the country's social and economic aspects. (Council on Health Research for Development, (COHRED, 2006). In essence, (HSR) focuses on the performance and problems of health systems which are the sum of the structures, people and processes that together provide the vehicle for the delivery of health care and achievement of better health in a country (Bennett, 2007).

In order to enhance the outputs of Health System Research (HSR), countries have developed a system that is referred to as a Health Research Systems (HRS), a system that ensures governance of HSR activities, a concept, that reintegrates and coordinates the objectives, structures, stakeholders, processes, cultures and outcomes of health research towards the development of equity in health and in the national health system. Health Research Systems (HSR) in many countries does not fulfil its potential because few countries have designed HRS to specifically address main issues (COHRED, 2006).

The focus of this research is on the investigation and development of strategies to strengthen implementation and governance of Health Research Systems (HRS) in Namibia. The Namibian HRS reform started in 2003 with the development of the

Research Management Policy (RMP) and the Guidelines on Clinical Trials in Human Subjects (GCTHS) with the aim of governing the HRS functions through coordination and management.

The status of the HRS implementation and governance as witnessed by the researcher in day-to-day operations in Namibia prompted an inquiry in this area. In addition, empirical findings triggered the researcher's interest when study conducted in forty-four (44) countries, only a total of sixteen (16), 36% of the countries, reported that a functional national health research governance mechanism exist (Mbondji, Kebede, Zielinski, Kouvididila, Sanou, Lusamba-Dikassa, 2014).

The Executive Committee, Research for Health System Strengthening in West Africa (2011) states that while some countries have managed to develop their health research capacity and productivity, many others still experience problems. International partnerships continue to strengthen health research by funding vertical system approach or programmes, rather than by focusing on a "horizontal systems approach." Furthermore, developing countries have been unable to integrate health research into a systems approach. Even though they have adopted the Essential National Health Research (ENHR) philosophy, health research in these countries continues to be fragmented and poorly coordinated. As a consequence, defective research governance has led to inadequate and inappropriate research funding. Lang (2015) also found that research conducted in developing countries in many cases lack ethical standards that would be required in the developed world a situation that exposes vulnerable populations to exploitation in health research. Namibia is not exempted from the above WHO observation as the country's HRS has an outdated

Research Management Policy (RMP) and the GCTHS since the latter have been in existence for over nine years without revision.

In order to understand the focus of this investigation, it is necessary to look in detail at the content of Health Research Systems as described by the World Health Organization. According to WHO (2001), HRS refers to a system for planning, coordinating, monitoring and managing health research resources and activities; and for promoting research for effective and equitable national health development. In addition, as a concept, it integrates and coordinates the objectives, structures, stakeholders, processes, cultures and outcomes of health research towards the development of equity in health and in the national health system. Moreover, Pang, Sadana, Hanney, Bhutta, Hyder and Simon (2003) identified stewardship, capacity development, financing, creating and sustaining resources as well as producing and using research as essential functions for a health research system to fulfill its role.

In addition, apart from the core functions, WHO (2001) has recognised that ensuring good governance and strengthening research capacity are strategies for strengthening HRS. These strategies have been considered in this study as they need to be explored in relation to HRS implementation and governance. The need to investigate these strategies was considered necessary based on the findings of a study conducted in thirty-eight countries that pointed out that many low- and middle-income countries have major gaps in their governance and policy frameworks for health research (Ahmedov, Kennedy, & IJsselmuiden, 2007). Similarly, lack of standard operating procedures, inadequate training and inconsistent funding were identified as the

biggest challenges faced by Research Ethics Committees in Africa (Kass, Hyder, Ajuwon, Appiah-Poku, Barsdorf, Elsayed et al, 2000).

Consequently, WHO (2004) has issued a call to member states to strengthen national health research systems by building relevant capacity: developing capable leadership; providing essential monitoring and evaluation tools; improving capacity for ethical review of research; and putting in place necessary ethical standards and regulations for population health; providing health services; and conducting clinical research.

The International Conference on Health Research, held in Bangkok in October 2000, recommended future strategic directions and action plans for strengthening health research and health research systems in member countries (WHO, 2001). This investigation is a response to address the strategies discussed above as identified by WHO. Kirigia and Wambebe (2006) point out the importance of research policy environment. According to these authors, such a research environment could be achieved by developing health research legislation, policies, strategic plans, research agendas and rolling out plans with the involvement of all stakeholders, e.g. relevant sectors, research organisations, communities, industry and donors.

The above endeavours as listed by Kirigia and Wambebe are related to ensuring good governance of HRS and strengthening research capacity. In the area of ensuring good governance for HRS at country level, the Ministry of Health and Social Services in Namibia (MoHSS), as the custodian of HRS in the country, developed the Research Management Policy (RMP) and the Guidelines on Clinical Trials in Human Subjects (GCTHS) in 2003. Although MoHSS is the lead ministry in health-related research

activities, there are other line ministries, parastatals, institutions of higher learning and civil society organisations, which also conduct health-related research in the country.

The purpose of a Research Management Policy and the Guidelines on Clinical Trials in Human Subjects is to provide guidance to persons or institutions controlling or performing research and clinical trials when planning, executing and reporting clinical trial research (MoHSS, 2003). Thus, the main responsibility of the MoHSS is to plan, coordinate, monitor and manage health research resources and activities, as well as to promote research for effective and equitable national health development.

According to WHO attributes such as health research legislation, the strategic health research plan, national network of health research and development (NNHRD), health institutions with institutional review committees (IRC), budget lines for health research, various sources of health research funding in the country, and incentives plus career paths for researchers need to be in place in order for the HRS to function optimally (WHO, 2014). However, it is not clear whether the MoHSS have adequate mechanisms to coordinate, monitor and manage health research resources and activities. This could be one reason that the country has not yet developed a strong HRS but rather continued to rely on the 2003 Research Management Policy and the Guidelines on Clinical Trials in Human Subjects.

Absence of adequate mechanisms to coordinate, monitor and manage health research resources and activities not only impede the implementation and governance of

quality health research but are also detrimental to the advancement of research efforts in the country. It should be noted that the National Health Policy Framework (2010-2020) indicates specific strategic responses in relation to health information and research which are:

Assignment of adequate human and other resources for information and research aiming at reaching 5% and 2% of total health budget respectively

Consolidation of a system for research management which includes among other issues: setting research priorities, management of research processes and liaison with relevant academic and other training institutions for conducting research.

The above strategic responses will only be achieved if a strong HRS that will enhance proper coordination of health research in Namibia is in place. To ensure coordination and implementation and governance of multiple players in health research and avoid fragmentation, redundancy and gaps in knowledge from various disciplines needs to be adequate in the Health Research System in order that it can meet its objectives. The gaps in the literature discussed above necessitated the investigation of HRS in Namibia in order to make evidence-based recommendations for changes.

1.3 PROBLEM STATEMENT

After eight (8) years working experience as head of the research ethics secretariat and operational research at MoHSS research unit, the researcher has become aware of shortcomings in the execution of research activities, as well as the implementation and governance of HRS in the country. The Research Management Policy and the Guidelines on Clinical Trials in Human Subjects, which govern the implementation

of health research in Namibia were introduced in 2003 or 13 years ago. However, the same policy stipulates that it is a requirement that both the Research Management Policy and the Guidelines on Clinical Trials in Human Subjects be reviewed every five years in order to keep them up to date.

The documents have not been reviewed since their inception and are therefore, out-dated. The out-dated policy and guidelines may have contributed to the shortcomings of inadequately coordinated research activities in the country as observed by the researcher.

Similarly, the out-dated research governance tools have also posed constraints regarding the inclusion and utilisation of new HRS inventions domestically, especially as it relates to inadequate investment in and support for health research, lack of common goals and objectives from major funders, cumbersome processing time for research proposals, and low capacity in certain fields e.g. policy and systems research and development (MoHSS, 2010).

The researcher furthermore has observed that the MoHSS have dependence on donor funded health research activities. The inadequacy identified stems from the fact that the Ministry of Health and Social Services does not have a dedicated budget line for health research. One possible consequence of inadequate HRS within the Ministry of Health and Social Services is its potential to hamper effective implementation of medical and health research in general and clinical trials, in particular.

The establishment of a Medical School at the University of Namibia (UNAM) and a Department of Health Sciences at the Polytechnic of Namibia (which was recently

(2016) transformed into the Namibia University for Science and Technology (NUST)), as well as the heightened interest by international scholars studying within the health and medical field, underscores the need to analyse, review and update the current structures and operations of HRS in Namibia.

In addition, the past few years have registered increased interest in health systems research by scholars, public and private institutions with both academic and operational research increasing on annual basis. During 2011 and 2012, the majority of research proposals that were registered in MoHSS were academic, recording an increase from fifty-two (52) proposals in 2011 to sixty-eight (68) in 2012, while operational research proposals increased from twenty-seven (27) in 2011 to thirty-six (36) (MoHSS 2011/ 2012).

The increased numbers of students studying medicine and health related topics at the University of Namibia, other local institutions of higher learning as well as from regional and international universities, will also contribute to the increase in medical and health research activities. All these activities fall under the realm of Namibia's HRS, and require that properly functioning HRS is in place to ensure quality health systems research governance.

Since the HRS in Namibia is characterised by out-dated governance tools and the absence of HRS essential attributes, there is a need for a strengthened Health Research System. The strengthened Health Research System will provide students in medical and health fields, as well as researchers and scientists with the necessary tools and a conducive environment to conduct research that is technically and

ethically sound, facilitated by a fully functioning HRS. At present, Namibia does not benefit from clinical trials, due to possible shortcomings in HRS.

This stems particularly from the fact that proposals submitted are declined because of lack of financial, human and material resources.

Against above background, clear strategies are needed to guide the implementation and governance of health research system in Namibia. Although anecdotal information about HRS in the country is available, the researcher recognised that empirical data is needed in order to develop evidence-based strategies for HRS in Namibia. This study seeks to address the shortcomings outlined above.

1.4 THE AIM OF THE STUDY

The overall aim of the study was to investigate Health Research Systems in Namibia and develop strategies that will contribute to strengthening implementation and governance of Health Research Systems in Namibia.

1.5 OBJECTIVES OF THE STUDY

The objectives of this study were to:

- Conduct a situational analysis by exploring and describing the current approach as well as the viewpoints of stakeholders with regard to HRS implementation and governance in Namibia [**Phase1**]
- Identify and describe factors that influence the implementation and governance of HRS in Namibia [**Phase 1**]
- Develop a conceptual framework for the development of strategies to strengthen implementation and governance of HRS in Namibia. [**Phase 2**]

- Develop and verify the strategies to strengthen HRS in Namibia.[Phase 3]

During this phase, strategies were developed using the results from phases 1 and 2. They were verified to strengthen the implementation and governance of HRS in Namibia.

The diagram below summarises the phases of the study.

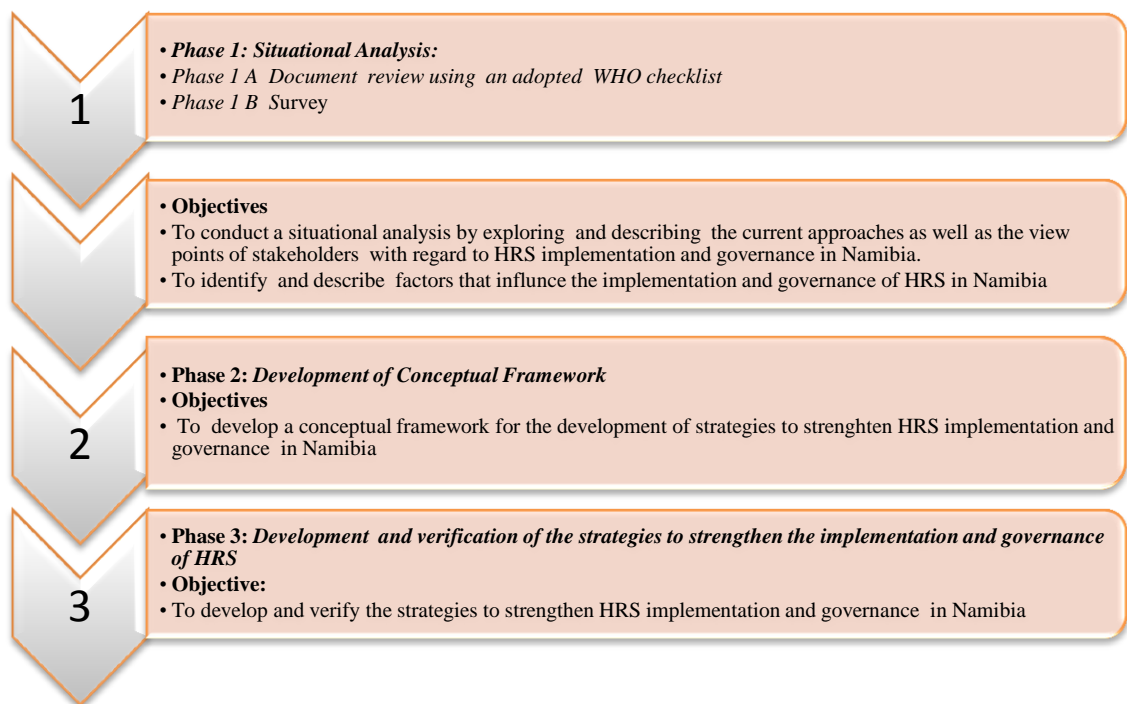


Figure 1.2: Study phases

1.6 PARADIGMATIC PERSPECTIVE

All research is based on some underlying philosophical assumptions about what constitutes 'valid' research and which research method(s) is/are appropriate for the development of knowledge in a given study. In order to conduct and evaluate any research, it is therefore important to know what these assumptions are (Thomas, 2010).

This chapter discusses the paradigmatic perspective and the philosophical assumptions underpinning this research study. Common philosophical assumptions were reviewed and presented Thomas, (2010).

Mertens (2005) discusses the theoretical framework as distinct from theory. This is sometimes referred to as the paradigmatic perspective. According to the author, a paradigm manipulates the way knowledge is studied and inferred. Thus, the selection of a paradigmatic perspective lays down the goal, thrust and expected outcomes for research. Paradigms are regarded as philosophical principles that guide researchers' worldviews and perceptions on the complexities of the broader society. Their importance rests on the fact they point out what is important in human inquiry and direct investigators' responses to philosophical questions (Tappen, 2011; Polit & Beck, 2012).

This study was conducted within a positivist paradigm, which employs quantitative data collection tools such as the checklist and the questionnaires as well as a quantitative data analysis and interpretation methods. The philosophical underpinning of a positivist paradigm holds that only factual knowledge gained through observation (the senses), including measurement, is dependable or valid. When a researcher adopts positivism, his or her role is reduced to the collection and interpretation of data, which in turn, is conducted through objective approach. Commonly, the research findings are amenable to being observed and quantified (Dudoyskiy, n.d).

The methodological paradigm used in this study is the quantitative approach. Furthermore, the researcher concurs with the approach of Mertens (2005) that quantitative methods tend to predominate in a positivist research approach.

O’Leary (2004) augments the approach to this study as he further elaborates that the positivist approach aims at testing a theory or experience through observation and measurement, in order to predict and control forces that surround people. Consequently, as philosophical perspectives inform practices, space and limitations of a discipline, the paradigmatic perspectives such as ontological, epistemological, axiological assumptions were considered in order to accommodate views and beliefs about HRS.

Paradigmatic perspectives are important in studies since they contribute to building a simplifying paradigm of research design by providing a means to elucidate the existing state of theory in the study field. The relevant paradigmatic assumptions for this study are discussed below.

1.6.1 Meta-theoretical assumptions

Weiner, Nelson and Mizumori (2012) maintain that meta-theories are like a map of a challenging conceptual terrain. Scientists rely on basic meta-theoretical assumptions which shape how scientists generate, develop and test middle-level theories and their derivative hypotheses and predictions. The Oxford Dictionary (2015) explains that meta-theories explore the underlying assumptions that theories hold and try to recognise the consequences of such assumptions on the work of theorising and practice of empirical research. Since meta-theoretical assumptions can be defined as a theory about theory and since this study is quantitative and is built on a positivist

research approach, the ontological, and epistemological and the axiological assumptions are considered below.

1.6.1.1 Ontological assumptions

Ontological assumptions are representations of the nature of reality and being as described by Hutton (2009). He describes ontology as "the science of being" and its purpose is to determine what "reality" is. This assumption holds that the laws of nature result from the collection of data, therefore, it is necessary to include realistically defined categories to support explanations and predictions of outcomes (Ponterotto, 2005). By employing ontological philosophy, the researcher acknowledges that there is a reality, --a reality, which is the status of HRS. And that reality needs to be understood. Furthermore, the researcher tries to determine and find out the nature of the phenomena under investigation, namely the implementation and governance of HRS in Namibia.

Through ontological assumptions, the researcher seeks to discover the cause and effect relationship behind a social issue, the subject matter of this study. In relation to this study, an ontological assumption is that the challenges facing Health Research Systems in Namibia result from an outdated policy and guidelines. To address the challenge, there is a need to develop strategies aimed at strengthening HRS.

The need to strengthen HRS was also identified by World Health Organization. The WHO Ouagadougou Declaration (2008) underscores the need to strengthen health information and surveillance systems and promote operational research on health systems for evidence-based decisions in member states. In relation to this study, the

thrust of the Ouagadougou Declaration represents a positivistic paradigmatic approach. The promotion of health research can only be realized when there are adequate, effectual, and effective HRS implementation and governance strategies, which are designed in such a way as to facilitate the gathering and interpretation of empirical data. This is the objective of this study.

1.6.1.2 Epistemological assumption

According to Vasilachis de Gialdino (2011), questions that are addressed through epistemology include: “how reality can be known; what is the relationship between the knower and what is known; the characteristics, the principles, the assumptions that guide the process of knowing and the achievement of findings; and the possibility of that process being shared and repeated by others in order to assess the quality of the research and the reliability of those findings”.

Hutton (2009) refers to the fact that the study of epistemology is relevant to the analysis of comprehension, knowledge, understanding and the characteristics correlated with how individuals are able to distinguish what they know and the method of how they acquire this knowledge. Engle (2009) contends that epistemology is the science of knowledge. In other words, the theory of how we know that which we know, it is recursive by nature, and in order to fully understand reality there is a need to examine it as a whole.

In view of the above assumption, it emerges that, currently and in practice, Health Research Systems in Namibia are largely based on a policy framework. Research

implementation and governance have not featured in significant measure in the building of a strong HRS.

However, the latter does link more to the Research Management Policy and the Guideline on Clinical Trials in Human Subjects. This situation persists despite several regional and international declarations and calls by the World Health Organization on states to strengthen Health Research Systems in their jurisdictions.

In addition to the Ouagadougou Declaration, another appeal, namely the Algiers Declaration on Research for Health in the African region by the World Health Organization (WHO) (2008) was issued in the same year. It urges member countries to establish or strengthen coordination within the health sector and other sectors contributing to the development of science and technology. The revised coordination efforts in health research should include establishment or strengthening governance structures to promote ethics and increase public trust in research.

To give effect to the epistemological assumption of how we know the reality of the HRS situation in Namibia, the researcher argues that the respondents are independent and the researcher will endeavour not to influence them in anyway. The epistemological assumption, therefore, enables the researcher to predict and at all times remain aware of the possible influence the researcher may have on the respondents. This awareness enables the researcher to control and avoid asserting such influence.

1.6.1.3 Axiological assumption

Hutton (2009) observes that the term “axiology” is derived from the Greek, “axios” meaning “worth” or “value” and logos meaning “science.” As a general philosophical theory, it involves a study of “goodness” or “value” in the widest sense of these words. Its significance lies in the considerable expansion that it has given to the meaning of the term value; the choice of basic fundamental values may either be relativist, meaning that values are subjective and relative, or cognitivist, meaning that moral choices are possible and objective.

According to Hutton (2009), the axiological assumptions of research are considered when the researcher takes into consideration the overall role of value and bias associated with science. Therefore, the overall results of the study are reflective, based on the perspectives of both the researcher and the participants.

In conducting research, the researcher considers the declarative principle of admitting his/her bias in research. This principle ensures that the study is completed objectively without introducing bias in interpreting human behaviour (Schulze, 2003). Thought and fundamental values are the core axiological foundations as they determine whether a correct science of values (axiology) is possible and whether these fundamental values describe the phenomenon, in question, as it is.

The existence of objective values, which flow from objective truth are viewed as an expression of reality (Hutton, 2009). In view of the above discussion, the researcher endeavors to rule out her personal values about HRS implementation and governance from the research process. Because, if these values are carried into the study by the researcher they are considered as confounding factors that can have a negative impact on the investigation of the implementation and governance of HRS.

Although according to the axiological assumptions values come first, the researcher has a purpose based on values and is passionate about carrying out the study. The researcher acknowledges the diversity and backgrounds of the respondents and that value systems may differ, and the axiological assumption helps the researcher to discern the influence of personal values on the evaluation/judgments made by the respondents. The researcher's interpretation of the respondent's responses will be devoid of her own values as far as possible.

1.6.1.4 Theoretical basis for the study

All research builds on theoretical foundations. The theoretical assumptions that are based on theories are quantifiable declarations about the research field (Botes, 1991) and they include models and theories (Mouton & Marais, 2001).

An assumption is defined as a realistic expectation, something that is believed to be true; the researcher believes that HRS is a complex system that needs to be addressed holistically (Leedy and Omrod, 2010). The following theories were used in this study:

- System's Theory (as postulated by WHO, 2001 and Pang, 2003)

This theory emphasises a holistic approach to HRS functions. The theory was considered during literature review in order to assist with identifying pertinent issues that need to be considered in this study.

- Practice-oriented theory of Dickoff, James and Wiedenbach (1968).

The Practice-oriented theory proposes a survey list which includes variables such as the context, the agent, recipient, procedures, dynamics and the terminus. This theory was used to conceptualise the findings. The concepts of the theory were defined and clarified and their interrelatedness were synthesised. The process aided conceptualisation for the development of the strategies.

- Howe's Compass Aligned Performance System (1999)

This theory comprises the mission, vision, strategic objectives, and the key performance indicators. This theory enables the process of presenting the strategies in summary and graphic formats.

The system's theory is discussed in detail in chapter 2, while the Practice-oriented and the Compass Alignment theories are presented in Chapter 6 of this document.

1.7 SIGNIFICANCE OF THE STUDY

The researcher contends that exploring and understanding challenges in HRS implementation and governance in Namibia will provide insights and identify ways to improve HRS implementation in the country. In the process, it will assist in facilitating greater coordination and better execution of health research activities in the country through strategies that will support HRS policy and guidelines.

Furthermore, the expectation is that the strategies to be developed will lead to more effective implementation and governance of HRS in the country. Consequently, strengthened HRS implementation and governance strategies will ensure ethical conduct of research.

The research project is expected to create awareness for the researcher and policy makers regarding the HRS situation in Namibia in relation to implementation and governance of the system.

1.8 DEFINITION OF TERMS

To provide intended context and engender common understanding, the core concepts used in this dissertation are clarified and operationally defined.

The key concepts in the title of the study are defined. In addition, the WHO HRS functions are defined because they are part of the philosophical point of departure of investigation in this study.

Capacity development- A key function within a health research system is to strengthen its own health research capacity. Both the demand and supply sides of capacity need to be strengthened (WHO, 2001; Pang et al., 2003). Strengthening capacity occurs at individual, institutional and systems levels; it encompasses a broad range of issues such as programmes for building capacity in research methods, knowledge translation, and policy-maker abilities to access, assess, adapt and apply research.

This function includes improving the physical infrastructure for research and addressing factors which lead to the brain drain of researchers by providing improved career structures and opportunities (Chanda-Kapata et al., 2012).

Creating and sustaining resources- this function refers to building, strengthening and sustaining the human and physical capacity to conduct and absorb health research (WHO, 2001; Pang et al., 2003). It is concerned specifically with human resource development, an approach to capacity building that deals with efforts to create outstanding research groups at national and international levels (Lansang and Dennis 2004).

Ensuring good governance of health research systems – at the national level ensuring good governance of health research begins with the involvement of people and the society in identifying research problems and priorities and to some extent in deciding on resource allocation. The central importance of ownership and involvement of the public is emphasised.

Financing- securing research funds and allocating them in an accountable manner (WHO, 2001; Pang et al., 2003). While Chanda-Kapata et al. (2012) refer to the financing function of a National Health Research System, as a system that is able to source research funding, and equitably distribute those funds. This is also the same system, which is accountable for monitoring the expenditure of government and donor funds.

Governance –The South African Qualification Authority (2012) refers to governance as a concept that is concerned with overseeing the responsible, legal, ethical, transparent and effective achievement of national or organisational goals. Hence, it deals with the formation and stewardship of the formal and informal rules, laws, regulations and policies that regulate delivery of services in the public and private sectors. As defined by Chanda-Kapata et al. (2012) governance including leadership in the context of a National Health Research System refers to national legislation spearheaded by a competent institution that clearly stipulates and enforces the vision and mission of the NHRS by coordinating the people, institutions and activities in the system. In the context of this Study, governance is viewed as the broad scope of regulations, ethics and standards of good practice that exist to recognise and constantly advance research quality across all aspects of health research in Namibia.

Health Research Systems (HRS) refers to a system for planning, coordinating, monitoring and managing health research resources and activities; and for promoting research for effective and equitable national health development. It is a concept that integrates and coordinates the objectives, structures, stakeholders, processes, cultures and outcomes of health research towards the development of equity in health and in the national health system (WHO 2001). Conceição and McCarthy (2011) expand the definition given by Pang et al. (2003) by referring to HRS as the people, institutions, and activities whose primary purpose in relation to research is to generate high-quality knowledge that can be used to promote, restore, and/or maintain the health status of populations.

For the purpose of this Study, HRS refers to the systems that govern health research coordination and implementation in Namibia.

Implementation is the process of putting a decision or plan into effect; execution or carrying out, or practice of a plan, a method, or any design for doing something (Oxford Advanced Learner's Dictionary (2016)). In this Study, implementation takes into consideration all the processes involved in getting research activities executed accurately according to set standards and policies yielding expected outcomes.

Producing and using research findings- means processes and activities employed to produce scientifically validated research outputs, translate and communicate research to inform health policy, health practice, and public opinion, promote the use of research to develop health products such as drugs, vaccines, devices and other applications to improve health (WHO, 2001; Pang et al., 2003). Grimshaw et al. (2012) refer to this function as knowledge translation of research findings through up-to-date systematic reviews or other syntheses of research findings, evolved out of several diverse disciplinary perspectives, including knowledge utilisation, diffusion of innovations, technology transfer, evidence-based medicine, and quality improvement.

Stewardship - quality leadership needs to continuously promote and develop effective and efficient health research systems.

The main task is to develop a strategic vision for health research development, for both medium- and long terms, according to the knowledge needs of the local or national health system, and to be responsible for steering the whole research

community in a coherent manner, including the oversight function (WHO, 2001; Pang et al., 2003).

Strategies as defined by (El-Kadi, 2008) are the means by which objectives are consciously and systematically pursued and obtained over time; it is the art of analysing, projecting and directing systems. According to the Online Business Dictionary, a strategy is defined as an art, a method, and science of planning and organising resources with the aim of achieving a goal or solving a problem. For the purpose of this Study, strategies refer to national, regional and international tools and mechanisms such as policies and guidelines designed, adopted and actualised to govern the implementation of research activities.

Strengthen: According to WHO (2004) the term strengthen refers to strengthening or reinforcing the health research systems by building relevant capacity, providing essential monitoring and evaluation (M & E) tools, improving capacity for ethical review of research, and putting in place necessary ethical standards and regulations for population health, health services, and clinical research. In the context of this study the term “strengthening” is accepted (in relation to the above WHO definition) because the envisaged outcome of the Study is to develop strategies that address governance and implementation of HRS in the country.

Strengthening research capacity - Strengthening of technical and managerial capacity ranges from improving management of health research, exploring new frontiers of sciences in health and biotechnology, updating health research-related legislation and policies.

On the demand side, strengthening management issues deal with absorptive capacity for research. On the supply side, there is a need to expand and improve the management capacity of researchers and managers in the field of leadership, negotiation and team building.

1.9. Division of chapters

This study is divided into the following chapters:

Chapter 1 – Introduction

This chapter provides the introduction and rationale of the study; the problem statement; aims and objectives; the paradigmatic perspective; significance of the study and definition of terms used in the study.

Chapter 2 –Literature review and contextualisation

This chapter presents the literature review which maps the main issues related to HRS internationally, regionally and at country levels. These issues include challenges and strategic directions. The chapter also gives the location of the study as well as the conceptual framework and the theoretical perspectives employed in the study.

Chapter 3 – Methodology

In this chapter, the research methodology that underpins the research design, the population, the sample and sampling method and data collection procedures are described. It also includes the data analysis process and the ethical considerations.

Chapter 4: Data analysis and presentation

This chapter presents the data for the situational analysis for phase 1A and phase 1 B, which consist of the document review and the survey.

Chapter 5: Discussion and consolidation of the situation analysis results

The chapter presents the discussion and consolidation of the findings from both phases, which are augmented with relevant information from literature sources.

Chapter 6: Conceptualisation for development of strategies

In this chapter, conceptualisation of the findings for strategy development is presented. The reasoning map is also presented.

Chapter 7: Development of strategies and verification

This chapter presents the strategy development and verification process of the strategies

Chapter 8: Summary, conclusions and recommendations

This chapter presents the summary, conclusions and recommendations that arise from the study findings, which are designed to inform policy makers.

1.10 SUMMARY

In the summary, the researcher outlines the importance of conducting research on HRS. Background information, introduction and rationale of the study and the problem statement are given. An explanation of the overall aims and objectives of

the research is provided. In addition, this chapter outlines the paradigmatic and philosophical perspectives and defined key terms used in the study.

CHAPTER 2

LITERATURE REVIEW AND CONTEXTUALISATION

2.1 INTRODUCTION

The preceding chapter outlined the structure of the study, presenting the components, from introduction to the focus area or subject matter of the study, problem statement, objectives, the study phases as well as the arrangements of chapters. In this chapter, the literature review was conducted in order to establish the basis of the study (Polit & Beck, 2004). The aim of the literature review was to explore the concepts of health research systems and contextualise the study.

The focus of this research is on investigating the concepts HRS and developing strategies to strengthen the implementation and governance of HRS in Namibia. The research takes into account the theories and principles adopted by the WHO with respect to HRS, as gleaned from the literature studied as part of the literature review.

Therefore, the researcher reviewed health research systems related literature to bring to light challenges facing HRS at global, regional, and national levels. The identification of the challenges facing HRS facilitated learning of lessons at all levels from different health research systems, including Namibia. These issues are the subject of this study and were therefore, investigated under this research. The literature review is organised in the following sections:

- The status of HRS in the African region and elsewhere in relation to its functions
- The system's theory

- Lastly, the literature review presented strengthening country level health research systems

2.2 THE STATUS OF HRS IN THE AFRICA REGION AND ELSEWHERE IN RELATION TO ITS FUNCTIONS

According to WHO (2001), certain functions are at the core of HRS in all countries. These are: stewardship and ensuring good governance, financing function, creating and sustaining resources and capacity development strategies, as well as producing and using research findings. World Health Organisation (WHO) (2001), also points out that one of the main aims of a national and/or local health research system is the coordination of health research. It is against this background that WHO emphasises the need for countries to strive for strong health research systems that bring about health systems towards equity and improved health.

These functions of HRS are firstly presented below in the form of a diagram, with a narrative on each of the functions following thereafter.

Figure 2.1 on page 34, presents the conceptual framework and foundation for health research systems, where the functions and operational components of health research systems are been summarised.

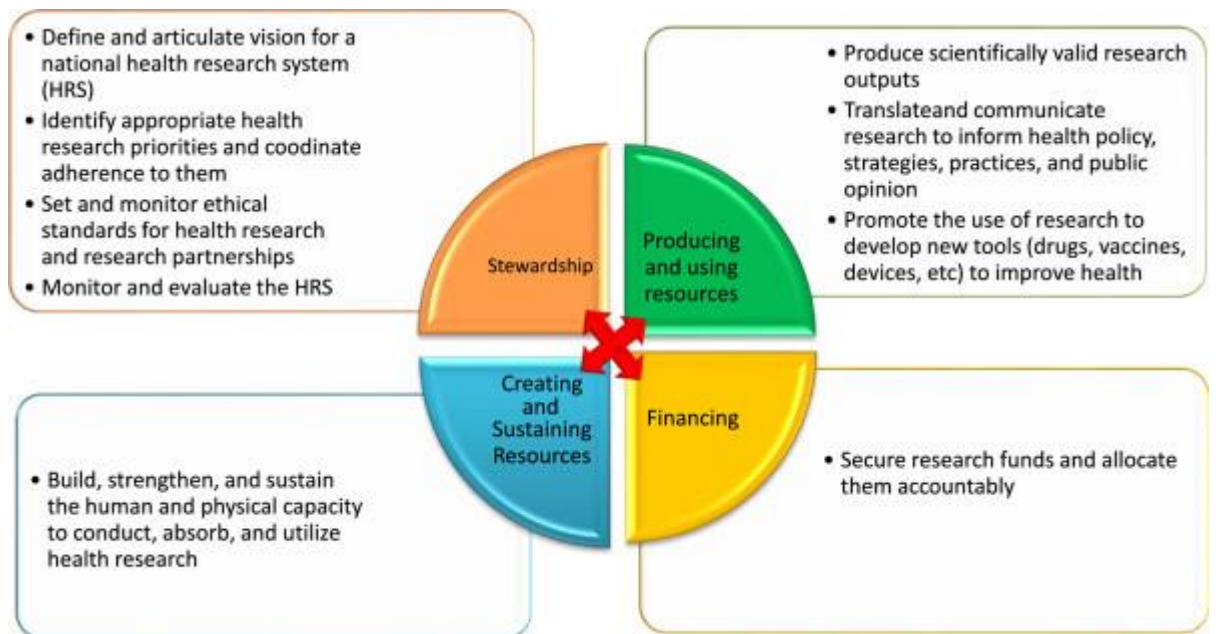


Figure 2.1: A conceptual framework and foundation for health research systems: Summary of the functions and operational components of health research systems

(Adopted from Pang et al. 2003, which is modified by Sombié et al 2013)

2.2.1 Stewardship and ensuring good governance

Pang et al. (2003) posit that stewardship within the HRS should include four components namely definition and articulation of a vision for a national HRS; identification of appropriate health research priorities and coordination of adherence; setting and monitoring of ethical standards for health research and research partnerships; and monitoring and evaluation of HRS itself. These insights were considered in the literature review looking at challenges facing them as well as in the development of strategies for the strengthening, governance and implementation of HRS proposed in this study.

The first aspect to be discussed is: define and articulate vision for a national health research system followed by identification of appropriate health research priorities and coordination of adherence; setting and monitoring of ethical standards for health research and research partnerships; and monitoring and evaluation of HRS.

2.2.2 Define and articulate vision for a national health research system (HRS)

Overwhelming literature shows that there are some challenges in the defining and articulating vision for national health research systems. The study conducted on the status of national health research systems in ten countries of the WHO African region, Kirigia and Wambebe (2006) found that only three countries reported having a functional national health research system (NHRS). As such, there is a need for government together with global health partners to consider strategies that enhance building of HRS in affected countries.

Similarly, D'Souza and Sadana (2006) conducted reviews of 28 case studies that analysed health research systems in 26 low-and middle-income countries. The authors discovered several common challenges affecting national health research systems. These include lack of coordination in research; inadequate participation of stakeholders in research-related activities; inadequate or weak policy and execution practices; lack of demand for research; and limited access to research funding.

2.2.3 Identify appropriate health research priorities and coordination of adherence

Due to globalisation, health research is now determined by economic or academic interests that may or may not reveal the prerequisites of the host country, although some forms of research sponsorship are humane.

This necessitates countries to set national health research priorities related to the countries needs in order to heighten their dimensions that health research to be conducted is significant to the country's requirements. Therefore, one of the key functions of a national health research system is setting research priority for the country which is perceived to be an important process in terms of ensuring the alignment of research funding with national evidence needs (Glickman, McHutchison, Peterson, Cairns, Harrington, Califf, et al, 2009, Ranson and Bennett, 2009).

Campbell, (2008) point out that health research priorities in developing countries continue to be donor-driven through funding of vertical programmes in specific areas of interest. He further reason further that these programmes can be used to channel resources towards developing HRS instead of concentrating only on specific areas. Therefore, WHO (2001) maintains that ensuring good governance through identification of appropriate health research priorities and coordination of adherence to the identified health priorities of health research begins with the involvement of people and society in identifying the research problems and priorities and, to some extent, deciding on resource allocation. Thus, the significance of ownership and involvement of the public is to be emphasised as a means of ensuring good governance of health research.

In Namibia, setting of health research priority is yet to be considered, as a result, research in the country is donor-driven because there is no line budget for research in the Policy Planning Directorate that hosts the Research Unit, which oversees all HRS functions. Typically, the implementation of projects funded by donors is carried out according to the priorities of the donors.

2.2.4 Set and monitor ethical standards for health research and research partnerships

Setting and monitoring ethical standards for health research are an important aspect of the stewardship and ensuring good governance HRS function and the process requires involvement of representatives of key stakeholders and players, such as: development partners, institutions of higher learning, civil society and community organisations, state-owned enterprises and professional associations is necessary.

The operational component of setting and monitoring ethical standards for health research and research partnerships involves drawing up or strengthening health-research policies and health-research legislative documents, as well as enforcing standards, regulations, research coordination mechanisms and transparent best practice research processes, including those related to ethical review and conduct (Health Research Policy for the Caribbean 2009, WHO 2008, WHO 2010). IJsselmuiden, de Haan, and Kennedy (2005-2006) argue that countries as units of policy have an impact on health and development through health research and thus

are vital to the success setting and monitoring of ethical standards for health research and research partnerships.

Literature has revealed that weak, non-existent, restrictive or out-dated policy and legislative frameworks pose challenges to HRS in Africa. Whitworth, Kokwaro, Kinyanjui, Snewin, Tanner, Waldport et al. (2008) indicate that the environment in many African countries is not conducive for research. This is a result of legislative frameworks that do not keep pace with international trends in research. These inadequacies impede multi-institutional research, specifically clinical trials, as trends in relation to clinical trials, material exchange and intellectual property rights are not well addressed. Namibia is no exception.

In the case of Namibia, the Research Management Policy and Clinical Trial Guidelines were adopted in 2003 and have not been revised since. Therefore, Namibia could be classified as having outdated, policy and legislative HRS frameworks. The lack of revision of these tools has a detrimental effect on the management and implementation of HRS functions.

Although existence of research coordination mechanisms is necessary for setting and monitoring of ethical standards for health research and research partnership as indicated by WHO, 2008 and by the Health Research Policy for the Caribbean (2009) which specifies that, in order to facilitate in-country governance and management of research, there should be a single entity tasked with the responsibility of managing issues related to research for health in the country.

Literatures reviewed show that the lack of research coordination mechanisms surfaces frequently in many countries around the world, more specifically in Africa and the Caribbean. As such, the situation is not unique to Namibia. In their study, Mbondji et al. (2014) indicated that only sixteen or 36% out of forty-four African countries reportedly had research coordination mechanisms in the form of well-designed national health research governance mechanism, of which nine or 20% had clear terms of reference as well as a functional national health research management forum.

Another challenge in Namibia related to setting and monitoring ethical standards which is linked to research coordination mechanisms is that there are no linkages between research ethics committees in institutions that are involved in health research and the MoHSS.

In addition, ethics committees in institutions of higher learning operate in isolation and there is no interaction with the MoHSS ethics committees.

Moreover, Becerra-Posada et al. (2014) maintained that their analysis of fourteen Latin American countries that participated at the HRS conference in 2014 showed various aspects of weak governance structures and coordinating mechanisms. The report of the analysis underscored the fact that most of the National Research for Health Systems (NRfHS) in that region were inefficient because they lacked coordination and were dispersed.

Therefore, Ndebele, Mwaluko, Kruger, Ouwe, Oukem- Boyer and Zimba (2014) emphasise the importance of networking because, while a single country may not have enough capacity, the identified gaps could be enhanced through networking.

In the same vein, the Health Research Policy for the Caribbean (2009) suggested key strategies related to strengthening the stewardship function of the HRS by enhancing research coordination mechanisms in particular through the integration of the HRS into national health systems; promotion of inter-sectoral participation at all stages and levels of research for health; creation of an enabling environment for the ethical conduct of research and the setting up of a health research agenda at regional levels.

In the Namibia context, one of the strategic directions to address the research coordination mechanisms at country level is the consolidation of a system for research management as stipulated in the MoHSS National Health Policy Framework 2010-2020, a philosophy that is embraced by South Africa that culminated in the publication of the Health Research Policy (HRP) of 2001, calling for the development of a national health research system (NHRS) with a vision to contribute to equitable health development (Senkubuge & Mayosi, 2012/13).

2.2.5 Monitor and evaluate the HRS

Monitoring and evaluation of the HRS is crucial in order to demonstrate the HRS return on investments and indicate how and to what degree the HRS contribute to social goods such as the evidence based decision making process (Souvairan, de Haan, Montorzi Edwards and IJsselmuiden 2014). The component of monitoring and evaluation of HRS presently is inefficiently carried out amongst Mediterranean and

African countries (including Namibia). Inefficient monitoring and evaluation of HRS is due to lack of national mechanisms for monitoring and evaluation of the performance of the health research system (Kennedy, Khoja, Abou-Zeid, Ghannem and IJsselmuiden, 2008, Mayosi and Senkubuge, 2012).

2.3 FINANCING FUNCTION

Financing function for HRS refers mobilisation/collection of financial resources for health research, allocation of the funds accordingly as well as tracking resource flows for health research (Kirigia, Ota, Senkubuge, Wiysonge and Mayosi, 2016).

2.3.1 Secure research funds and allocate them accordingly

Contrary to WHO recommendation of securing and allocating research funds accountable, financing for HRS remains inadequate despite growing interest in increasing financing for research for health from WHO and its Member States across the continent (Becerra-Posada et al. 2014).

This finding was supported by different authors who were in agreement with the lack of financing for health research in the WHO member states (Senkubuge & Mayosi, 2012/13); Hanney and González-Block, 2013).

Furthermore, some researchers argue that research for health is subjected to a functioning HRS. Meaning that, such HRS secure foreign funding sources for all costs, including salaries, equipment, support staff and all project costs (Kok, Rodrigues, Silva and de Haan, 2012).

Namibia has recognised the need to address the challenge of strengthening health research collaboration and linkages. This is also articulated in the MoHSS National Health Policy Framework 2010-2020 (2010), which indicates a specific strategic response in relation to information and research. In the case of Namibia, specific strategic responses that relates to strengthening the financing HRS function include the allocation of adequate human and other resources for information and research to reach 5% and 2% of total health budget, respectively. In addition, at an international level Namibia ascribes to the Algiers Ministerial declaration of allocating at least 2% total health budget to research (WHO, 2008).

However, the research practices in Guinea Bissau steered the development of a HRS with both local and international links and strong dependencies on international partners and donors. Above scenario is also the same in Namibia.

The fact that the majority of health-related research activities, in Namibia are donor-funded can be directly linked to the lack of a fully functional HRS, which should coordinate research funding and determine guidelines for disbursement of funds according to the country's health research priorities.

Hence, appropriate and multi-disciplinary funding mechanisms need to be put in place in order to aid efficient use of the resources (MoHSS 2003).

However, issues such as lack of funds and donor-driven health research activities were identified in the literature as stumbling blocks in relation to the financing HRS function around the globe, regionally and at country level (Pang et al., 2006).

The financing function is critical in ensuring the effective implementation and governance of HRS. The process may involve securing funds from the private and public sectors as well as from development co-operation partners. Since the process involves different players, a systems approach is required that involves a transparent and peer-reviewed process. Furthermore, an appropriate system to disburse and administer these funds should be established.

The function of allocation of resources should encompass the overall vision and agreed research priorities of the MoHSS and other national research bodies outlined in the national research agenda. This approach would ensure better co-ordination and prevent duplication of efforts. It would also engender consensus amongst stakeholders in health research and policy-makers (Pang et al., 2006).

Despite the Algiers Ministerial declaration target of allocating at least 2% of the total health budget to research, Kirigia et al, (2016) found that the index for the budget line for health research in Africa was 47%. However, governments that allocated 2% of national health budget to health research were only 6%. They concluded that this is linked to lack of political will.

Hotez, Cohen, Mimura, Yamada, Hoffman, and Patel (2013) maintain that funds for research are collected from different sources; therefore mechanisms should be put in place to coordinate the utilisation of these funds.

Figure 2.2 below present possibilities that can be explored to strengthen the HRS financing function as discovered from literature.

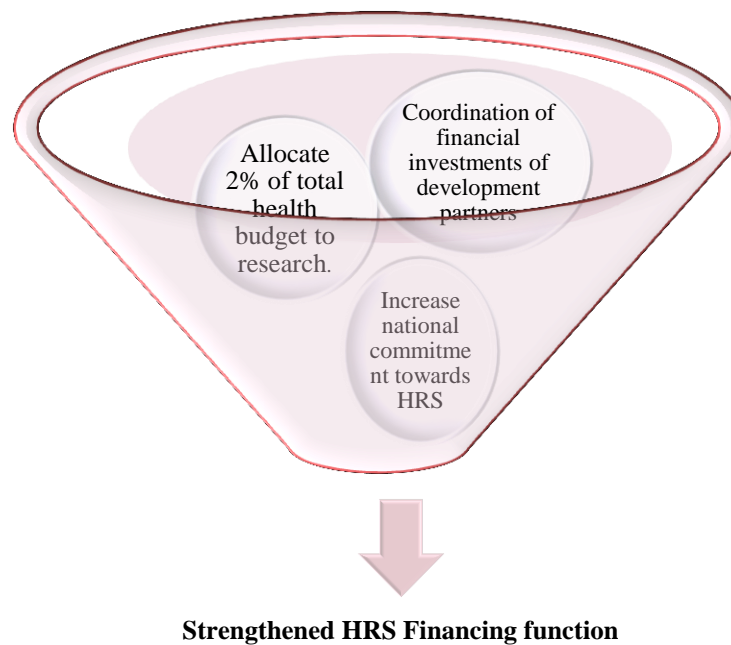


Figure 2.2: Possibilities for strengthening the HRS financing function.

2.4 CREATING AND SUSTAINING RESOURCES AND CAPACITY DEVELOPMENT FUNCTION

Creating and sustaining resources and capacity development function covers building or strengthening and sustaining human resources and physical infrastructure for health research through discovering and defining essential elements related to creating and supporting an enabling environment for countries, institutions and individuals, to develop new information and utilize (Kirigia et al., 2016).

2.4.1 Build, strengthen, and sustain the human and physical capacity to conduct, absorb and utilise health research

IJsselmuiden, de Haan and Kennedy (2005), found that many countries lacked a critical mass of researchers. This deficit was often part of a wider problem of inadequate human capacity, especially human resources for health research. Furthermore, the authors mentioned that skills development was mainly focused on the supply side (researchers and research institutions) rather than enhancing the capacity of users of research (e.g. policy-makers and community groups) and found that research was not often translated into policy or action.

In Namibia, creating and sustaining resources, both financial and human, as an HRS function is compounded by lack of human resources, inadequate capacity and shortages of expertise in HRS at ministerial level. The Research Unit that is mandated with the coordination of health research in the entire Ministry is faced with a shortage of staff and currently has only three professionals. Furthermore, the unit serves as a secretariat to the ethics review committees in the MoHSS. However, it does not receive sufficient input from the committee members on the review of protocols.

Although these ethics review committees were specifically set up to carry out appraisal of proposals, it is left to members of the secretariat to carry out these duties on top of their core functions and responsibilities.

Furthermore, a country-focused plan for capacity strengthening which includes development of technical skills and competence in research management negotiation

skills, leadership skills and networking, at macro- country, meso- institutional and micro- individual levels.

The identified areas for capacity building are major areas for addressing challenges related to creating and sustaining resources HRS function. Senkubuge & Mayosi, (2012/13) stress that despite its importance, creating and sustaining human and physical resources for health research, is not prioritised. This function is listed as only the third central function of a health research system in addition to the stewardship and ensuring good governance and financing HRS functions.

In South Africa, this important HRS function is adversely affected by underfunding of the health research system and the shortage of training programmes and career paths for health researchers. Shortage of training programmes for health research in South Africa is similar to the situation in Guinea Bissau where capacity development remains reliant on South-South and North-South collaboration as indicated by Kok et al. (2012). This is also comparable to the situation in Namibia.

Strengthening health research collaboration and linkages is important. Haidari (2012) has recommended that the NHRS needs to play a role in health research collaboration through innovation and knowledge sharing.

Therefore, NHRS needs to be in place to provide guidance on coordination of research representing the views of all health research stakeholders such as researchers, funding agencies, private companies, and civil society as well as representative governments (Hanney & González-Block, 2013).

Health research capacity will have broad benefits for institutions as well as communities. The loss of research expertise through “brain drain” places a burden on the ability of mandated institutions such as the MoHSS to achieve their goals. Moreover, loss of professionals consequently weakens the HRS in the country as a whole. The emphasis is that creating, sustaining resources and capacity development are critical for an effective HRS (WHO, 2004).

Educations as well as the Science and Technology systems also play a major role in developing science and research policies necessary in the execution of HRS functions. In order to build capacity, training should be offered at different levels as indicated in figure 2.3 on page 49.

- Areas and levels of HRS training***
1. Trainings on technical skills and competence in research management
 2. Negotiation skills,
 3. Leadership skills and networking,

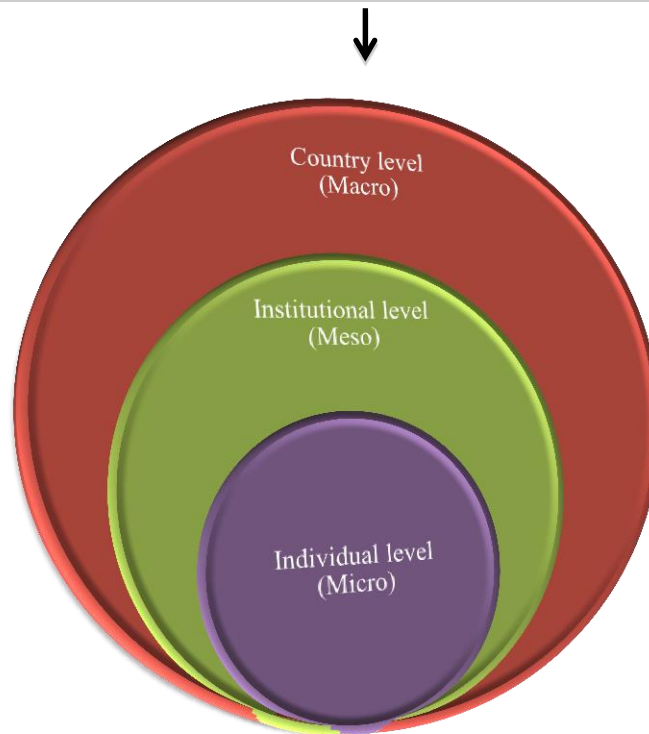


Figure 2.3: Levels for capacity building and sustaining resource for HRS

2.5 PRODUCING AND USING RESEARCH FINDINGS FUNCTION

Kirigia et al, (2016) outline that, the function of producing and using research findings entails the conduct, dissemination and translation of research findings into policies, strategies, practices, opinions as well as development of new products and tools.

2.5.1 Produce scientific valid research outputs

Literature review has revealed several setbacks related to producing and using research globally, regionally and nationally. Kirigia and Ovberedjo (2007) point out some setbacks such as lack of interactive academic and professional societies; limited access to scientific information already available in the region and globally; poorly trained end-users of research output, failure of researchers to disseminate research findings beyond journals and donors; and weak administrative support for health research, both at governmental and institutional levels.

African researchers more than doubled their production of research between 2003 and 2012, to 29% of Africa's overall research output; of these scientific amount produced is in the health sciences, which account for 45% of the region, have output. Although this production is only 1% of the world's research outputs, the report confirms that the quality and quantity of research is improving in the African continent (Tabaro, 2016, World Bank Group, 2014).

In the Namibian context, Professor Kenneth Mchombu, the then Dean of the Faculty of Humanities and Social Science at the University of Namibia, indicated that "as far back as ten years ago, research in Namibia was carried out by outside researchers, who would leave the country with their findings. This situation has led to lack of continuation of research activities as the possibility of building on previous research is lost in the process" (Mchombu, 2011).

In order to produce, utilise and share research findings maximally, there is a need to create a health research information culture (WHO, 2001).

The current situational results in duplication of efforts, with countries losing opportunities to benefit from health research findings, which are necessary for evidence-based decision-making. For example, the new generation of researchers are compelled to start investigations from scratch instead of building on the intellectual attainment of the preceding generations.

2.5.2 Translate and communicate research to inform policy, strategies, practices and opinions

Kok et al. (2012) in their study in Guinea Bissau indicate that avenues for disseminating research results are very limited. This is compounded by barriers to evidence-based policy-making as pointed by Hyder, Corluka, Winch, El-Shinnawy, Ghassany, Malekafzali, Lim, Mfutso-Bengo, Segura, and Ghaffar (2010). They stress that the obstacles to evidence-based policy-making include poor communication and dissemination, lack of technical capacity in policy processes, as well as the influence of the political context in a given country.

In order to address the identified barriers to utilizing research findings for evidence – based policy making, Hyder et al. (2010) suggests strategies such as the better packaging of research results, utilisation of social networks, establishment of fora for popularisation and sharing of research results, as well as clearing houses as vehicles for research findings dissemination.

Given challenges related to availability and access to research information and its utilisation, there is a need to facilitate meaningful interactions between data producers and data consumers through improved communication.

In addressing challenges related to availability and access to research information and its utilisation, the Health Research Policy for the Caribbean (2009) suggests strategies such as securing and consolidating international linkages and technical cooperation as well as improving mechanisms, tools, and capacity for knowledge management at the regional and national level. On the same subject, WHO (2001) encourage the creation of fora to serve as mechanisms or platforms, at the national or institutional levels, to clarify and promote positive ideas on health research and ensure that they become part of health systems and policies. This suggestion is relevant to the Namibian HRS scenario since there is currently no forum or mechanism to ensure the proper dissemination of research findings.

2.5.3 Promote the use of research to develop new tools (drugs, vaccines, devices etc.) to improve health

New knowledge, technologies, and clinical treatments that lead to enormous returns are produced through scientific research. Although research makes up 29% of Sub Saharan Africa's research output, the situation leaves a gap in many countries' including Namibia's ability to enhance sectors that may contribute to new knowledge, technologies, and clinical treatments such as information and technology, manufacturing and agriculture (Kreiman and Maunsell 2011, World Bank Group 2016).

The preceding discussion dealt with the status of HRS in Africa and elsewhere covering all the functions, the next item to be presented is the systems theory in relation to the HRS functions.

2.6 THE SYSTEM'S THEORY

The WHO has adopted the systems theory in dealing with HRS as postulated by Pang et al (2003), who argue that due the complex nature of HRS, the functions of HRS must be treated and managed through a system's theory, which discussed below. In order to assess HRS, there is a need to understand its complex and comprehensive context. World Health Organization (2001) points out that HRS is based on a broad range of interrelated functions such as stewardship, financing, creating and sustaining resources and producing and using research. These functions of the HRS cannot be viewed in isolation as they are intertwined. HRS, therefore, needs to be viewed from a system's perspective owing to its complex nature (Senge, 1999).

In addition, WHO (2001) stresses that a health research system is the application of a system approach to research to enable planning and implementation of health strategies towards equity, quality, efficiency and social accountability. Pang et al. (2003) propose a conceptual framework for health research systems (HRS) that defines their boundaries, components, goals, and functions. Pang's theory adopts a System's Perspective towards understanding an HRS and serves as a foundation for constructing a practical approach to describe and analyse it (Pang et al., 2003).

The analysis of an HRS should in turn provide a better understanding of how research contributes to gains in health and health equity. Pang's (2003) approach takes into account the HRS functions as postulated by WHO.

In the system's theory, the functions of HRS are seen as stewardship, financing, creating and sustaining resources, production and utilisation of research, good governance, and improving research capacity and all these are regarded essential (Pang et al., 2003). According to the same authors, a system's perspective allows HRS issues to be addressed holistically. "A holistic approach is necessary because often health research is fragmented, competitive, highly specialised and a sectoral activity where researchers within scientific disciplines habitually work in isolation from other disciplines" (Pang et al., 2003).

In addition, the proposed conceptual framework for HRS by Pang et al (2003) further can be viewed in line with Dickoff et al. (1968). Dickoff et al, has designed a survey list that include the agent, context, recipient, dynamics, procedure of the activity and terminus that enables the documentation and classification of concepts that will ensure development of the strategies. However, strategy development is a complex process that requires simplification of the developed strategies for easy implementation. In the same context, good strategy development involves principles that address issues related to the agent, context, recipient, dynamics, procedure of the activity and terminus. Therefore, the Compass Aligned Performance System (c@ps) of Howe (1999) that covers key performance indicators, strategic objectives, critical success factors, values and vision enable summarisation of the strategies, were also considered in the development of strategies.

According to Pang et al (2003) there is often little effective communication and consultation between the producers of research information and the end-users (i.e. the decision and policy-makers, health professionals, consumers, and the public).

Therefore, there is a need for a rational framework that values both the production and use of research, and a platform for effective communication and interaction between all the players and stakeholders (Pang et al, 2003). Furthermore, Pang et al, (2003) emphasises that a systems approach is needed for integrating multi-disciplinary efforts. Hence, a national and local health research system is proposed by WHO which coordinates multiple players in health research and avoids fragmentation, redundancy and gaps in knowledge from various disciplines.

In addition to the view of Pang et al. (2003) that HRS should be viewed from a systems' perspective, McCoy (2001) concurs and stresses that since HRS interacts with other societal systems, it should be realised that its interactions are shaped by many factors. Consequently, HRS should be viewed from a systems perspective or systems theory in order to understand its complex nature. The author also points out that there are three broad systems that are interlinked with the health research system of a country, namely the health system itself, the education system, and the science and technology system. Therefore, due to the interrelatedness that exists amongst these systems; a holistic approach through the system's perspective to HRS is required.

In Namibia, the co-ordination task rests with the Ministry of Health and Social Services (MoHSS), which is responsible for the coordination and harmonisation of the institutional, national and external health research environment in the country. In addition, the international research community is part of the network that influences the HRS with its strategic, technical and financial support.

Moreover, WHO (2002) affirms the need of health systems research to address many issues through a functional HRS which includes among others: health development in areas like human resources for research for health, community development, technology, pharmaceuticals and vaccines, communication and information systems, financial system, health policy and laws. Therefore, there is a need for a comprehensive approach to HRS. It is against the above principles that a system's approach is applicable for the current study. System's theory is also critical in facilitating comprehensive investigation and development of strategies towards strengthening the implementation and governance of health research activities.

2.6.1 The external factors needed for analysis of HRS for development of strategies

Many authors (Sombié, Aidam, Konaté, Somé, and Kambou, 2013, Pang et al., 2003; McCoy, 2001) are advocating for a systems perspective or systems theory or approach to be applied to the HRS because this system is influenced by many internal or external factors such as: the country context, which include historical, political, ideological, socioeconomic, geographical and cultural factors at play in the country. These factors are part of the macro environment that needs to be taken into consideration when conducting an analysis with the aim of developing strategies.

Country context is understood as the country's organisational infrastructure that supports the HRS functions. It also refers to multifaceted HRS stakeholders at national, regional, and local levels that influence the implementation of HRS functions. These factors are discussed below.

Cultural factors - cultural factors are referred to as thoughts and behaviours shared by a group of people (Armenakis & Kiefer 2007).

However, the cultural backgrounds have a major effect on the lives of people and determine how they react to situations. In addition, culture includes health awareness which determines the population's attitudes to understanding health issues. Therefore, health beliefs and practices as well as myths and misperceptions that prevail in populations about health research have an impact on HRS functions. For example, in many communities in Namibia and other African country, HRS activities may be hampered and curtailed by cultural practices disapprove the divulging of information about a person's health status.

Geographical factors- the geography of a country impacts the health care delivery system and in turn, the HRS functions. For example, vast distances and areas to be covered, as is the case of Namibia affect the government's efforts to ensure appropriate delivery and utilisation of health services; therefore, there are gaps in these which limit HRS functions.

Historical context- the historical context of a country also impacts HRS functions positively or negatively. In its 2006 Report COHRED (COHRED, 2006) point out that countries, especially low- and middle-income countries, face under-investment

in research for health relevant to their needs. This phenomenon consequently leads to dependency on donor-funded health research.

Ideological factors- ideology is defined as the set of ideas and beliefs that are important to a person, a group, or a culture (Miriam -Webster's Dictionary, n.d). The positive sets of ideas and beliefs among different institutions and stakeholders such as social scientists, health system researchers, policymakers and the communities have an impact on HRS functions. On the other hand, ideological biases and basic assumptions may affect HRS functions adversely.

Political factors-the country's governance structure, laws and regulations can have positive or negative impacts on HRS functions. Strengthening HRS in a country needs political will and support for the reason that many developing countries struggle to get the process going (Palmer⁻Anyaa, and Bloch (2009). Governments have great influence on how HRS functions are executed; therefore, to what degree and in what manner a government intervenes in HRS functions determine its success.

Furthermore, political factors such as international public health laws, tax policy, trade restrictions, political stability, availability of goods and services and infrastructure all influence the implementation of HRS functions.

Socio-economic factors- since the socioeconomic determinants of health are the predictors or drivers of health outcomes, these same factors influence the HRS of a country as they influence areas to which HRS directs its efforts. These factors include the education level, income, poverty, housing burden and economic hardship.

In addition, social factors related to employment and working conditions; community cohesiveness, social support and civic engagement; community safety; and legal and social equity relating to health research all impact a functioning HRS (Senterfitt, Long, Shih, and Teutsch 2013).

Therefore, the socioeconomic status of a country determines the efforts its HRS needs to make in order to address its health research needs. Furthermore, economic factors such as economic growth, interest, exchange and the inflation rates have major impacts on how the HRS of a country can perform because they determine the purchasing power of goods and services. In addition, allocation of resources from the government pool for HRS is determined by availability of funds since the HRS functions cannot work without finance.

2.6.2 Summary of the system's perspective in relation to health research systems

Figure 2.4 below depicts concepts related to HRS that were identified in literature, from a holistic point of view the HRS is influenced by both external and internal environment factors. The external environment includes the country context, which takes account of historical, political, ideological, socioeconomic, geographical and cultural factors at play. As indicated in the diagram the internal environment consists of the HRS functions, which are linked and both exert influence on HRS.

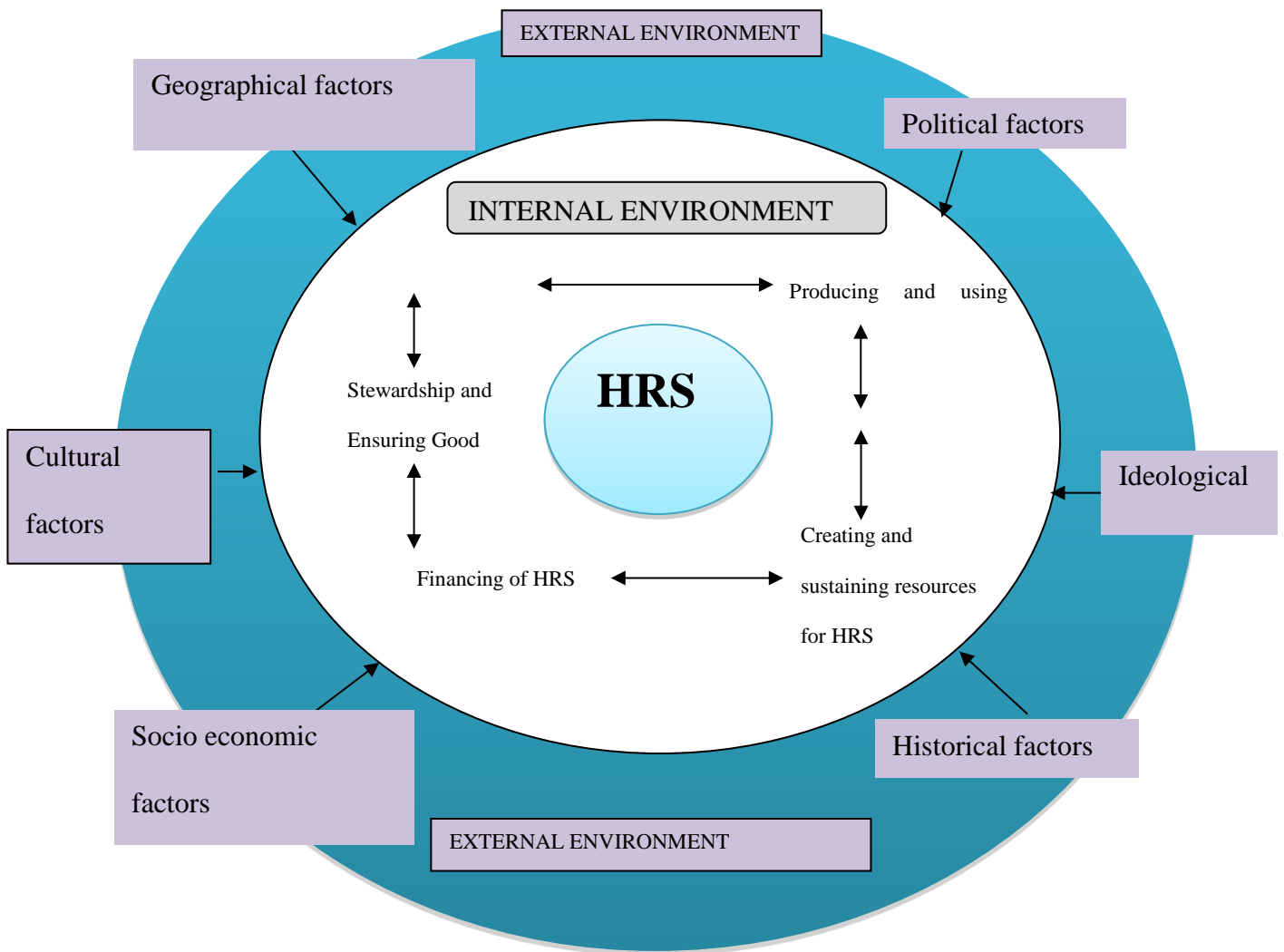


Figure 2.4 Factors influencing the HRS

As underscored by Pang et al. (2003) and McCoy (2001), HRS should be approached from a systems perspective because it is influenced by various factors, including the external environment. The external environment is made up of the factors that are outside (as indicated in the diagram above) the HRS but which impact the functions of the HRS positively or negatively. In addition, this confirms that the health research setting is demanding as it embraces problems of inadequate resources for research, which lead to many countries accommodating donor-driven research activities.

At the same time, as an external factor that has an impact on the HRS, globalisation has produced various actors, at both international and national levels (WHO, 2016). The World Health Organisation (2004), points out that HRS is based on a broad range of interrelated functions such as stewardship, financing, creating and sustaining resources and producing and using research. These functions of the HRS cannot be viewed in isolation as they are intertwined in the HRS. The prevailing interactions of external and internal environments with each other shape the health research system eventually (Sombié et al. 2013). Therefore, in strengthening HRS functions, a systematic approach need to be followed, the discussion that follows will briefly discuss the framework for country level action that can be utilised to strengthen health research systems as proposed by the World Health Organisation.

2.7 STRENGTHENING COUNTRY LEVEL HEALTH RESEARCH SYSTEMS

Sombié, et al. (2013) posits that to date, little is known about how health research systems (HRS) in low-income countries emerge and change over time, and how this process relates to their performance. Therefore, getting insight into how such systems advance is significant for the development of well-functioning NHRS (Kok et al. 2012).

Therefore, the study and analysis of the structure of (HRS) would provide relevant information about the facets of national health research systems that may need strengthening.

There are abundant examples in literature, which demonstrate the multitude of challenges in the implementation and governance of HRS and recommend some strategies that could be undertaken to strengthen HRS. Many authors (Whitworth, Kokwaro, Kinyanjui, Snewin, Tanner, Waldport et al., 2008; Campbell, 2008, D'Souza & Sadana, 2006; Kirigia & Wambebe, 2006) have outlined and discussed several strategies.

Senkubuge and Mayosi (2012/13) emphasise that an HRS is part and parcel of the health system and the research system of a country. Therefore, its strengthening is a complex activity, requiring consideration of different aspects of the system. It is this process, in its entirety, that would lead to the development of concrete plans and actions aimed at strengthening the country's HRS.

On the other hand, COHRED (2006) proposes that strengthening HRS in countries requires that HRS situations in countries are understood regarding their opportunities and constraints their respective needs and resources to strengthen HRS therefore, HRS situation analysis performance appraisal need to be carried out.

In addition, consideration of the role and importance of networking and investigation of opportunities for networking with national, regional or international agencies forms part of the process of strengthening HRS in countries in order to solicit technical or financial support. In line with Senkubuge and Mayosi (2012/13) as well as COHRED (2006) The World Health Organisation proposed a country level action framework that can be utilised to strengthen Health Research Systems (WHO, 2004). The proposed framework summarises issues that are discussed by Senkubuge and Mayosi, 2012/13, and COHRED, 2006).

Figure 2.5 below outlines the framework for country level action to improve health research systems as proposed by the World Health Organisation.

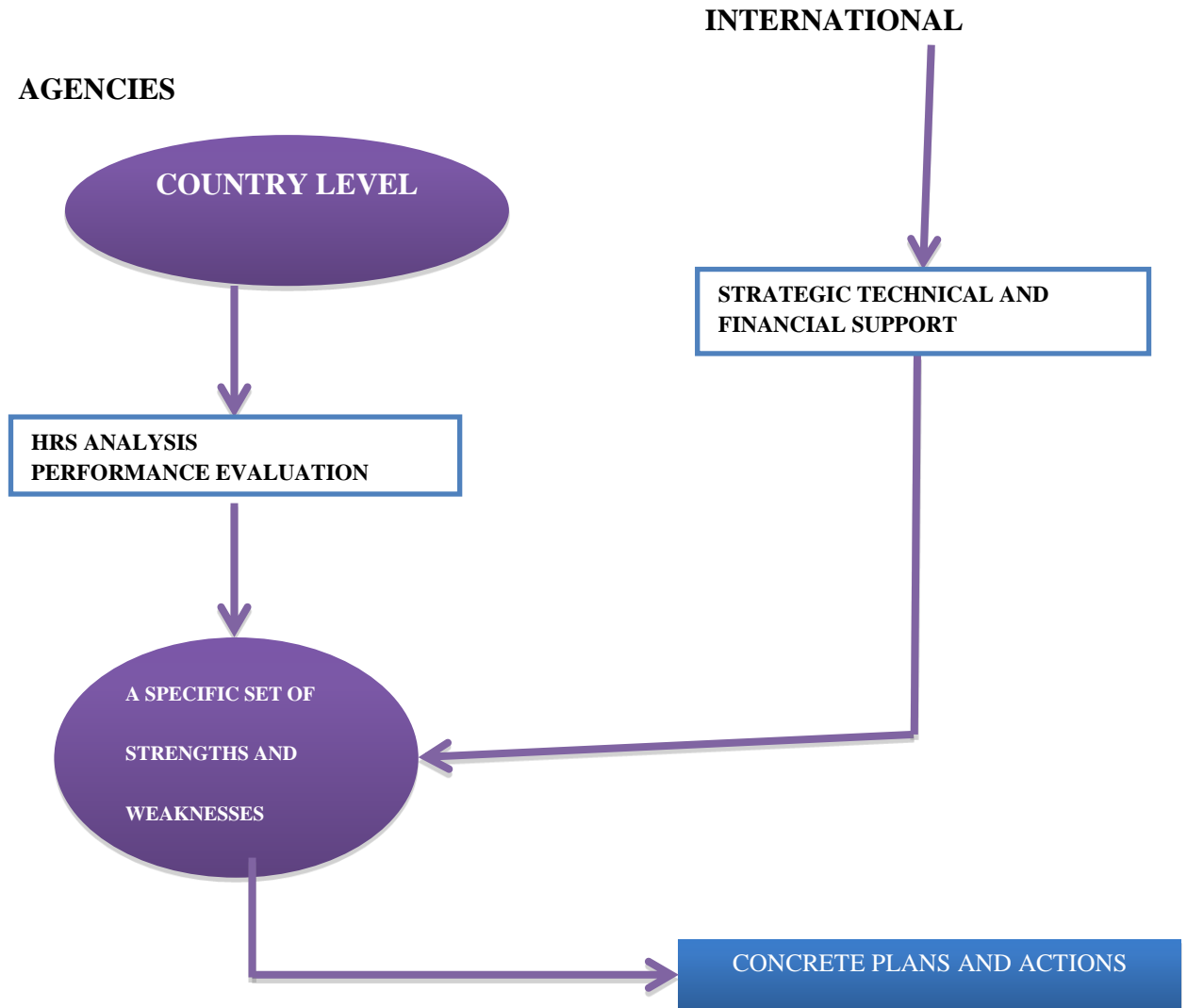


Figure 2.5: World Health Organisation framework for country level action to strengthen HRS. (Adopted from World Health Organisation (WHO) 2004, Report from an International Workshop on National Health Research Systems)

2.8 SUMMARY

This chapter presented the literature review and the context within which the study was conducted. The literature review provided an analysis on the theoretical basis underpinning the practice and study of HRS. The importance of adopting a system's theory to HRS was discussed in order to address HRS comprehensively and to avoid addressing the functions of the system in isolation. Discussion of the factors that influence an HRS system such as the historical, political, ideological, socioeconomic, geographical and cultural ones that need to be considered in relation to the HRS of the Namibia was also presented.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

The literature review was presented in the previous chapter. In this chapter, the researcher explains the methodology used to guide this study. The researcher used a structured framework, consisting of three phases. The framework is a logical structure that guides and links the development of a research study. In this research study, the research method included an empirical phase, a conceptualisation phase, and a strategy development and verification phase. The methods in each phase will be described in greater detail after the discussion on the research design.

3.2 THE RESEARCH DESIGN

The research design is the researcher's overall plan for answering the research questions (Babbie & Mouton, 2009). These authors hold that the research design is a "blueprint", indicating how the researcher intends to conduct the research by describing the sources of data, and whether a quantitative or qualitative design approach will best suit the research problem, finding out whether to employ an exploratory, descriptive or explanatory approach, and determining the unit or units of analysis as well as the point of focus. In this study a quantitative approach, an exploratory and descriptive design was utilised, and the approach as well as each design will be discussed below.

3.2.1 Quantitative research design

Quantitative research is defined by Burns and Grove (2009) as a formal, objective, systematic process in which numerical data are used to obtain information about the world, and it is used to describe variables, and to examine relationships among variables. The authors also argue that a quantitative research design yields more objective and reliable findings. The quantitative method enables the researcher to solve the data reduction challenge by focusing on the common inputs and forsaking the unique variation through the use of numerical data. The process ensures that the researcher focuses on the statistical parameters during data interpretation.

This study was also non-experimental as these studies are done in the natural setting without manipulating the independent variable (Burns and Grove, 2009). A non-experimental quantitative design was therefore selected, because the researcher wanted to gather objective and measurable data, without any manipulation of the independent variable.

3.2.2 Exploratory research design

Exploratory design is appropriate when there is little evidence, or little or no literature on a concept. An exploratory study is conducted to provide a basic familiarity with a topic with the aim of understanding it fully (Polit & Beck, 2012). The approach is applicable to this study as Health Research Systems [HRS] approaches in Namibia are relatively new, which prompted the researcher to explore this area. Also no study in this area had been conducted previously in the country. This study was also exploratory because it was conducted to gain insight

and understanding of the HRS in Namibia. Burns and Grove (2009) recount that exploratory research designs enable the researcher to depart from a position of not knowing and having no insight, into a position of insight about a phenomenon. Therefore, this design was suitable for the envisaged investigation.

3.2.3 Descriptive research design

Descriptive designs are utilised to assist with gaining more information about a particular characteristic within a particular field of study, as well as when little is known about a phenomenon (Polit & Beck 2012, Strydom & Delpont, 2011). In addition, a descriptive design may be used to identify problems with current practice, justify current practice, make judgements or identify what other researchers in similar situations may be doing. There is also no manipulation of variables and no attempt to establish causality.

Consequently, Leedy and Omrod (2010) specified the eventual aim of descriptive research as being the solving of problems through clarification of the data that have been collected; hence its applicability to this study, because an investigation of the HRS concepts and functions were described. This study was also descriptive because it was conducted to achieve a holistic description of HRS governance and implementation in Namibia.

Finally, such detailed descriptions assisted in the presentation of information for the development of appropriate strategies to strengthen HRS implementation and governance in the Namibia. The following discussion discusses research methods and techniques.

3.2.4 Research methods and techniques

The research study was conducted in three phases, namely an empirical phase, a conceptualisation phase, and a strategy development phase. The phases are discussed sequentially below.

3.2.4.1 Phase 1: The empirical phase [Situational analysis]

This phase addressed the following two objectives:

1. To conduct a situational analysis by exploring and describing the current approach as well as the viewpoints of stakeholders with regard to HRS implementation and governance in Namibia
2. To identify and describe factors which impact the implementation and governance of HRS in Namibia.

The Empirical phase is sub-divided into phase 1 A (document review) and phase 1 B (survey). A document review was chosen by the researcher as a method of collecting data for phase 1 A of the study. In this context, the existing National Health Management Policy was reviewed.

According to the Centres for Disease Control Evaluation Brief (No. 18 January, 2009), documents to be reviewed may be internal to a programme or organization, or may be external.

The review of existing documents is helpful to a researcher in understanding the history, philosophy, and operation of a program with reference to the current study, the governance and implementation of HRS in Namibia.

The objective of the document review in this study was to help the researcher gain better understanding of the content of the Health Research Management Policy that guides the HRS functions so that such insight may guide the formulation of questionnaires for phase 1 B of the study.

It is on the basis of the document review that the researcher developed the questionnaires and the two response options as to whether the attributes on the WHO checklist are affirmed (present) or not affirmed (not present). The checklist helped to identify those attributes that may be present or lacking in Namibia's HRS implementation and governance.

The discussion below presents different aspects under each of these phases, namely the population chosen for each of the phases (1 A and 1B); the data collection instruments used; validity, reliability and pilot testing of the instrument in each phase; data collection and data analysis.

3.2.4.2 Study populations

A research study population is known as a well-defined collection of individuals or objects known to have similar characteristics. Oswala (2001) define population as the number of people or entities covered by the study or with which the study is concerned. With respect to phase 1 A, the researcher departed from the definition of a population by Saunders et al. (2009) who refer to a population as the entire set of individuals with the same characteristics. This aspect is discussed below.

3.2.4.3 Populations for phase 1A and phase 1 B

The population for phase 1A comprised documents that guide the implementation and management of HRS in Namibia. This agrees with the definition by Oswala (2001) which states that a research study population includes persons or objects. The Research Management Policy is the official policy document to be utilised by all stakeholders involved in health research in Namibia (MoHSS 2003).

In phase 1 B, the selection criteria for the population for this phase were persons responsible for the coordination of health research in Namibia, or institutions involved in health research. The population was divided into two sub-populations. The first sub-population included persons from different departments/sectors within the Ministry of Health and Social Services. They are referred to as the ministerial respondents.

The exo- ministerial sub-group comprises respondents/participants from institutions other than the Ministry of Health and Social Services, such as relevant government ministries, offices and agencies (O/M/As, state-owned enterprises, international organisations, tertiary education institutions and agencies of other governments. The constituents of the second subgroup are referred to as exo-ministerial respondents as illustrated in Table 3.1. The total assessable population amounts to eighty (80) entities in total. This population is shown in Table 3.1 on page 72.

3.2.4.4 Inclusion and exclusion criteria

Inclusion and exclusion criteria provide the rationale or justification in demarcating the identification parameters for inclusion or exclusion of the assessable populations

for the study. The rationale for inclusion or exclusion is usually based on specific reasons. Some of these reasons are direct contribution (s) and relevance of the population group or sub-group to the objectives and scope of the study. In this study, the inclusion criteria recognises populations or sub-populations eligible to participate or be included in this study. For this study, the inclusion criteria (with reference to different subgroups, as discussed above) are the health research guiding documents as well as entities involved in health research activities. The exclusion criteria connote documents and entities that do not have a stake in health research activities.

Table 3.1: The populations of phase 1B

Sub population 1		Population descriptors	(N)
Ministerial respondents		Executive office, MoHSS	3
		Departments	3
		Directorates	20
		Referral and District Hospitals	17
		Three Health Training Centres (National, Oshakati and Keetmanshoop Health Training Centres)	3
Sub-population 2			
Exo- ministerial respondents	Line Ministries and other agencies	Seven line ministries.	7
		National Planning Commission	1
	Institutions of Higher Education	University of Namibia faculties/divisions	9
		International University of Management	1
		Polytechnic of Namibia (Now NUST)	1
	International organisations	11 Organisations, namely: WHO UNICEF CDC Global Fund Program United Nations Population Fund United States Agency for International Development (USAID) MSH SMA UNAIDS PEPFAR I- TECH	11
	Parastatals	National Institute of Pathology (NIP) The Health Professions Council	2
	Civil Society	Namibia NGO Forum Legal Assistance Centre (LAC).	2
Total assessable population			80

The sub-populations of the study considered exo- ministerial and ministerial entities that are responsible for health research

3.2.4.5 Study samples and sampling techniques

The sample of a study refers to participants that/who represent the total population in a study, while sampling or sample selection is the process whereby a researcher selects the sample for the study. Generally, depending on the nature of the study subject, bigger samples are better because small samples are regarded as non-representative and they may yield results that do not represent the correct image of the area under study (Babbie, 2008, De Vos et al., 2011). While in studies such as this one where target populations are limited and are sui generis, it is important to project the size of the population that is both eligible to participate and assessable by the researcher.

The documentation of the eligible, assessable population in this study formed the basis for the viability of a proposed study, and it guided the context for the investigation. In this study, the nature and scope of the topic under study is such that it has both a delimited and limited number of entities that implement health research activities, on the one hand, and on the other a delimited and limited number of documents that guide the implementation of HRS. The RMP was included as the assessable population of the study in phase 1 and the total assessable population of 80 entities was included in this study for phase 1 B. The delimited and limited number and nature of the assessable populations in both Phases obviated the need for sampling.

3.3 DATA COLLECTION INSTRUMENTS USED IN PHASE 1A AND PHASE 1B

In phase 1A, a checklist was developed. It was based on the attributes set out in the WHO checklist. The WHO Health Research Systems Analysis Initiative, (2010) checklist was specifically developed for member countries and indicates which attributes should be in place regarding implementation and governance of health research. The attributes adapted by the researcher from the WHO list for this study are presented in Annexure E.

In phase 1B, a self-administered questionnaire was selected as the best method for data collection, as the intention of the study was to gather factual and quantifiable information, with regard to viewpoints and perceptions of the study respondents on health research systems in Namibia. Questionnaires are also quick and cost-effective to administer and the data collected is easy to code and analyse (Polit & Beck, 2012). Furthermore, questionnaires are considered trustworthy and vital tools to collect high-quality information efficiently (Saunders, Lewis and Thornhill, 2003).

Questionnaires also allow respondents enough time to think about the responses attentively as they can fill the questionnaire at their own pace. It is for this reason that the method was chosen as a suitable data collection tool for this study (La, 2012). Agreeing with these authors, the researcher decided to use a self-administered questionnaire with open- and close-ended questions for this study to collect primary data from the respondents.

Two different questionnaires were compiled, one for each sub-population. The first sub-population is called the ministerial respondents (group), and the second sub-population is called the exo-ministerial respondents (group). (See point 3.2.2, where the population description is given). The two questionnaires had a similar section that both sub-populations needed to respond to. That section focused on questions related to the WHO's health research functions. The specific sub-population questions formed part of the questionnaire for the ministerial respondents as they were requested to provide their perceptions/views on internal processes related to health-related systems in the Ministry of Health and Social Services, which only they would be familiar with.

The exo-ministerial respondents' questionnaire consisted of different questions related to the HRS financing function [Refer to Annexure D- Section E – HRS Financing function in the questionnaire]. The content of the data collection instruments focused on the functions of HRS which are: stewardship, capacity development, ensuring good governance of HRS, financing, creating and sustaining resources as well as producing and using research. A description of key concepts i.e. the HRS functions was attached to the data collection tool for clarification and common understanding of terms to rule out misinterpretation.

The questionnaires were divided into sections A–G. The HRS functions as per World Health Organization were divided into sections B to G, with each section covering related questions (WHO, 2010). [See Annexure D & E]. These sections were divided as follows:

Section A: Demographic information of the respondents (gender, age, position and experience)

Section B: Stewardship function

Section C: Capacity development for HRS

Section D: Ensuring good governance for HRS

Section E: Financing HRS

Section F: Creating and sustaining resources for HRS

Section G: Producing and using research findings

3.3.1 Validity, reliability and pilot testing of the instruments [checklist and survey] used in phase 1A and phase 1B

Validity and reliability are essential to establish in a newly developed research instrument. For this study, face and content validity was considered.

Face validity

Face validity addresses the issue of how the respondents perceive the look of the instrument (Trochim, 2006).

With respect to phase 1A, face validity also implies that the checklist should be able to measure what it is intended to measure and also whether the measurement makes sense and is reasonable.

In order to ensure that face validity was adhered to, the researcher submitted the checklist to two experts in health systems research who agreed that it had face validity.

Face validity was also ensured by submitting the questionnaire to the study supervisor and by conducting a pilot study. The pilot study will be referred to again after discussion of reliability. Recommended changes such as addressing each variable on its own in a separate question other than combining two or more variables in one question were then incorporated.

In phase 1 B, face validity and content validity for the questionnaire were considered. In presenting phase 1B, the researcher adhered to the same description and motivation as discussed under point 3.2.1.3. For the sake of consistency, reference was made to some of the motivations and explanations already mentioned under phase 1A.

In order to ensure face validity, the researcher submitted the questionnaire(s) of the survey to two experts in health systems research who agreed to the face validity of the questionnaire(s). Face validity was also ensured through submitting the questionnaire to the study supervisor and by conducting the pilot study. Suggested changes such as presenting only one focus point per item other than combining two or more focus points were integrated consequently.

Content validity

Content validity may be defined both as the adequacy of the content area being measured, as well as the representativeness of the content of an instrument (Bruce, Pope and Stanistreet, 2008).

In this study, the researcher was guided by the content of the HRS functions as defined by the World Health Organization to focus the content of the questionnaires (WHO, 2001; Pang et al., 2003). The World Health Organization's checklist was scrutinised and compared to related literature to identify items that may be relevant for consideration in the research questionnaire according to the country context. The checklist was also tested for reliability.

Taking into account the nature of the instruments, content validity refers to the degree to which an instrument covers the scope and range of information that is sought (Bruce et al. 2008). Content validity may also be defined as the representativeness of the content of an instrument. In phase 1B of this study, the questionnaire(s) developed was/were based on the documented content from the WHO on expected criteria for health research systems (Trochim 2006).

The WHO checklist is a generic tool that can be used to assess health research systems in different settings and countries. The content validity of the original WHO document is an international blue-print. Thus, internationally accepted content validity was ensured.

Existing literature was studied and perceived items identified from the WHO document were added to the newly developed questionnaire(s). Terms used in the questionnaire(s) were optimally defined in the context of the study. In addition, guidance was sought from persons who deal with health research functions to inform the content of the questionnaires during development of the tools and after the pilot study for finalisation.

Reliability

Reliability is the consistency of the research measurement, or the degree to which an instrument measures the same way each time it is used under the same conditions with the same subjects. In short, it is the replicability/repeatability of a researcher's measurement (Babbie & Mouton, 2009, Trochim, 2006). In this study, an inter-rater reliability approach was followed. Inter-rater reliability adopts a process whereby a research instrument is rated by an independent "rater" or "raters", whose findings are compared to those of the researcher.

For phase 1 A, the adopted checklist was again assessed for a second time by a different (second) person and the results were compared with those of the researcher. The results were similar. For phase 1 B the questionnaires were also assessed by two different persons from different organisations i.e. CDC and MoHSS, and the test yielded comparable results.

3.3.2 Pilot studies of the checklist (phase 1A) and the questionnaires (phase 1B)

The pilot study was carried out as part of the testing for reliability, which was carried out during September 2011. Piloting the checklist enabled the identification of attributes that are country-specific that need to be considered in the study.

Before administering questionnaires for the main study, the instruments were piloted to assist the researcher to refine the data collection plan (Saunders et al., 2003). By and large, piloting the questionnaires provided conceptual clarification for the

questionnaire content and enabled the researcher to check validity and reliability at the same time.

The questionnaires were submitted to six technical people i.e. three people within MoHSS which included the two experts in research and one medical doctor, and three people from other stakeholders' representatives, i.e. one representative from WHO and two from CDC staff.

The aim of piloting was to identify possible problems, which could arise in the use of the questionnaire or checklist and thus facilitate appropriate revisions (Gile, 2006). The pilot study revealed that the use of too many open-ended questions was not suitable for the quantitative study. The questionnaires were revised and more multiple-choice questions included with only a few open-ended questions. Attention was paid to testing the correct level and use of language and relevance of the questions, as well as the duration of the data collection tools.

The pilot study obviates the need to use long questionnaires because data collection tools that are too lengthy have a propensity to cause respondent fatigue or to scare off the respondents before they even attempt responding to the questions. In this regard, although the questionnaires consisted of thirteen pages, most of the questions were multiple choice questions that required only ticking appropriate responses. Proposed changes that resulted from the pilot study included:

- Correction of grammar and ensuring a logical flow to the questions,
- Simplifying the questions i.e. to use terms that could be easily understood by the respondents e.g. avoiding technical terms, and

- Changing the content of the consent form such as stating that participation in the study is voluntary, but that respondents are invited to participate in the study to share their ideas with the researcher.

Consequently, the idea behind reliability is that any significant results must be more than a one-off finding and be inherently repeatable. In the long run, other researchers must be able to replicate the same investigation under the same conditions and generate the same results (Shuttleworth, 2008). Reliability of the data collection instrument during the pilot study was confirmed by the fact that the responses provided were related to each HRS function in question. [See discussion under reliability on page 74].

3.4 DATA COLLECTION FOR PHASE 1 A AND PHASE 1 B

The situational analysis carried out as part of phase 1 A involved the review of the Research Management Policy. Data collection was conducted by the researcher during the month of February 2012. The data was collected after permission was obtained from MoHSS. The relevant information collected from the RMP was matched to the required attributes contained in the adopted WHO checklist. The purpose of matching the information from the RMP with the adopted WHO checklist was to gauge whether RMP which guides health research in Namibia complies with WHO HRS standards.

For phase 1 B, the data collection exercise was conducted during the month of February 2012. The questionnaires were hand delivered or emailed by the researcher to the respondents to be completed by the respondents on their own and within seven

days. The researcher collected the completed hand-delivered questionnaires from the respondents after seven days.

The respondents were reassured in writing that participation in the study was voluntary and that they had the right to refuse or withdraw from the study at any time, should they wish to do so. Similarly, the purpose of the study was explained and clarified to the respondents. Confidentiality and anonymity were further ensured, as respondents were asked not to write their name or staff/employee number on the questionnaire. Consenting respondents were instructed to keep the signed consent form separate from the completed questionnaire to enhance confidentiality and ensure anonymity [See the discussion on research ethics under point 3.5].

3.5 DATA ANALYSIS FOR PHASE 1 A AND PHASE 1 B

Data analysis is a crucial step in any research project. It refers to a technique of reducing, organising and giving meaning to data. The process involves gathering, modelling and transforming research data with the goal to highlight the valuable information, suggesting conclusions and supporting the decision-making process (Polit and Beck, 2012). For phase 1 A, data analyses were done descriptively, as they were undertaken to reduce, organise and give meaning to the data that was collected. This was done by assessing whether an attribute, as indicated in the checklist, appears in the Research Management Policy of Namibia.

The analysis was done in a dichotomous manner, by documenting whether the attribute assessed is affirmed or not affirmed. An attribute on the WHO checklist is considered affirmed if it is present or is being used in the implementation of health

research systems in Namibia. It is considered not affirmed when it is on the WHO checklist, while it is needed but not present or is not being used in the implementation of health research systems in Namibia. As with data analysis, the results were descriptively presented.

For phase 1B, data were entered into the Statistical Package for the Social Sciences (SPSS) was used for the purpose of data entry for the study. Before data entry, the researcher performed classification of the text by sorting these responses into simple categories. Since the data collection tool consisted of agree, disagree and don't know response categories, these categories were coded as follows: Agree=1, Disagree=2 and don't know=3.

Furthermore, the questionnaires consisted of open-ended questions. Before entry of data from open-ended questions, similar responses were coded together under one category as short descriptive text. Coding was done to enhance programmed analysis. The coded data were entered in to SPSS for data management and statistical analysis. Microsoft Excel (2005) was used in drawing charts. Data were then cleaned through visual verification on raw data sets and by investigation of graphical analysis of frequency distributions of the data to detect and spot any atypical and bizarre values. Descriptive statistics allowed the researcher to provide a summary of the findings, to organise and summarise the raw data into tables, calculate simple statistics such as frequency and percentages (Bruce, Pope and Stanistreet, 2008). This was done prior to proceeding to an in- depth coherent analysis of the data.

Graphs and tables were generated and interpreted from the data. The data emerged from closed-ended and open-ended questions. The closed ended questions were nominal and ordinal in construction.

The quantitative categorical data from open-ended questions provided the researcher with additional useful information, which made it possible for in-depth analysis. The researcher was able to observe the most frequently mentioned categories and identify whether all respondents have reflected on all the variables. Descriptive statistics, such as frequencies and percentages, were used to present the data. The findings will be presented in chapter 4 of this study.

In addition, since this study was descriptive and exploratory in nature, aimed at documenting a holistic description of HRS governance and implementation and the views/perceptions of stakeholders on HRS, and was not about understanding the associations, correlations or cause and effect, or determining confounders among the variables, analytical statistics were not conducted. Description of empirical findings and the conceptualisation phase aided the development of evidence-based strategies to strengthen HRS implementation and governance.

As with data analysis, the results were descriptively presented. The researcher was able to observe the most frequently mentioned categories and identify whether all respondents have reflected on all the variables. Descriptive statistics, such as frequencies and percentages, were used to present the data. The findings will be presented in chapter 4 of this study.

In addition, since this study was descriptive and exploratory in nature, aimed at documenting a holistic description of HRS governance and implementation and the views/perceptions of stakeholders on HRS, and was not about understanding the associations, correlations or cause and effect, or determining confounders among the variables, detailed analytical statistics were not conducted. However, the researcher conducted analytical comparisons between the sub-population groups where similar questions/items in the instrument were posed to both groups (See point 4.16). The relative small numbers allowed only for “*Fisher Exact Probability Test*” to be performed.

Phase 2: Development of conceptual framework

The objective of this phase was to develop a conceptual framework. Findings from phase 1 were conceptualised for the development of strategies to strengthen implementation and governance of HRS in Namibia. A conceptual framework was developed on the basis of the results of the data analysis of phases 1A and 1 B. This framework formed the basis for the development of the strategies. The conceptual framework is described in chapter 6.

Phase 3: Development and verification of the strategies to strengthen the implementation and governance of HRS

The objective of this phase was to develop and verify strategies to strengthen the implementation and governance of HRS in Namibia. The strategies developed during this phase are presented in chapter 7 of this study. The verification of the strategies is also presented in the same chapter.

3.6 Research ethics

Conducting ethically and technically sound research begins from the identification of the research topic to the publication of the findings of the study (MoHSS, 2003). Cooper and Schindler (2006) stress that researchers need to observe research ethics, which are norms and standards of behaviour. These norms and standards guide moral choices about an individual's behaviour and the relationships with others in the research process. Adherence to the standard and norms of research ethics by researchers protects respondents from harm or the suffering of adverse effects resulting from research undertakings (Cooper & Schindler, 2006). The researcher adhered to the ethical principles in order to ensure that the Study does not contravene on any rights of the respondents, the MoHSS or the University of Namibia. In this study, the Code of Ethics of the Human Sciences Research Council (HSRC) was used as a guideline for this research. In this study, the principles of the HSRC as outlined by Jesani & Balai (n.d) were adhered to:

3.6.1 Permission to conduct the study

The Research Management Policy of the MoHSS stresses the importance of conducting quality research that is technically and ethically sound (MoHSS, 2003). In order to observe this requirement, the proposal for the study was submitted to the Post Graduate Studies Committee of the University of Namibia to ensure that the proposal met the University's research requirements and standards. Approval was granted after the review of the proposal.

Furthermore, the researcher submitted a study proposal to the Ethics Review Committee of the MoHSS for appraisal and ethical approval before the start of the study. A letter of approval that grants the researcher permission to conduct the study and stipulating the conditions to be observed during the study was issued. Copies of approval letters are appended in the report [Annexures A, B and C].

3.6.2 Non-maleficance

Non-maleficance refers to the “do no harm ethical principle” and was implemented in this study. To adhere to non-maleficance, the following ethical principles were observed: informed consent, confidentiality and anonymity.

3.6.3 Informed consent

Although the HSRC recommends obtaining the participants’ consent in writing, the researcher observed that in many instances participants were not prepared to sign their names on consent forms in order to protect their identity. The wishes of the respondents in this regard were respected. The respondents were, however, fully informed in a cover letter about the nature and purpose of the study and the value of their contribution through their responses.

3.6.4 Confidentiality and anonymity

This principle was observed by excluding the respondent’s identification on the data collection tools. Furthermore, individual rights to confidentiality were ensured to all respondents as no names or addresses were collected during the study. E-mailed questionnaires were handled by a support staff person and handed to the researcher

after printing, ensuring that the researcher had no insight on the origin of the printed questionnaires.

3.6.5 Beneficence

This principle entails minimising the risk of harm to participants and issues such as voluntary participation and no deception were observed in this study (Cooper & Schindler, 2006). Participants took part in this study out of their own free will. The content of the questionnaires contained no items that could cause psychological or emotional harm or discomfort to participants.

3.6.7 Voluntary participation

The essence of voluntary participation in the study was explained to the participants in the introductory letter. No pressure was brought to bear to obtain and receive the questionnaires from respondents. On the other hand, the cover letter provided information on the fact that respondents have the right to refuse to answer any question or refuse to participate in the study. Therefore, by adhering to this ethical principle, it was ensured that there were neither coercion nor perverse incentives since those who consented to take part in the study were not promised any rewards, and participants were neither obliged nor intimidated to participate in any manner.

Furthermore, the study did not cause any physical harm, psychological distress or discomfort to participants because the nature of the phenomenon or subject matter of the study as well as the content of the questionnaires was not sensitive. Furthermore, the questionnaires did not include collection of respondent's personal or confidential

information. In cases where any psychological pain or discomfort was experienced, evidenced by complaints from the participants, such concerns were attended to by discussing the issue(s) with the participant to reach an amicable solution. No invasive procedures were involved.

3.6.8 Deception

Deceptive practices were avoided in this study. The researcher ensured that the participants were provided with relevant information about the study and its objectives in the consent form. The foregoing explanation accords with the principle of human dignity, specifically the principle of self-determination, which is emphasised by Cooper and Schindler (2006) as a crucial principle to consider when conducting research.

All questionnaires were accompanied by an information letter, attached as the front page. The information letter was to be read by each respondent before answering the questions. Respondents were, in addition, accorded the chance to contact the researcher or the study supervisor whose contact numbers were provided on the cover letter.

3.6.9 Protecting the right of the institution

In order to protect the rights of the institutions, the norms and values of the institutions involved in the process were adhered to by ensuring that permission to conduct the study was granted.

3.6.10 Ethical aspects regarding documents used in the study

Fully aware of the proprietary nature of documents, both hard- and soft copies thereof, the researcher ensured that the information obtained from all documents consulted were used only for the purpose of the study. To the extent that ideas and intellectual property of authors were used, either through direct quotation or paraphrasing, due credit has been given to the sources. To the extent that information has been discussed with third parties, such as respondents and editors, the researcher explained to such third parties about the origin of such documents or ideas.

3.7 SUMMARY

The preceding chapters presented the overview of the study. In this chapter, the researcher presents the research design and the methodology as well as the study population groups and sub-groups. The chapter further describes the data collection tools and quality assurance thereof. The researcher also presented the data collection procedures, data analysis and the research ethical principles. The next chapter will present the study findings.

CHAPTER 4

DATA ANALYSIS AND PRESENTATION

4.1 INTRODUCTION

In this chapter, the findings of the study are presented. A situational analysis was conducted in phases 1A and B of this study. Phase 1 A includes the document review. The subject of the review was the Research Management Policy using the checklist HRS; while in phase 1 B a survey was conducted. In phase 1 B, data was collected from relevant staff members of Ministry of Health and Social Services (MoHSS and from respondents in institutions outside the Ministry (exo-ministerial institutions). These include tertiary education institutions, government Offices, Ministries and Agencies (O/M/As), state owned enterprises (SOEs), and non-governmental organisations that are involved in health research.

4.2 PHASE 1A: EMPIRICAL PHASE: SITUATIONAL ANALYSIS (RESULTS FROM THE DOCUMENT REVIEW)

The purpose of using the WHO checklist was to gather information on the status of national health research system based on the attributes that are stipulated by WHO in the Health Research Systems Analysis Initiative checklist, (2010) for a well-functioning HRS. The assessment was conducted per function of Health Research Systems (HRS) and the results are presented under the following headings: stewardship function and ensuring good governance, financing function, capacity development function, creating and sustaining resources as well as producing and using research.

4.2.1 Stewardship function and ensuring optimum governance

Discovering the challenges in HRS was one of the objectives of the document review. The stewardship function and ensuring good governance for HRS strategy are combined in this review as they are interlinked in the policy. The concepts considered under stewardship function and ensuring good governance strategy included in the Health Research Systems Analysis Initiative checklist, (2010) are:

- Health research policy,
- Health research legislation,
- Strategic health research plan, and
- Research coordination mechanisms.

Table 4.1 on page 93, indicates the findings on the concepts and the related attributes that are affirmed or not affirmed.

Table 4.1: Affirmation of attributes necessary for stewardship function and ensuring governance strategy

Concepts	Attributes	Affirmed	Not affirmed
Health research policy	Official national health policy	✓	
	Strategic health plan	✓	
	Official health research policy (HRP)	✓	
	HRP with a preamble		✓
	HRP with health research situation analysis	✓	
	HRP with a strategic vision for health research		✓
	Working plan for the National Health Research Systems (NHRS/ research agenda		✓
	National health research policy statement (aims, objectives)	✓	
	Health research policy needs updating	✓	
	Health research legislation	Is there a law relating to health research	
Strategic health research plan	Is there a strategic health research plan (SHRP)		✓

The stewardship function and ensuring good governance strategy has eleven attributes that need to be in place for it to fulfill its functions.

These are affirmed as existing by the respondents. The stewardship function and ensuring good governance strategy also include issues of research coordination mechanisms; the findings on this aspect are presented in the table below.

According to the findings, none of the eleven attributes are affirmed for the research coordination mechanisms.

Table 4.2: Affirmation of attributes necessary for research coordination mechanisms

Concepts	Attributes	Affirmed	Not affirmed
Research coordination mechanisms	Existence of a functional NHRS		✓
	NHRS has clear Terms of Reference		✓
	Existence of a functional National Health Research Management Forum (NHRMF)		✓
	Existence of a functional Ethical Review Committee (ERC)		✓
	Existence of a Scientific Review Committee (SRC)		✓
	Existence of health institutions with Institutional Review Committees (IRCs)		✓
	Existence of a national health research focal point		
	Existence of hospitals with ERCs to review clinical research proposals		✓
	Existence of a National Network of Health Research and Development (NNHRD) that includes universities		✓
	Existence of National Guidelines on development of collaboration agreements on health research involving human subjects		✓
	Existence of an NNHRD that includes district medical officers of health		✓
Existence of an NNHRD that includes national medical associations		✓	

4.2.2 Financing function results

The financing function is related to health research financing and budget. The attribute related to this aspect is: the existence of a budget line for health research in the MoHSS. Importance of various sources of health research funding in the country such as government tax revenues; multi-lateral and bi-lateral donor funding; support from local NGOs and International NGOs; allocation of a regular budget for health research by government and the establishment of local financing systems.

Multi- and bi-lateral donor funding as well as, support from local and international NGOs are affirmed as sources of health research funding. The existence of Non-Governmental Organizations involved in health research is also affirmed. The checklist on the financing function includes the concepts set out in table 4.3 below.

Table 4.3: Affirmation of attributes necessary for financing function

Financing function Attributes	Affirmed	Not affirmed
Importance of various sources of health research funding the country such as government tax revenues		✓
Multi-lateral and bi-lateral donor funding	✓	
Local and international NGOs	✓	
Allocation of a regular budget for health research and establishment of local financing systems		✓
Existence of a budget line for health research		✓

4.2.3 Creating and sustaining resources function and capacity development strategy

Aspects stipulated by WHO under this function include the actions needed to strengthen health research capacity and actions needed at country level to stimulate health research capacity. The attributes listed under actions needed to strengthen health research capacity are:

- Incentives for researchers and clear career paths,
- Establish networking with institutions and individual researchers,
- Clearly defined structural and institutional arrangements for health research, and
- Strengthen research capacity.

According to the findings, none of these four attributes are affirmed.

The attributes related to actions needed at country level to stimulate health research capacity are:

- Strengthen health research collaboration and linkages, provide technical training opportunities,
- Establish consultative exchange visits and forum,
- Promote networking and technical support, strengthen health research systems,
- Help with health research equipment, and
- Promote networking and technical support attributes.

Table 4.4 below, tabulates which attributes were affirmed and which were not affirmed.

Table 4.4 Affirmation of attributes necessary for creating sustaining resources and capacity development

Creating and sustaining resources function and capacity development strategy attributes	Affirmed	Not affirmed
Incentives for researchers and clear career paths,		✓
Establish networking with institutions and individual researchers		✓
Clearly defined structural and institutional arrangements for health research		✓
Strengthen research capacity	✓	
Existence of a budget line for health research		✓
Strengthen health research collaboration and linkages		✓
Provide technical training opportunities		
Establish consultative exchange visits and fora		✓
Promote networking and technical support		✓
Strengthen health research systems		
Help with health research equipment		✓
Promote networking and technical support resources function and capacity development		✓

4.2.4 Producing and using research findings

The attribute of producing and using research findings has the following sub-attributes:

- Existence of a research institute
- Establish alternative mechanisms of research dissemination, such as dissemination of research findings through:
 - Seminars and conferences,
 - In-house seminars,
 - Newsletters,
 - Institutional publications,
 - International journals,
 - Annual, quarterly and monthly reports
 - Utilisation of research findings.

Table 4.5 on page 99, indicates which attributes were affirmed or not affirmed.

Table 4.5: Affirmation of attributes necessary for production and use of research findings.

Producing and using research attributes	Affirmed	Not affirmed
Research institute		✓
Dissemination of research through: seminars and conferences	✓	
2.1 In-house seminars		✓
Newsletters		✓
2.2 Institutional publications	✓	
2.4 International journals	✓	
Annual, quarterly and monthly reports	✓	
2.7 Utilisation of research findings.	✓	

4.3 Phase 1 B: situational analysis - survey data analysis and presentation

4.3.1 Introduction

This section provides information on data analysis and presentation of phase 1B. Phase 1 B is the survey data of the two groups, namely the ministerial and exo-ministerial respondents. The researcher presents the findings from the survey that will be consolidate with phase 1A in order to inform the development and verification of the strategies to strengthen HRS. Similar items from questionnaires of both ministerial (MoHSS) and exo-ministerial respondents will be presented. The findings that are dissimilar in the two groups will be given separately.

4.3.2 Response rate of study respondents

The group from MoHSS included sixty-five (65) respondents, from whom fifty-two or 74 % of the questionnaires were completed and returned, while the sample from exo-ministerial respondents included twenty-one respondents. Fifteen or 71 % of the questionnaires were returned from exo-ministerial respondents. It has already been indicated in chapter 3 that the population size is influenced by the nature of the study, as only those who are involved in health research were included. The data analysis will be presented in respect of the two groups, namely the respondents from MoHSS or ministerial respondents as well as the exo-ministerial respondents. Table 4.6 below, summarises the findings of this item.

Table 4.6: Response rates of study participants

	Study subjects	Response rate	Percentage
Ministerial	65 participants	52 questionnaires returned	74%
Exo-ministerial	21 participants	15 questionnaires returned	71%

4.3.3 Background of the respondents

For both groups, the background characteristics of the respondents, which included the gender, age and experience, were documented.

4.3.3.1 Background of exo-ministerial respondents

From the exo-ministerial group, 40% (n=6) respondents were male, while 60% (n=9) were female. Three respondents, 27% (n=3) were in the age category of 20-30 years, while 27% (n=4) fell in the age category of 31-40 years. In addition 7% (n=4) of respondents fell in the age category of 41-50 years, whilst the other 7% (n=4) fell in the age category of 51 years and above.

With regard to relevant experience, the years of experience for 33% (n=5) of the respondents were in the range of 1 to 5 years, while 40% (n=6) of respondents indicated that their respective relevant experience range from six to ten years. Only 27% (n=4) of the respondents indicated that they have more than ten years' experience.

4.3.3.2 Background of ministerial respondents

Ministerial respondents included 40% (n=25) female respondents and 52% (n= 27) male respondents, respectively. Thus, the number for this group is (n=52) respondents. Regarding age groups 21% (n=11) of respondents fell in the age range of 31 to 40 years; while 38 % (n=20) of respondents fell in the age range of 41 to 50 years. The majority of the respondents, which is 41 % (n=22), fall in the age range of 50 years and above. Regarding the years of experience for ministerial respondents, the majority, or 58% (n=30), has more than ten years' experience. Thirteen respondents, which is 25% (n=13) of respondents have between 6 and 10 years' experience. Only 7% (n=9) of the respondents have 1-5 years' experience.

The table 4.7 below presents the gender, age, and experience statistics of exo-ministerial and ministerial respondents.

Table 4.7: Gender, age and experience of respondents

Respondents' background	Exo-Ministerial (n=15)	Ministerial (n=52)
Gender	Percentage	Percentage
Male	40%	52%
Female	60%	48%
Age		
20-30	20%	0%
31-40	27%	21%
41-50	27%	38%
50 and above	27%	40%
Experience		
1-5 years	33%	17%
6-10 years	40%	25%
>10 years	27%	58%

4.3.3.3 Positions of respondents within institutions

Respondents from both groups were asked to indicate their positions in their respective institutions. The positions of the respondents as indicated in their responses are presented in the table below.

The positions of the respondents in institutions are presented in table 4.8.

Table 4.8: Positions of respondents

Exo- ministerial	Number of respondents	Percentage	Ministerial	Number of respondents	Percentage
Position					
Development Planner	2	13%	Executive	4	8%
Chief Development Planner (CDP)	1	7%	Health Programme officers /administrators	20	38%
General manager technical operations	1	7%	Medical Doctors	9	17%
Scientist for research and special projects	1	7%	Directors	14	27%
Education statistician	1	7%	Nurse managers	1	2%
Epidemiologist	2	13%	Tutor	2	4%
Health specialist	1	7%	Not specified	2	4%
Manager	1	7%			
Lecturer	1	7%			
Development planner legislation	1	7%			
Not specified	3	20%			
Total	n=15			n= 52	

4.4 Stewardship and ensuring good governance strategy

The respondents were asked questions about the stewardship and ensuring good governance strategy of HRS in the MoHSS. Findings are presented below under specific sub- headings.

4.4.1 Coordination of research activities in MoHSS

The respondents were asked to indicate how the research activities are coordinated in the MoHSS. Of the respondents, 67% (n=35) indicated that research activities in the MOHSS are coordinated by the Ministry itself, whilst 33% (n=17) indicated that research activities are coordinated by donors and development partners.

4.4.2 Coordination of research activities in other institutions

Regarding coordination of research activities in other institutions 60% (n=9) of exo-ministerial respondents agree that their institutions implement and coordinate health research activities themselves. These would be the institutions that are involved in the implementation of research activities in conjunction with MoHSS. Only 33% (n=5) of the respondents indicated that their institutions do not coordinate health research activities. One respondent 7% (n=1) did not respond to this question.

4.4.3 Stewardship functions of research activities in MoHSS

For this item, the respondents in MoHSS were asked to indicate whether the stewardship functions of research activities are acceptable. Regarding this question, 59% (n=30) out of 52 questionnaires returned indicated that the stewardship

functions of research activities in MoHSS are not acceptable. Fifteen respondent which is 29% (n=15) of the respondents indicated that the stewardship function of research activities is acceptable, while 12% (n=7) of the respondents indicated that they do not know. Figure 4.1 below summarises the performance rating by the respondents of the stewardship function.

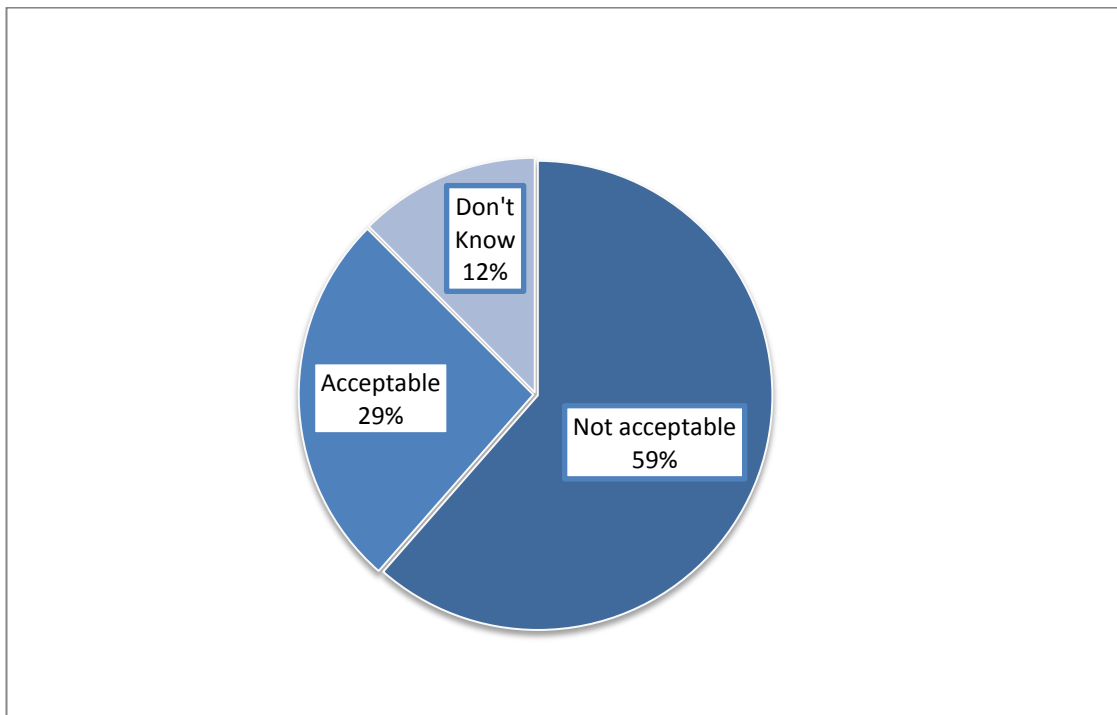


Figure 4.1: Performance rating of stewardship functions of MoHSS

4.4.4 Reasons why respondents felt that the stewardship function for research activities in MoHSS are not acceptable

The respondents were asked to provide reasons why they felt that the stewardship function for research activities is not acceptable in MoHSS. Only 52% (n= 27) of respondents provided reasons. Reasons why the stewardship function for HR is rated poorly included the following:

- Lack of coordination (33%)
- Lack of resources (33%)
- Lack of support (8%)
- Lack of motivation (8%)
- Absence of ministerial research agenda resulting in donor-driven research (8%)
- Lack of strategic vision (4%)
- Does not involve all directorates in the MoHSS (4%)
- Lack of operational research (4%)

Figure 4.2 summarises the reasons provided why the stewardship function was poorly rated.

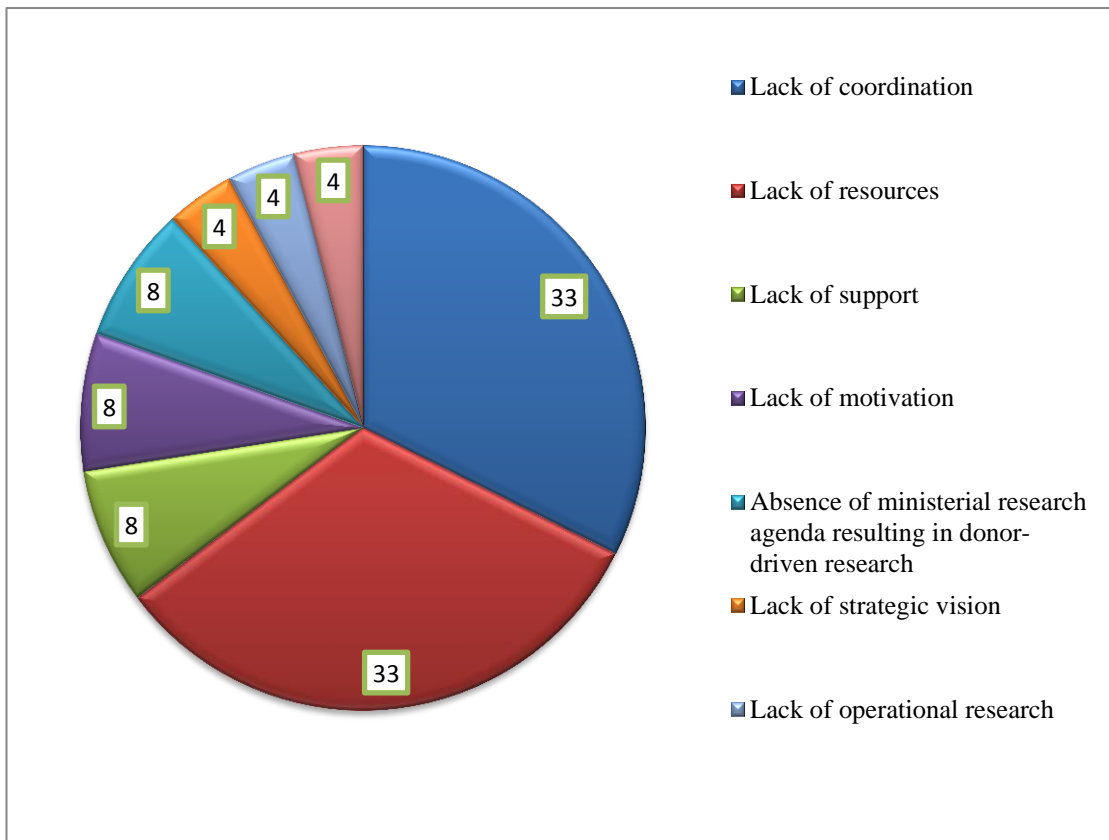


Figure 4.2 Reasons why the stewardship function for HR is rated poor

4.4.5 Adherence of MoHSS to the components of HRS stewardship functions

The respondents were asked to share their views on whether the MoHSS is adhering to the components that form the basis of the HRS stewardship functions. These components include compliance to the ethical standards for health research; linking health research (HR) to Millennium Development Goals (MDGs) and research priorities; utilisation of knowledge benefits for health and health equity; adherence to national policies on HR involving all key stakeholders. The findings for each component are discussed next.

4.4.6 Adherence to the ethical standards for health research

Respondents were asked to indicate whether MoHSS complies with the ethical standards for health research. Regarding this item 87% (n=45) of respondents agreed that MoHSS complies, while 13% (n=7) indicated that the Ministry does not. The next figure 4.3 on page 108 presents the perceptions on the MOHSS compliance with ethical standards for health research.

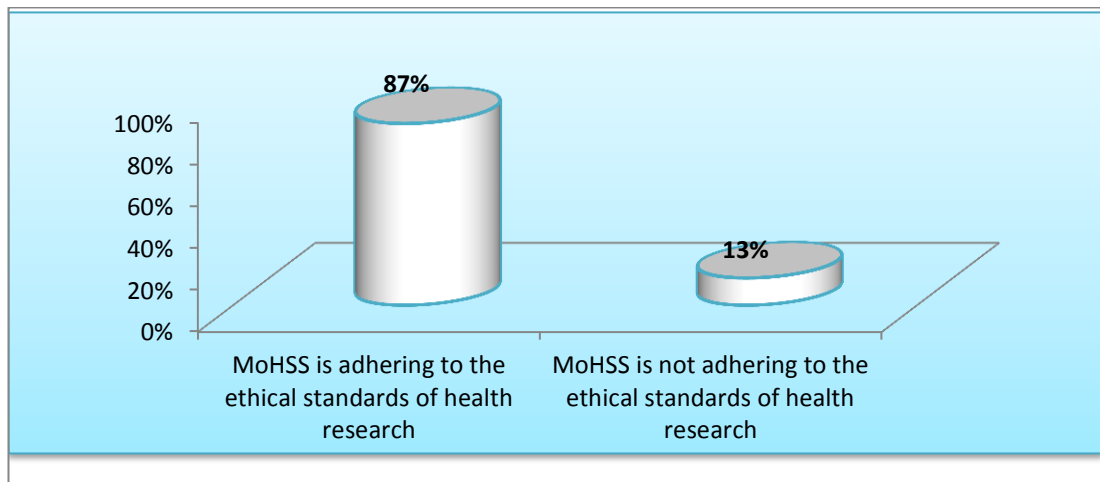


Figure 4.3: Perceptions on MoHSS compliance with ethical standards for health research

4.4.7 Linking HR priorities to Millennium Development Goals (MDGs)

Under this item, respondents were asked to indicate whether MoHSS links HR priorities to Millennium Development Goals. This item consisted of two sub-items i.e. linking HR priorities to MDGs, and utilisation of knowledge benefits for health and health equity. On this issue 46% (n=24) of the respondents indicated the MoHSS links research priorities to the Millennium Development Goals (MDGs). However, 29% (n=15) of the respondents felt that this is not implemented. Thirteen respondents which is 25% (n=13) did not respond to this question. Linking health research priorities to MDG's is summarised in figure 4.4 on page 109.

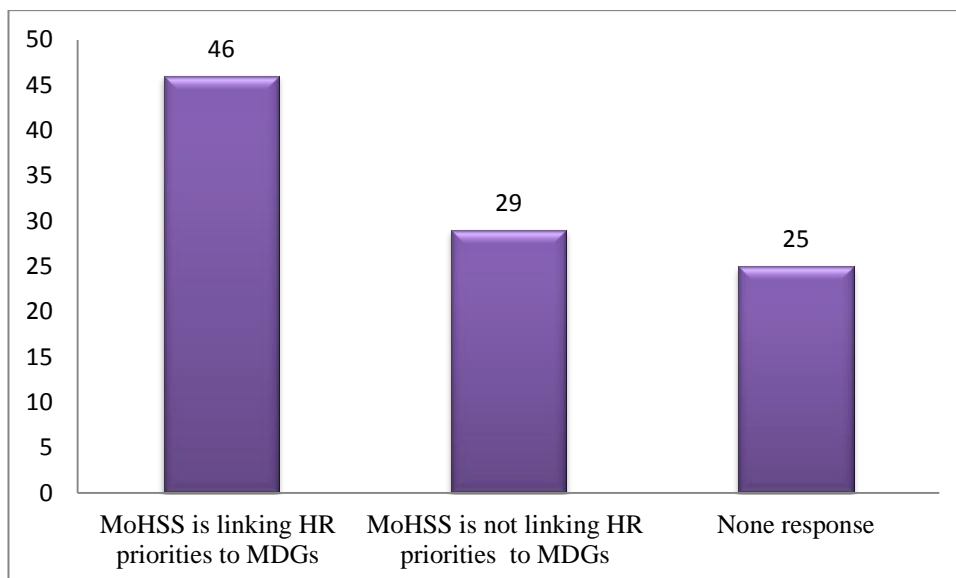


Figure 4.4 Linking Health Research priorities to MDG's

4.4.8 Utilisation of knowledge benefits for health and health equity

In order to determine whether utilisation of knowledge benefits for health and health equity takes place or is utilised in MoHSS, respondents were asked to indicate whether MoHSS is adhering to this principle.

Of the respondents 42% (n=22) indicated that MoHSS is adhering to the principle whilst the majority, 54% (n= 28), indicated that MoHSS is not adhering to it. Two respondents which is 4% (n=2) did not respond to this question.

4.4.9 Adherence to national policies on involving all key stakeholders in developing health research policies

Respondents were asked to indicate whether MoHSS involves all stakeholders when developing national policies on health research. The majority of the respondents which is 56% (n= 29) indicated that the MoHSS is adhering to requirement of involving all key stakeholders when developing health research policies, while 37%

(n=19) of respondents felt that this is not so. Four respondents which is 7% (n= 4) did not answer.

4.4.10 Stakeholders' views defined and expressed within national policy on health research

In this item, respondents were asked to indicate whether stakeholders' views are defined and expressed within a national policy on health research of MoHSS. Of the respondents 52% (n=27) felt that MoHSS does consider stakeholders' views as they are defined and expressed within a national policy on health research, while 46%(n=24) of the respondents of the respondents felt that this is not so. One respondent that is 2% (n=1) of the respondents did not answer this question.

4.4.11 Existence of a forum or process to coordinate the setting of national health research priorities

Respondents were asked to indicate whether a forum or process to coordinate national health research priorities exists in MoHSS. On this item, 38% (n=20) of the respondents indicated that a forum or process to coordinate the setting of national health research priorities exists in MoHSS, while 60% (n=31) indicated that such a forum or process does not exist in MoHSS. For this item 2% (n=1) of the respondents did not answer this question.

4.4.12 Factors to be considered in setting health research priorities

Respondents were asked to indicate whether the MoHSS identifies factors that need to be considered in setting health research priorities e.g. national burden of disease, human resources, political will and community participation. The majority i.e. 52% (n=27) of the respondents agreed that the MoHSS does identify factors to be considered in setting health research priorities, while 41% (n=21) felt that the MoHSS does not do so. Four respondents i.e. 7% (n=4) did not respond to this question.

4.4.13 Ethics review committees in MoHSS and institutional review boards in other institutions

Respondents' views were solicited about the composition of the ethics review committees in the MoHSS i.e. the Research Management Committee (RMC), the

Bioethics Review Committee (BREC). Figure 4.5 summarises the findings on the composition and structure of ethics review committees in MoHSS.

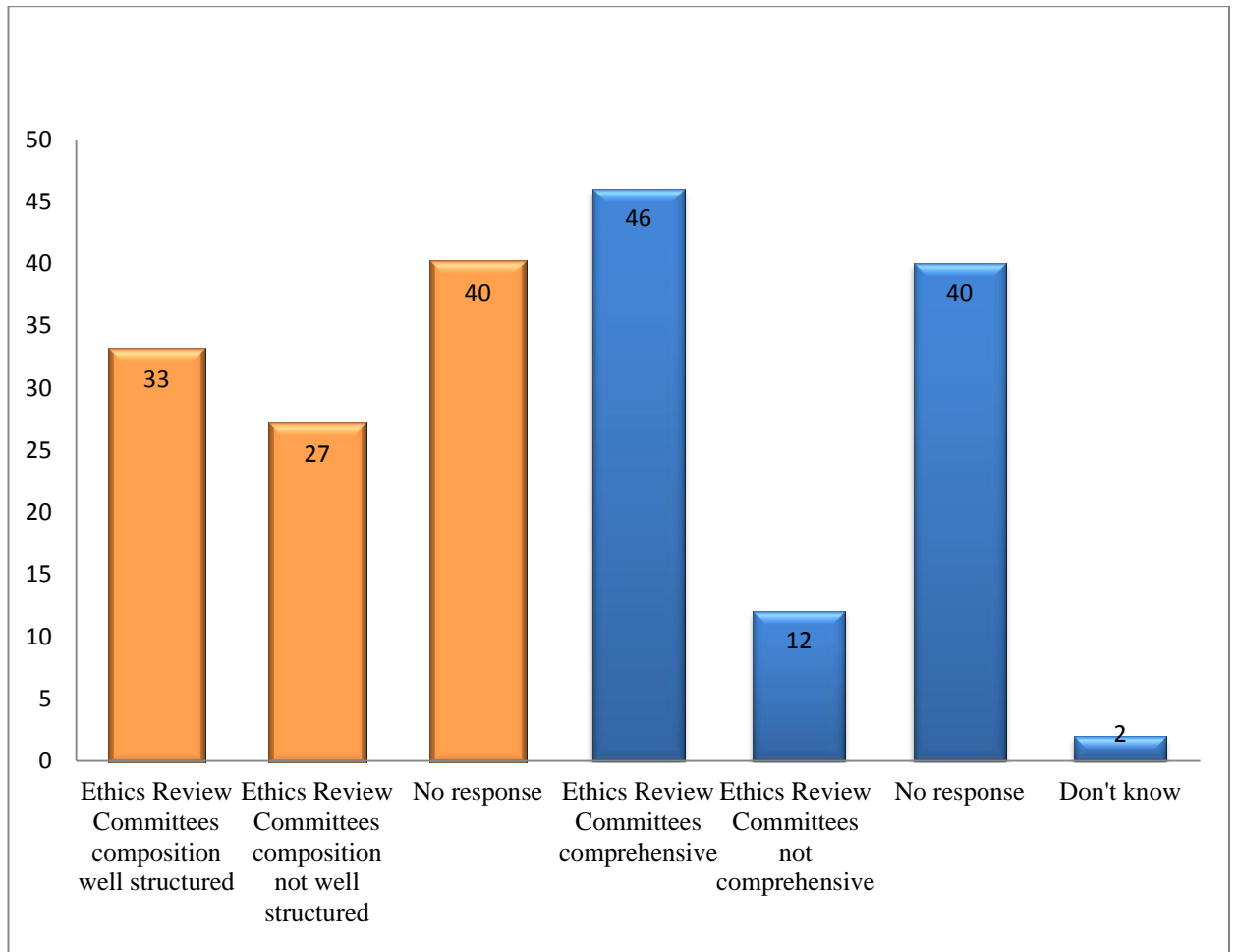


Figure 4.5: Ethics review committee composition-well structured, comprehensive

Ministerial respondents were asked to indicate whether the composition of the Ethics Review Committees is well structured. Regarding this item 33% (n=17) of the respondents agreed that the composition of the committees is well structured in MoHSS, at the same time 27%, (n=14) felt that the composition of the committees not well structured. The majority of the respondents which is 40% (n=21) did not answer. Reasons for low response of 40% on this item are not known by the researcher.

Exo-ministerial respondents were asked to indicate whether there are institutional review boards for health-related research in their institutions. Of the respondents 60% (n=9) said there are no institutional review boards for health-related research in their institutions whereas 27% (n=4) of the respondents indicate that such boards do exist in their institutions. The remaining 13% (n=2) of the respondents did not respond to the question.

The ministerial respondents were asked to indicate whether the ethics review committees of MoHSS are comprehensively composed. Of the responses provided, 46% (n= 24) of the respondents agreed that the composition of the Ethics Review Committees is comprehensive; on the other hand, 12% (n= 6) rated the composition as not comprehensive. On the other hand 40% (n=21) of the respondents did not respond to the question while 2% (n=1) did not know.

The respondents were asked to indicate whether the institutional review boards at institutions are comprehensively composed. On this item 40% (n=6) of the respondents stated that the instructional review boards are not comprehensively

composed, while 13% (n=2) % of the respondents agreed that the institutional review boards in their institutions are comprehensively composed. Of the respondents the majority that is 47% (n=7) did not answer this question.

To substantiate the opinion of the respondents who agreed that the institutional review boards at their institutions are composed comprehensively, the respondents were asked whether the boards include representatives from other institutions. Of the two who had agreed that the boards are comprehensively composed, one was of the opinion that it included a representative from other institutions.

The majority of the respondents, or 47% (n=7), indicated that there are no representatives from other institutions on the boards. This is in line with the 33% (n=5) who indicated that their boards do not have a wide representation. Two respondents i.e. 13% (n=2) of the respondents did not provide answer to this question.

4.4.14 Functioning status of ethics review committees in MoHSS and institutional review boards at institutions

In this question, the ministerial the exo-ministerial respondents were asked to share their views on the functioning of the ethics review committees and institutional review boards. These findings are presented in Figure 4.6 on page 114.

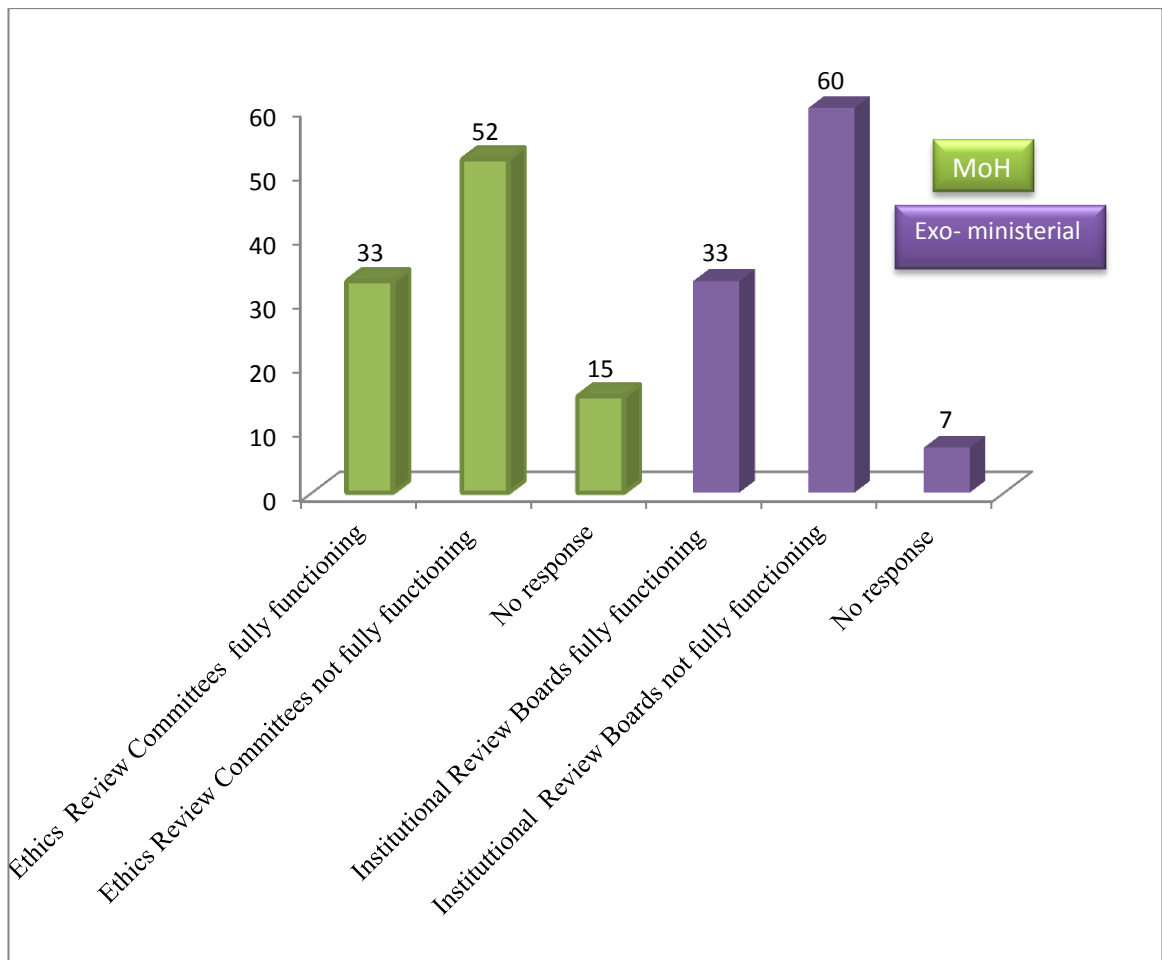


Figure 4.6: Functioning status of ethics review committees and institutional review boards

Regarding this item, 33% (n=17) of the respondents indicated that the committees are fully functional, the majority of the respondents, 52% (n=27), felt that they are not. Eight respondents i.e. 15% (n=8) of the respondents did not answer.

The exo-ministerial respondents were also asked to indicate whether the institutional review boards in their institutions are fully functional. About 33% (n=5) of the respondents agreed that the institutional review boards are fully functional whilst 60% (n=9) indicated that the institutional review boards in their institutions are not

fully functional. One respondent which is 7% (n=1) of the respondents did not answer the question.

4.4.15 Functions of ethics review committees in MoHSS and institutional review boards at institutions

The MoHSS respondents were asked to provide their views on the functions of the ethics committees in MoHSS such as attendance to ethical review meetings. Only 32% (n=17) of the respondents indicated that the ethics review committee meets regularly. The majority of the respondents, 54% (n=28), indicated that the ethics review committees do not meet regularly while 4% (n=7) did not respond.

In addition, the ministerial respondents were asked to state whether the ethics review committees are reviewing the submitted research proposals properly. Only 19% (n=10) of the respondents agree that the ethics review committees are attending to the review of submitted proposals properly, whilst 19% (n=10) disagreed. The majority of the respondents which is 62% (n=32) of the respondents did not give their views on this question.

The exo-ministerial respondents were asked to indicate whether the institutional review boards perform functions such as proposal review, approval and supervision of health research projects. About 66% (n=10) of the respondents indicated that the existing review boards do attend to proposal review and approval and supervision of projects while 7% (n=1) indicated that the proposals are referred to MoHSS ethics review committee for review, while 27% (n=4) of the respondents did not respond.

4.4.16 Challenges related to the stewardship function of health research activities

Regarding challenges related to the stewardship function of health research activities, respondents were asked to indicate whether there are challenges related to the stewardship function of health research activities. In responding to this question, 81% (n=42) of the respondents indicated that there are challenges facing the stewardship function while 13% (n=7) indicated that the stewardship function does not face any challenge. On the other hand, 7% (n=3) did not answer.

4.4.17 Existence of HRS components MoHSS as part of the stewardship function

This item dealt with four sub-items, namely vision, priorities, ethical instruments, and monitoring and evaluation of health research. Each item will be discussed separately in sequence.

4.4.17.1 Vision

Respondents were asked to indicate whether the HRS vision as part of the stewardship function exists in the MoHSS. While 27% (n=14) of the respondents agreed that the vision does exist as a component of the stewardship function of HRS, 46% (n=24) disagreed. Fourteen respondents which is 27% (n=14) did not respond to the question.

4.4.17.2 Health research priorities

Respondents were asked to indicate whether MoHSS has priorities for health research. In answering this question, 40% (n=21) of the respondents agreed that priorities for health research do exist as part of the stewardship function of HRS while 14% (n=7) of the respondents disagreed. The majority, 46% (n= 24) of the respondents did not answer the question.

4.4.17.3 Ethical instruments

As part of the stewardship function respondents were asked to indicate whether there are ethical instruments for HRS in MoHSS. Table 4.9 presents the existence of HRS components in MoHSS as part of the stewardship function.

Regarding ethical instruments, 60% (n=31) of the respondents agreed that ethical instruments do exist as a component of the stewardship function of HRS while 7% (n=4) disagreed. On the other hand, 33% (n= 17) of the respondents did not answer the question.

4.4.18 Fulfilment of the health research vision, priorities and ethical instruments by the MoHSS

In this item, respondents were asked to indicate whether MoHSS adheres to health research vision, priorities, and ethical instruments. On this item, 67% (n=35) of the respondents disagreed that the health research vision, priorities, ethical instruments are fulfilled in the MoHSS, whilst 33% (n=17) of the respondents agreed that it is being fulfilled by MoHSS.

4.4.19 Monitoring and evaluation (M & E) of HRS components

Respondents were asked to share their views on M & E of HRS components, the views are presented below.

4.4.19.1 Monitoring and evaluation of health research component

Respondents were asked to indicate whether monitoring and evaluation of health research exists as a component of the stewardship function of HRS. The majority, 40% (n= 21) of the respondents agreed that M & E of health research do exist as a component of the stewardship function of HRS, whereas 33% (n=17) disagree. Another 27% (n=14) of the respondents did not respond to the question.

4.4.19.2 Monitoring and evaluation of HRS is clearly linked with HRS strengthening is being fulfilled by MoHSS

Respondents were asked to indicate whether monitoring and evaluation activities were clearly linked with strengthening HRS in MoHSS. On this item, 27% (n=14) of the respondents indicated that MoHSS are clearly linked to strengthening HRS. However, the majority of the respondents, 65% (n= 34), stated that the MoHSS is not doing so. Four respondents i.e.8% (n=4) of respondents did not answer the question.

4.4.20 Rating health research (HR) co-ordination in MoHSS in Namibia

In order to find out how the coordination of health research is perceived in Namibia, ministerial respondents were asked to rate it. Only 20% (n=10) of the respondents rated the coordination of health research as adequate while 67% (n=35) of the respondents rated it as not adequate. The remaining 13% (n=7) did not respond.

4.4.21 Implementation of health research by institutions

The aim for this item was to learn from exo-ministerial institutions how research is coordinated in their institutions. Apart from coordination of research activities in these institutions, the researcher explored the mechanisms that are employed by these institutions in governing health research activities. The majority of the respondents, 73% (n=11), indicated that their institutions implement health research. The remainder, namely 27% (n=4) did not respond to the question.

4.4.22 Mechanisms governing implementation of HR activities in institutions

Respondents were asked to indicate whether there are mechanisms that govern the implementation of health research activity in their institutions. Mechanisms governing the implementation of health research activities included the existence of the research policy and the ethics review boards. The findings are presented under respective sub-headings. In addition, respondents were asked to specify any other governing mechanisms for health research activities.

4.4.22.1 Existence of mechanisms that govern health research activities

The majority of the respondents, 60% (n=9) agree that there are mechanisms, which govern the implementation of health research activities in their institutions whilst 33% (n=5) indicated that such mechanisms do not exist in their institutions. The remaining 7% (n=1) did not provide a response to the question.

4.4.22.2 Existence of a research policy as a mechanism to govern HR activities

Of the respondents, 20% (n=3) indicated that there is a research policy as a mechanism to govern health research activities in their institution. Four respondents, i.e. 27% (n=4) did not respond to the question.

4.4.22.3 Existence of institutional review boards as mechanisms to govern HRS in institutions

Three respondents which is 20% (n=3) indicated that the institutions have an institutional review board as a mechanism to govern health research activities, while 80% (n= 12) said institutional review boards do not exist in their institutions.

4.4.22.4 Other specified research governance mechanisms

Respondents were also requested to specify other existing health research governance mechanisms. From these fifteen respondents (n=15) only six respondents, which is 40% (n=6) provided answers to this question. Each response indicated below was mentioned by one respondent:

- Faculty research committee, institutional research and publications committee,
- Using social science research ethics,
- Institutional ethical standards guiding the research policy,
- Using MoHSS research policy,
- Health research governing mechanism in the institution is based on core priorities and mandate of addressing children's rights.

4.4.23 Existing mechanisms for addressing research priorities in institutions

The respondents were asked to indicate if there are existing mechanisms that address research priorities in their institutions. The majority of the respondents, 53% (n=8), agreed that there are mechanisms for addressing research priorities in their institutions.

On the other hand, 13% (n=5) of the respondents disagreed and 14% (n=2) did not respond to the question. In addition, respondents were requested to indicate any other mechanisms used to address research priorities in their institutions such as the research agenda and the research strategic plan.

4.4.23.1 Existence of a research agenda

Of the respondents the majority that is 53% (n=8) of the respondents specified the existence of other mechanisms, of which 33% (n=5) indicated that their institutions have a research agenda as a mechanism to address research priorities in their institution. While 14% (n=2) did not provide some responses to the question.

4.4.23.2 Research strategic plan

Respondents were asked to indicate whether there are research strategic plans in their institutions.

Regarding a research strategic plan, 86% (n=13) of the respondents indicated that there are none in their institutions whilst only 14% (n=2) indicated that their institutions do have a research strategic plans.

4.4.23.3 Integration of HRS in other national systems

Respondents were requested to indicate whether HRS needs to be integrated into other national research systems as one of the strategies that can be implemented to strengthen HRS in the country to enhance the role of health through other sectors.

4.4.24 HRS to be part of other national research systems

The majority of the respondents, 73% (n= 11), believed that integrating HRS into other research systems is the right thing to do. Only 7% (n=1) of the respondents disagreed with the proposed approach, the remaining 20% (n=3) of the respondents did not answer this question.

4.4.25 Enhancement of the role of the health research systems through other sectors

All the respondents, 100% (n=15) indicated that the roles for Health Research Systems need to be enhanced in sectors such as Science and Technology, Economics, Social Sciences and Education.

4.5 INTER-SECTORAL PARTICIPATION AT ALL STAGES AND LEVELS OF HRS

In order to determine whether inter-sectoral participation at all stages and levels of health research systems in the country is needed, the respondents were requested to indicate their point of view by agreeing or disagreeing with this need. Almost all the respondents, namely 93% (n=14), agreed that inter-sectoral participation is needed at all stages and levels of the HRS. Only 7% (n=1) of the respondents felt that inter-sectoral participation is not needed.

4.5.1 Mechanisms to ensure inter-sectoral participation

In addition, the exo-ministerial respondents were requested to indicate mechanisms that can be used to ensure inter-sectoral participation: Representatives of different institutions serving on each other's institutional review committees, co-funding health research activities and participation of other institutions in the implementation of health related research project were mentioned by the respondents as mechanisms to ensure inter-sectoral participation. The findings on mechanisms to ensure intersectoral participation are summarized in the figure on page 125.

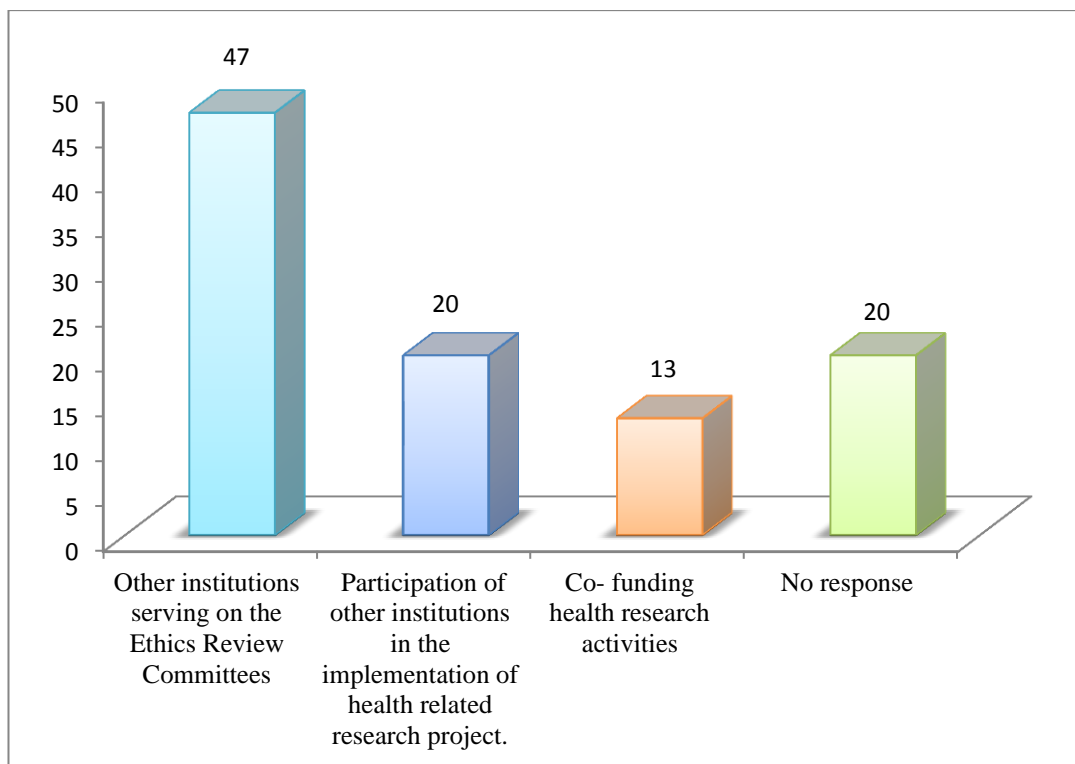


Figure 4.7: Mechanisms to ensure inter-sectoral participation

The majority of the respondents or 47% (n=7) indicated that it can be done through representatives of other institutions serving on the institutional review boards while 20% (n=3) of the respondents said it can be ensured through participation by other institutions in the implementation of health related research projects. In addition, 13% (n=2) of the respondents indicated that this can be ensured by co-funding research activities as well as through participation by other institutions in the implementation of health related research projects. The remaining 20% (n=3) did not respond to this question.

4.6 ENSURING GOOD GOVERNANCE OF HRS

In this section, elements related to the strategy of ensuring good governance for HRS were investigated. The questions in this section were applicable to both ministerial and exo-ministerial respondents, therefore then=67.

4.6.1 Political commitment for health research in Namibia

Respondents were asked to agree or disagree whether political commitment towards health research in the country is at an acceptable level. The next figure, figure 4.8 below, presents the findings on political commitment for health research in Namibia

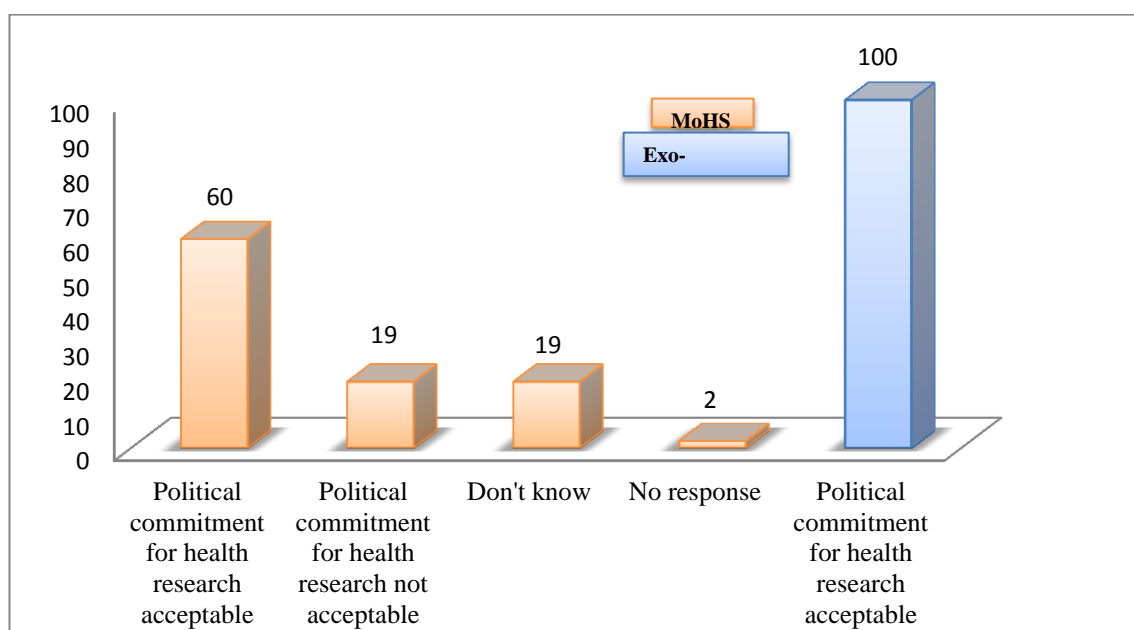


Figure 4.8: Views on political commitment for health research

While 60% (n=31) of the MoHSS respondents agreed that political commitment is acceptable, 19% (n= 10) of the respondents felt that it is not. The other 19% (n=10)

of the respondents did not know. One respondent 2% (n=1) did not answer this question. All exo-ministerial respondents (100%) agreed that there is a need for acceptable political commitment towards HRS in the country.

4.6.2 Reasons why respondents felt that political commitment towards H.R in Namibia is not acceptable

Respondents who felt that political commitment towards health research is not acceptable in Namibia were asked to indicate why they felt that way. Only 53% (n=8) of the respondents from the total group (n=15) responded to this question.

Responses to this question are listed below:

Not enough money reserved for health research/inadequate funding for research projects mentioned by 50% (n=4) of the respondents

Less commitment towards health research mentioned by 25% (n=2) of the respondents

No sectoral focal persons for research mentioned by 25% (n=2) of the respondents

4.6.3 Perceptions of respondents on existence of good governance elements in MoHSS

The elements explored consisted of the following five items, namely provision of a health research strategic plan; leadership; vision and mission; regulatory authority; and research act.

Respondents were asked to indicate whether the MoHSS ensures that HRS is supported by the elements listed above in order to produce the needed research outputs. The responses are presented in table 4.10, below.

Table 4.9: Perceptions of respondents on existence of good governance elements in MoHSS.

Element	Agree	Disagree	Don't know
Health research strategic plan	87%	13%	0%
Health research leadership	85%	10%	5%
Health research vision and mission	84%	16%	0%
Health research regulatory authority	81%	19%	0%
Health research act	75%	16%	9%

Health research strategic plan -87% (n=58) of the respondents agreed that the HRS is provided with this component by MoHSS, whereas 13% (n =9) of the respondents disagreed.

Health research leadership - 85% (n=57) of the respondents agreed that MoHSS is providing the HRS with leadership while 10% (n=7) of the respondents disagreed with the statement. Whereas 5% (n =3) of the respondents did not know.

Health research vision and mission - 84% (n=56) of the respondents agreed that MoHSS does have a health research vision and mission, while 16% (n=11) of the respondents disagreed with the statement.

Health research regulatory authority - 81% (n= 54) of the respondents agreed that MoHSS is providing HRS with a health research regulatory authority whereas while 19% (n= 13) of the respondents disagreed with the statement.

Health research act - 75% (n=50) of the respondents agreed that MoHSS is providing the HRS with a health research act while 16% (n=11) of the respondents disagreed with the statement, 9% (n=6) of the respondents did not know.

4.6.4 Other specified elements that needed to be ensured by MoHSS in order for HRS to be able to produce research outputs

Respondents were asked to suggest other elements that needed to be ensured by MoHSS in order to ensure production of research outputs. The other elements suggested by the respondents are presented below. Only 32% (n= 17) of the respondents shared their views in this question and from this percentage, 25% (n= 13) provided relevant answers. The proposed elements are listed below.

- Representative composition and functioning review committees mentioned by 15% (n=2)
- Dissemination of research activities mentioned by 15% (n=2)
- Utilization of the Research Science and Technology Act mentioned by 31% (n=4)

- Health Research Forum mentioned by 23% (n=3)
- Health Research policy, standards and guidelines mentioned by 15% (n=2)

4.7 Promotion and advocacy for HRS

In this item, respondents' views were sought on the need for promotion and advocacy for HRS. The questions were applicable to both MoHSS and exo-ministerial respondents (n=67).

4.7.1 Need for promotion and advocacy for HRS

Respondents were asked to indicate whether there is a need for promotion and advocacy for HRS. Almost all the respondents 93% (n=62) indicated that there is such a need, with only 3% (n=2) of the respondents disagreeing. The rest of the respondents, 4% (n=3) did not respond to the question.

4.7.2 Proposed HRS advocacy and promotion mechanisms

The respondents were requested to specify mechanisms that can be implemented to promote and advocate for HRS. Only 52% (n=13) of the respondents provided responses to this question. Table 4.11 on page 131 , presents the proposed HRS advocacy and promotion mechanisms.

Table 4.10: Mechanisms to promote and advocate for HRS (n=13)

Proposed mechanism	Percentage	n=13
Review and update research policy	8%	1
Align HRS to institutions of high learning	15%	2
Biannual research forum	8%	1

Awareness raising and lobbying with authorities for resources	23%	3
Networking forum with institutions such as CBS (is this Central Bureau of Statistics now NSA), WHO, UNAM and Polytechnic (now NUST)	8%	1
Joint planning and review meetings	8%	1
Information dissemination to stakeholders and the public	8%	1
Grassroots involvement	8%	1
Create HRS committee with stakeholders	8%	1
Newsletter, symposia, participatory approach on HRS	8%	1

4.7.3 Setting of norms and standards for HRS in the country

Respondents' views were explored regarding the setting of norms and standards for the HRS in the country. The questions in this item were applicable to both MoHSS and exo-ministerial respondents (n=67).

4.7.4 Need for setting standards and norms for HRS in the country

The respondents were asked to indicate if there is a need for setting standards and norms for HRS in the country. The majority, 84% (n=56) of the respondents indicated that there is such a need while 3% (n=2) of the respondents felt that there is not. The remaining 13% (n=9) of the respondents did not know.

4.7.5 Issues to be considered when setting norms and standards for HRS

Respondents were also requested to specify what should be considered when setting norms and standards for HRS. This question was answered by 41% (n=21) of the respondents. However, relevant responses were provided by just under 50% (n=10) of the 41% that had responded to the question. The table below indicates the relevant responses as obtained from those ten respondents. The specified issues that need to be considered are presented in table 4.11 below.

Table 4.11: Issues to considered when setting norms and standards for HRS (n=10)

Issue to be considered	Percentage of respondents	(n value)
Consider what type of research to be undertaken	10%	1
Compile all standards, policies, legislation, related to research	50%	5
Conduct gap/situation analysis	20%	2
Level of training of committee members should be considered	20%	2

4.7.6 Need for strengthening the ethical framework in the country

The respondents were asked to indicate whether there is a need to strengthen the framework of HRS. The majority, 75% (n=50) of the respondents agreed that there is such a need while 25% (n=17) of the respondents felt that there is no such needs.

4.7.7 Mechanisms to strengthen HRS ethical framework

Respondents were requested to specify what should be done in order to strengthen the ethical framework of HRS in the country. From both groups, only 19 respondents responded, representing 28% (n=19). Suggested ethical framework strengthening mechanisms from the respondents are presented in table 4.13 on page 134.

4.12: HRS ethical framework strengthening mechanisms (n=19)

Mechanisms	Percentage of respondents	(n value)
Formulate law, act or policy to regulate health research	11%	2
Independent research council	5%	1
Directorate of Policy Planning and Human Resource Development to take a lead	11%	2
Identify stakeholders to work with on the framework	11%	2
Information, Communication and Technology, Health and Education Sectors to be key players	5%	1
Align clinical trials with guidelines	5%	1
Annual assessment of research priority with key players	11%	2
Provision of technical assistance	11%	2
More funding for research	11%	2
Strategies to identify gaps within health sector	5%	1
Strategic planning for health research	5%	1
Strengthen ethics review process	5%	1
System-related problems need to be addressed	5%	1

4.8 Perceptions of exo-ministerial respondents on ensuring good governance

The views of exo-ministerial respondents on ensuring good governance for HRS was sought by posing the questions related to the topic. Set out below are the responses of exo-ministerial respondents on ensuring good governance for HRS (n-15).

4.8.1 Respondents' views on whether the HRS is addressing the country's health research priorities

Respondents were asked to indicate whether the HRS in the country is addressing the country's HR priorities. Regarding this item, 66% (n=10) of the respondents indicated that the HRS in Namibia is not addressing HR priorities. One respondent 7% (n=1) felt that the HRS is addressing HR priorities, whereas 27% (n=4) of the respondents said they did not know whether HRS in Namibia addressing the country's HR priorities.

4.8.2 Involvement and participation of human subjects /affected communities in research governance

Respondents were asked to indicate whether there is a need to ensure involvement and participation of human subjects/affected communities in research governance. The majority, 87% (n=13) of the respondents agreed that there is a need to ensure involvement and participation of human subjects/affected communities in research governance whilst only 13% (n=2) felt that there is no such need.

4.8.3 National and local authorities support for Health Research

Respondents were asked to indicate whether there is a need for national and local authorities to support health research. Almost all respondents, namely 93% (n=14) felt that there is such a need while 7% (n=1) of the respondents did not provide response to did not answer this question.

4.9 Creating and sustaining resources for HRS and capacity development

This section presents the finding on creating and sustaining resources for HRS. Both MoHSS and exo-ministerial sub-groups were asked to respond to this item (n=67).

4.9.1 Creating and sustaining resources for HRS

In order to address issues related to creating and sustaining resources for HRS, respondents from MoHSS as well as exo-ministerial respondents were asked to indicate whether they agree or disagree with the following statements: a need to build capacity for health research ethics committees (REC), need to raise awareness about existing research ethics committees and need to create mechanisms for communication and coordinating different research ethics committees for health research in the country.

The majority which is 95% (n=64) of the respondents agreed that there is a need to build capacity for research ethics committees. The remaining 5% (n=3) of the respondents did not answer.

On rising awareness, 97% (n=65) of the respondents agreed that there is a need to raise awareness about existing research ethics committees while 3% (n=2) of the respondents did not agree. The need to create mechanisms for communication and coordinating different research ethics committees for health research in the country was indicated by 90% of the respondents (n=60), while 10% (n=7) of the respondents did not answer.

4.9.2 Creation of mechanisms for communication and coordination of different research ethics committees

Exo-ministerial respondents were requested to suggest mechanisms to enhance communication and coordination between different research ethics committees for health research in Namibia. Only 15% of the respondents (n=8) provided responses to this question of which relevant responses came from 13% (n=7). Table 4.13 on the page 138 presents the proposed mechanisms.

Table 4.13: Mechanisms for communication and coordination of different research committees for health research (n=7)

Mechanism	Percentage of the respondents	n-value
Broader representation of health professionals not just programme managers	2%	1
Inclusion of technical experts from MoHSS as well as from outside	3%	2
Base the functions of the committees on skills and experience	2%	1
Involve regional level	2%	1
Consider paying the work of the reviewers	2%	1
More flexible composition of research committee	2%	1

4.9.3 Capacity development –ministerial respondents

Under this topic, the researcher explored the HRS capacity development function. The section covers findings from the questionnaires from both groups (ministerial (MoHSS) and those from exo-ministerial respondents). The findings from the two groups are dealt with separately because the items are not similar. The majority 64% (n=32) of MoHSS respondents agreed that capacity development of HRS needs to be enhanced, whilst 36% (n=20) disagreed with the statement.

4.9.4 Involvement in research activities

In examining the involvement of MoHSS respondents in research activities as part of capacity development, this group was asked to indicate their involvement in HR activities and whether they are always or occasionally involved in research activities. The majority of the respondents, 67% (n=35) indicated that they are occasionally involved in research activities. Whilst 17% (n=9) said they are always involved in research activities the remaining 15% (n= 8) of the respondents said the question was not applicable to them.

4.9.5 Health-related research training received from MoHSS

As part of capacity development, MoHSS respondents were asked to indicate whether they have received any health-related research training from the MoHSS. On this item, 63% (n=33) indicated that they have not received any such training, whereas 21% (n=11) indicated that they have received such training. The remaining 15% (n=8) of the respondents did not answer.

4.9.6 Research training received adequately addressed research needs

Respondents were asked to indicate whether the training they received adequately addressed their research training needs. Of the respondents, 33% (n=17) felt that the research related training they received from MoHSS did not address their research training needs adequately, while 25% (n=13) felt that that it did. The majority, namely 42% (n=22) of the respondents did not answer this question.

4.9.7 Mid-level managers and programme implementers research training needs

Almost all the respondents, 98% (n=51), indicated that research training is needed by mid-level managers and programme implementers in MoHSS, while the balance of 2% (n=1) of the respondents did not answer this question. In addition, respondents were requested to indicate the types of research training that would help address training needs of researchers and other staff in MoHSS.

Almost all the respondents, 94% (n=49) of the respondents indicated that short courses on research methods would be an ideal training for the mid-level managers and programme implementers in MoHSS, while 87% (n=45) indicated peer review and 80% (n=42) indicated post-graduate related courses. The final type of training suggested by respondents was the holding of a symposium as a training mode, this was mentioned by 77% (n=40) of the respondents. Summary of types of trainings recommended for mid-level managers and programme implementers are presented in figure 4.9 on page 141.

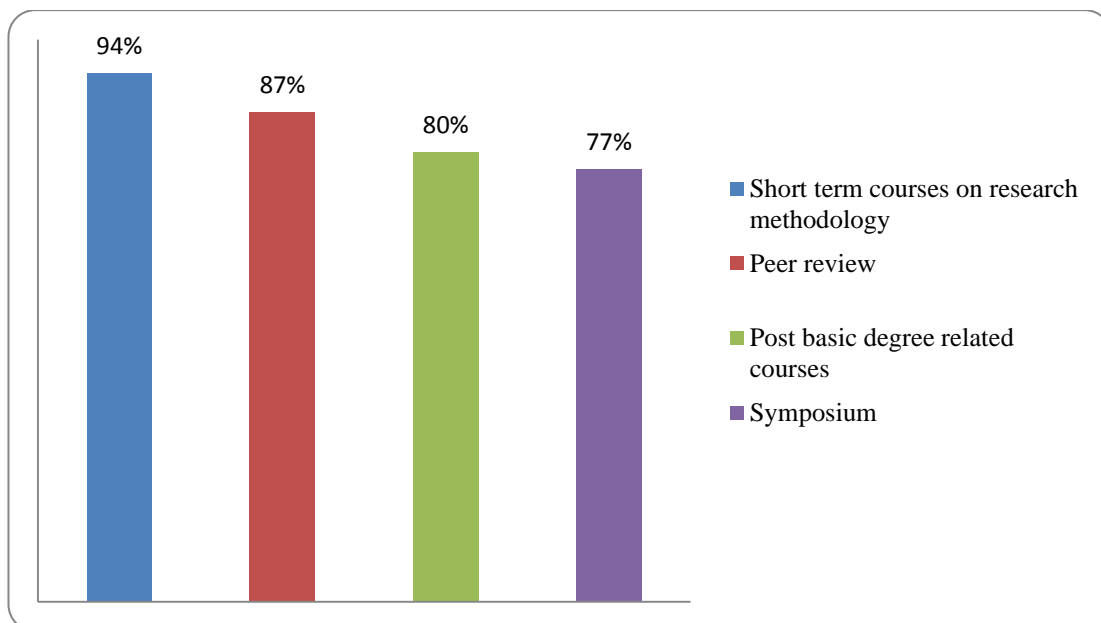


Figure 4.9: Types of training recommended for mid-level managers and programme implementers

4.10 CAPACITY DEVELOPMENT - EXO-MINISTERIAL RESPONDENTS

This part presents the findings from exo-ministerial respondents on the HRS capacity development function (n-15).

4.10.1 Strengthening different cadre of professionals

Exo-ministerial respondents were requested to indicate whether there is a need to strengthen different cadre of professionals with the capacity to conceptualise, conduct, analyse, disseminate and translate the findings from various forms of health research. All respondents, or 100 % (n= 15) agreed that this need exists.

4.10.2 Modes of developing capacity for health researchers in the country

Respondents were asked to indicate whether training different cadre of professionals and attending conferences and seminars are some of the modes that can be used to develop capacity of health researchers in the country. The majority of the respondents namely 53% (n=8) indicated that training different cadre of professionals as well as attending conferences and seminars could be modes of capacity development, whereas 20% (n=3) mentioned refresher courses. For this item, 27% (n=4) of the respondents did not answer this question. Respondents were requested to suggest other modes not given.

In addition, the respondents were asked to specify any training that is relevant to build capacity for health research. This question was answered by 80% (n=13) of respondents. In this regard, 13% (n=2) of the respondents did not provide responses to this question. The proposed trainings are in table 4.14 on page 143.

Table 4.14: Proposed health research capacity development trainings (n=13)

Type of training	Percentage of respondents	n value
Refresher courses for long-serving professionals	7%	1
Research agenda that will determine	7%	1
Long term training through established courses	7%	1
Seminars	7%	1
Attachment to other institutions	30%	4
Involvement in operational research	30%	4
In-service training	7%	1

4.11 FINANCING HRS

Questions related to the financing HRS function were directed to the respondents on the GRN contribution to health research, this question was directed to the MoHSs and the exo- ministerial respondents thus , (n=67).

4.11.1 Government of the Republic of Namibia (GRN) contribution to health-related research

In order to explore the views of both the MoHSS and exo-ministerial respondents on funding for health research activities, the same questions were asked to both groups. The question asked was whether the GRN is providing enough funds for HR. Table 4.15 indicates the perceptions of the respondents on the matter. The respondents were asked to agree or disagree with statements related to these topics.

Table 4.15: Perceptions on sufficiency of GRN funding for HR activities [N=67]

Respondents	Sufficient funding provided	Insufficient funding provided	Don't know
MoHSS (n=52)	23%	65%	12%
Exo-ministerial (n=15)	14%	53%	33%

4.11.2 Government funding for health research systems is appropriate for the country's research needs

The respondents were asked to indicate whether health research funding from government is provided in a way that is most appropriate for the country's research needs. These questions were administered on, and answered by ministerial (MoHSS) respondents (n=52).

4.11.3 Views on whether government funding for health research systems is appropriate for the country's research needs

About 50% (n=26) of the respondents indicated that funding from GRN is not provided in a way that is appropriate for the country's research needs, while 14% (n=7) of the respondents indicated the opposite. The remaining 36% (n=19) of the respondents responded that they do not know.

4.11.4 Ways to ensure appropriate GRN funding for health research

Respondents were asked to suggest appropriate ways to ensure GRN funding for health research. The suggestions are given below. Increase in national commitment towards HRS proposed by 87% (n=45) of the respondents. Coordination of financial investments of development partners towards health research was indicated by 79% (n=41) of the respondents while 13% (n=7) of the responses provided were not related to this question.

4.12 ADVOCACY FOR INCREASED NATIONAL COMMITMENTS TOWARDS HRS

The respondents were asked to indicate whether there is a need to increase national commitment towards HRS. The majority of the respondents i.e. 87% (n=45) felt that there was such a need whilst 10% (n=7) did not know.

4.12.1 Advocating for increased national commitment towards HRS

Respondents were asked to suggest advocating mechanisms for national commitment to HRS. The results are presented in table 4.16 on page 147.

Table 4.16: Mechanisms to advocate for national increase for HRS (n=14)

Advocating mechanisms	Percentage of respondents	n value
Develop a law that stipulates research requirements	7%	1
5% of MoHSS budget to go to health research and development	7%	1
Both GRN and development partners should support each other	7%	1
Create a special account for health research	7%	1
Establish national body that will mobilise resources for HR	7%	1
Set aside budget for HR	14%	2
Advocate for funding for HRS	7%	1
Develop an advocacy kit for HRS	7%	1
Secure political will for HR	21%	3
Advocate for capacity building in areas of research	7%	1
Convince relevant authorities and stakeholders of the need for high levels of financing for research	7%	1

4.12.2 Coordination of financial investments of development partners

The respondents were asked to indicate whether there is a need to ensure coordination of financial investments of development partners towards health research funding. Regarding this item, 79% (n=41) of the respondents indicated that this need exists while 6% (n=3) felt that there is no such a need. Of the respondents, 15% (n=8) did not answer.

4.13 PRODUCING AND USING RESEARCH FINDINGS

This section presents the findings on producing and using research findings, which is one of the functions of HRS. Questions were directed only to ministerial (MoHSS) respondents (n=52).

4.13.1 Functionality of the HRS System in producing results

Respondents were asked to indicate their views by agreeing or disagreeing with statements related to this function. The respondents were asked to indicate whether HRS is functioning and achieving results that are measurable. Whilst only 27% (n=14) of the respondents agreed that the HRS is functioning and achieving results that are measurable, 40% (n=21) disagreed while 33% (n=17) did not answer this question. The summary of the findings is presented in figure 4.10 below.

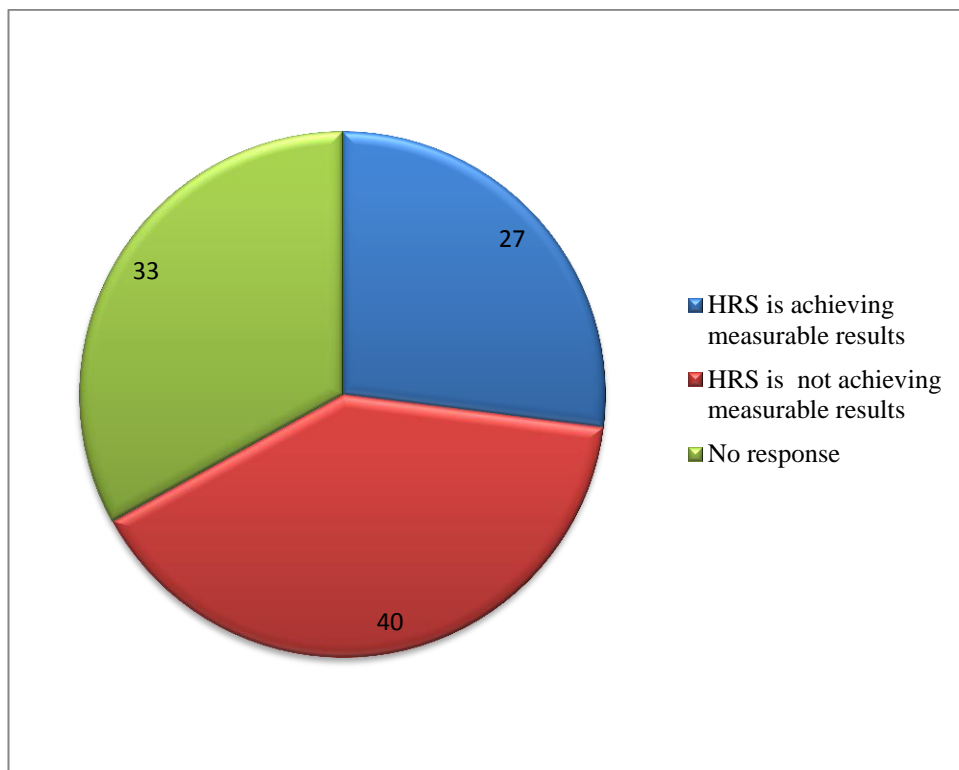


Figure 4.10: Functionality of HRS in producing results

4.13.2 HRS is producing results within a reasonable level of resources and time

While 42% (n=22) of the respondents agreed that the HRS is producing results within a reasonable level of resources and time, 53% (n=18) of the respondents disagreed. The remaining 23% (n=12) of the respondents did not know.

4.13.4 HRS is addressing health research priorities of the country

Only 40% (n=21) of the respondents felt that the HRS is addressing health research priorities of the country by agreeing with the statement, while 35% (n=18) disagreed with the statement. On the other hand 25% of the respondents (n=13) did not know.

4.13.5 Adherence to ethical considerations

This question was applicable to ministerial (MoHSS) respondents. Respondents were asked to indicate if the HRS is adhering to the ethical considerations that deal with human subjects /populations in the country. The majority of the respondents, i.e. 50% (n=26) of the respondents agreed with the statement, while 10% (n=5) disagreed. On this item, 40% (n=21) of the respondents did not know.

4.14 International linkages and technical cooperation in Health Research

The questions related to International linkages and technical cooperation in health research were applicable to MoHSS and Exo- ministerial respondents hence the (n=67).

4.14.1 Securing international linkages and technical cooperation in health research

Respondents from both groups were asked to indicate whether there is a need to secure international linkages and technical cooperation in health research. All respondents, 100% (n=52) of ministerial (MoHSS) respondents and 87% (n=13) of exo-ministerial respondents agreed that there is such a need. Two respondents, 13% (n=2) of exo-ministerial respondents did not know.

4.14.2 Mechanisms to secure international and technical cooperation in health research

In this item, the respondents were asked to indicate whether they agree that securing international and technical cooperation in health research can be done through international fora and participation in inter-country health research projects.

Of the respondents 50% (n=26) from MoHSS and 80% (n=12) of the respondents from exo-ministerial agreed that international and technical cooperation in health research can be secured through international fora. While 46% (n=23) of the respondents from MoHSS and 80% (n=12) of the exo-ministerial respondents agreed that this can be done through participation in inter-country health research projects.

Only 5% (n=3) of MoHSS respondents and 13% (n=2) of exo-ministerial respondents indicate that they do not know of any mechanism to secure international and technical cooperation in health research.

4.14.3 Specified mechanisms that can be used to secure international linkages

When asked to specify any other mechanisms to be used to secure international linkages, participation in global, regional and international fora, international conferences and meetings was mentioned by 7% of both MoHSS and exo-ministerial respondents (n=5). Furthermore, 7% (n=3) of the respondents mentioned using internet websites to download research articles written by researchers from other countries. In addition, 9% (n=6) of the respondents specified other methods that can be used such as providing basic training in research for managers, collaboration with neighbouring countries in health research as well as domestic fora. The findings for this item are summarised in the figure 4.11 on page 152.

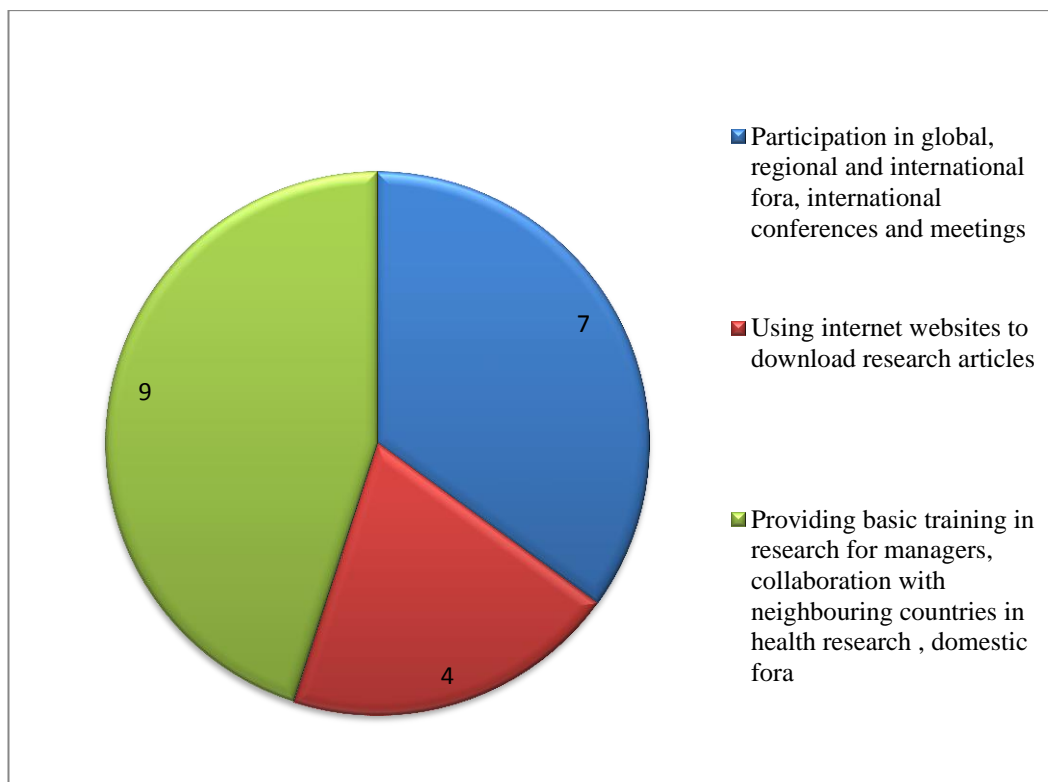


Figure 14.11: Any other mechanisms that can be used to secure international linkages

4.15 Platforms for presentations and discussions of health research findings

Views were sought related to platforms for presentations and discussions of health research findings. The question related to this item was applicable to all the respondents, hence n=67.

4.15.1 Sound platforms for presentations and discussions of health research findings

The respondents were asked to indicate whether there are sound platforms for presentations and discussions of health research findings where all sectors and individuals carrying out research can present their findings. Figure 4.12 on page 153 presents the findings for this item.

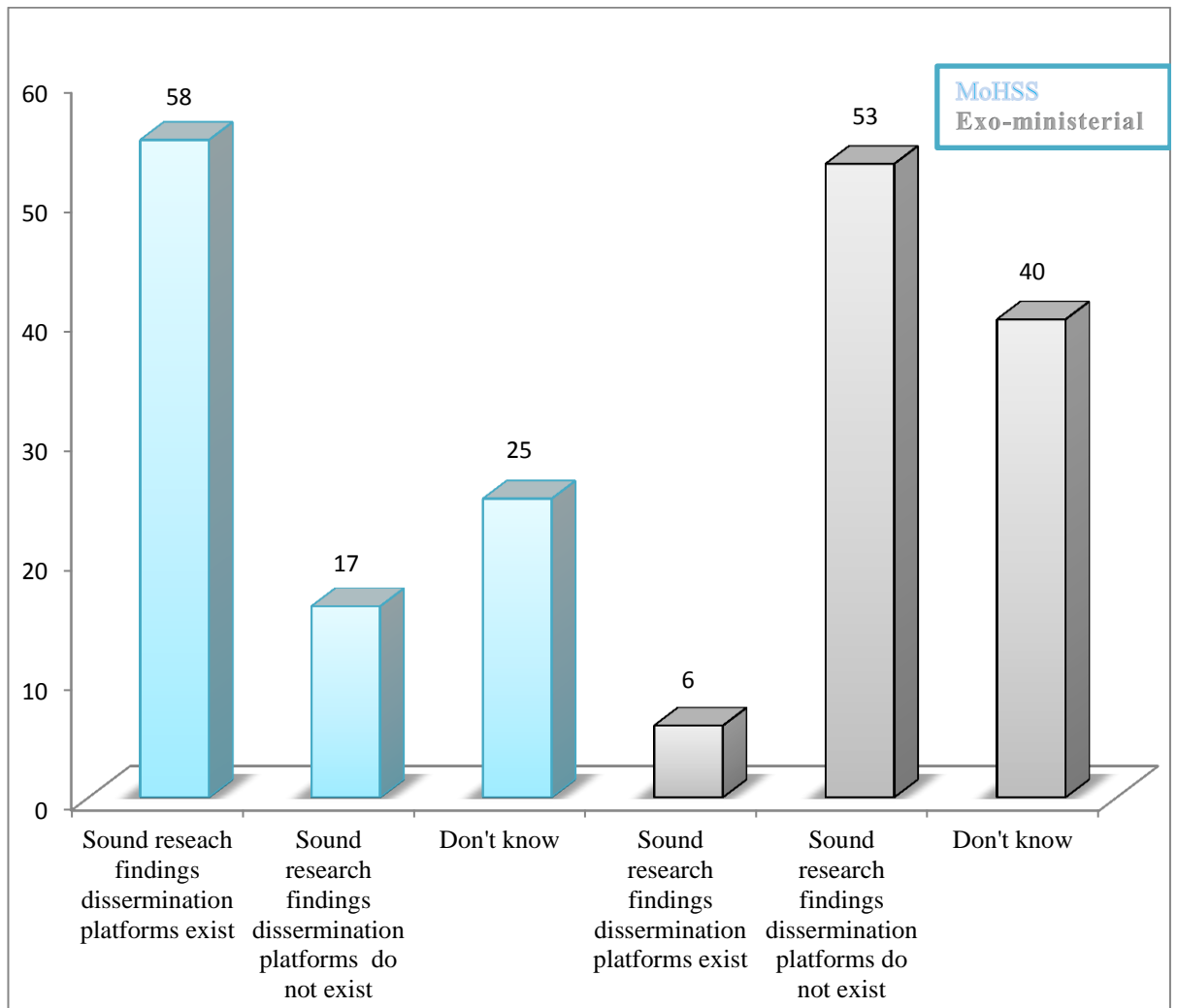


Figure 4.12: Existence of sound platforms for dissemination of research findings

Of the respondents, 58% (n=30) of the MoHSS respondents indicated that such platforms do not exist; only 17% (n=9) agreed that such platforms do exist, while 25% (n=13) do not know. Moreover, 53% (n=8) of the exo-ministerial respondents disagreed that such platforms do exist. Only 6% (n=1) of the respondents agreed with the statement, whereas 40% (n=6) of the respondents do not know.

4.16 ADDITIONAL STATISTICAL ANALYSIS.

A comparison between the two population groups was carried out where similar questions were posed to both groups. The relative small numbers allowed only for “*Fisher Exact Probability Test*” to be performed. In total, seven items were compared. There were no differences in the responses of the groups, except in one item (See Table 4.17) on page 155. The only statistical significant difference was with regard to the item on the composition of the ethical review boards/committees. The respondents from the Ministry of Health and Social Services were more of the opinion that the ethical review boards were comprehensively composed than the exo-ministerial respondents ($p=0.006$).

Table 4.17: Testing for differences between the two populations [respondent groups] responses.

Items			Respondent groups and their perspective responses		Fisher Exact Probability Test	
			Ministry of Health and Social Services	Exo-ministerial Respondents	One-tailed	Two-tailed
1	Ethics review committees	Fully functioning	17	5	p=0.552	p= 1.00
		Not fully functioning	27	9		
2	Composition of the ethical review committees.	Comprehensively composed	24	2	p=0.006**	p=0.006**
		Not comprehensively composed	6	6		
3	Funding provided	Sufficient funding provided	12	2	p=0.518	p=1
		Not enough funding	34	8		
4	The need for international linkages	Needed	52	13	p=1	p=1
		Not needed	0	2		
5	Existence of research platforms	Do exist	9	1	p= 388	p=661
		Do not exist	30	8		
6	Coordination of research activities	Perform own coordination	35	9	p= 533	p=1
		Do not perform own coordination	17	5		
7	The need for political commitment	Political commitment at an acceptable level	31	0	p=2.011	p =2.011
		Political commitment not at an acceptable level	10	15		

****Legend: Statistical significant finding [p= <0.05]**

4.17 SUMMARY

This chapter presented the analysis and presentation of the results of phases 1A and 1 B, namely, document review and the survey. It outlined the findings for each HRS function indicating areas of concern and proposed solutions drawn from the responses of the respondents. The next chapter will present the discussion of the findings, which will include consolidation of findings from both phases.

CHAPTER 5

DISCUSSION OF FINDINGS

5.1 INTRODUCTION

In the previous chapter, the findings of the study were presented. In this chapter, the findings from phase one (situational analysis 1A and B) will be discussed, linking the findings to the theoretical principles in the literature review. The discussion also establishes the nexus between the findings and the main objective of the study, namely to develop strategies to strengthen the implementation and governance of HRS in Namibia. The discussion treats the different aspects of the findings (document review and the survey) in the sequence they were presented in the preceding chapter (chapter 4) as follows:

- Profiles of the respondents;
- Stewardship function and ensuring good governance and its components;
- Creating and sustaining resources for HRS function and capacity development;
- Producing and using research finding; and
- Financing HRS function.

The results from the document review are incorporated in the discussion of each HRS function to support the survey results.

5.2 THE PROFILES OF THE RESPONDENTS

The demographic information of the respondents such as: gender, age, years of experience, was described.

In terms of gender, 40% of exo- ministerial respondents were males while 60% were females. Regarding the ministerial respondents, the findings indicate that 48% were females and 52% males.

Although Correll (2014) indicate that sex segregation often surface predominantly in various careers, the results of this study indicate that there was not much difference in representation of respondents in terms of gender in the MoHSS as well as in other institutions in the functions of HRS.

Regarding the age, the majority (27%) of exo ministerial respondents fell in the age category of 31 to 40, while majority (41%) of the respondents from ministerial respondents fell in the age range of 50 years and above. This outcome indicates that the majority of the exo- ministerial and ministerial respondents were in middle to late adulthood, suggesting the presence of mature people in the execution of HRS functions.

Concerning the years of experience, the majority (40%) of the exo- ministerial respondents had extended experience. This group ranged from 6-10 years. Regarding the ministerial respondents, 58% had more than ten years' experience. These findings correspond with the results regarding the age categories discussed above where the older the person is, the longer the period of service in that institution. However, these findings may have a positive or negative connotation. In case of positive connotation, it may indicate that there are skilled professionals who are competent to realise the HRS functions. Hence, employee job satisfaction.

On the negative side, it may possibly suggest the likelihood of resistance to change in these institutions i.e. “job embeddedness due to factors such as having expertise that will not transfer out of the institution, having connections with our co-workers and superiors, and having links that bind us to the job and the institution” (Wyld, 2014). The next discussion will concentrate on the findings of the HRS functions.

5.3 STEWARDSHIP FUNCTION AND ENSURING GOOD GOVERNANCE

The stewardship function relates to quality leadership needed to continuously promote and develop effective and efficient health research systems. Ensuring of good governance is concerned with the establishment of national, regional and global strong, collaborative health research systems that considers health research priorities (WHO, 2006).

However, 80% of the respondents in the current study identified some challenges facing the stewardship function in Namibia. The main challenges identified were: gaps in legislative frameworks including the outdated Research Management Policy (RMP) as well as lack of coordination of health research in the country.

As far as the rating of the stewardship function in Namibia is concerned, the majority, comprising 59% of ministerial respondents indicated that the level of the stewardship function in the country is not acceptable. However, nearly one third or 29% indicated that it is acceptable. On the other hand, 12% of the respondents indicated that they do not know.

These results demonstrated that the stewardship function was perceived differently by the respondents as far as the functioning of this function was concerned.

The study findings also indicated that there are challenges facing the stewardship function (as indicated by 81% of the respondents). Whitworth et al, (2008) have found that poor stewardship in HRS is not only a perception, and might exist in other African countries apart from Namibia. This view is further supported by Whitworth et al, (2008) who state that policy and legislation frameworks, which outline the stewardship function and ensures good governance, remain challenges for HRS in Africa.

Related to gaps in the legislative frameworks, it was revealed that there is a need for setting of norms and standards for HRS in the country as indicated by 83% of the respondents. Subjects to be considered when setting norms and standards for HRS as mentioned by the respondents include: the type of research to be undertaken; compilation of all standards, policies and legislation related to research; conducting a gap/situation analysis as well as considering the level of training of committee members. The setting of norms and standards for HRS is vital in ensuring good governance for HRS.

In the Namibian context, gaps in legislative framework are related to the Research Management Policy (RMP) stipulates the policy goals, principles, objectives, impact and the policy strategies with their related components. This study found that most of the internal environmental factors outlined above were not in place.

These further included attributes that were not in place according to the results from the adopted WHO checklist such as: Health Research Policy without a preamble,

with no strategic vision for health research, no working Plan for the NHRS/ research agenda, no law relating to health research, and no strategic Health Research Plan.

In his study on a similar subject, Gadsby (n.d) posits that there is no formal, articulated vision for health research policies in many countries. Plans and strategies are more often either not present or out-dated. Lack of official health research policies in many countries signifies the lack of identification of health research priorities in such countries.

Regarding unacceptable stewardship function, respondents indicated possible reasons for reasoning as such. The reasons that were suggested included dearth of: coordination, resources, support, motivation, operational research, strategic vision as well as lack of involving all directorates in the MoHSS.

The majority of the respondents, amounting to 62% were not satisfied with the operations of the HRS in Namibia. The need for health research coordination is also confirmed by the findings from the Research Management Policy review, which demonstrated that to date there is still poor liaison and interactions with universities and other institutions in health research. Moreover, efforts to foster collaboration with Ministry of Education to establish a research co-ordination body have proceeded at a slow pace.

The findings of this study on coordination of health research are concordant with those of Campbell, 2008; D'Souza and Sadana, 2006; Glickman, McHutchison, Peterson, Cairns, Harrington, Califf, et al, 2009; Ranson and Bennett, 2009), who

suggest that the challenges facing the stewardship function especially on coordination of health research are similar in Africa and there is a need to address the impediments in order to improvement the stewardship function of HRS across the continent. These constraints are substantiated by many authors (Campbell, 2008; D'Souza and Sadana, 2006; Glickman, McHutchison, Peterson, Cairns, Harrington, Califf, et al, 2009; Ranson and Bennett, 2009) who identified related problems affecting HRS in Africa, such as:

- Inadequate participation of stakeholders in research-related activities,
- Inadequate or weak policy and execution practices,
- Lack of demand for research, and
- Limited access to research funding.

In addition, the lack of coordination as indicated through the findings also points to fragmentation of health research activities. This is confirmed by 73% of the respondents who indicated that their institutions implement HR independently. Taken on the whole, these findings suggest and highlight the lack of a central point for coordinating the implementation of HR. Furthermore, different stakeholders employ different mechanisms to govern the implementation of HR as indicated by 60% of the respondents however 30% indicated that there are no mechanisms that govern implementation of HR in their institutions.

Given the foregoing, it emerges that HR implementation needs to be governed in all the implementing agencies, and the absence of HR implementation mechanisms in some institutions is a situation requiring attention.

The current study further revealed challenges related to the ethic review committees in MoHSS, and the institutional review boards composition, and structure. These include: ethics committees and institutional review boards were not well composed/ not comprehensively composed, not well structured and, not fully functioning.

Although proper coordination depends on the composition of the ethics review committees and institutional review boards, only 12% of the respondents rated the composition of these committees as acceptable. On the composition of the ethics committees and the institutional review boards, it is clear from the findings that the composition of the ethics review committees needed to be reviewed because thirty-three percent, a third of the respondents, rated their composition as unacceptable.

The composition of institutional review boards should ideally reflect multi-sectoral representation. The findings from exo-ministerial point out that the composition of the institutional review boards is not so representative and this was indicated by 40% of the respondents. In addition, 47% indicate that there are no representatives from other institutions on institutional review boards in their institutions.

The above findings are not unique to Namibia alone. It was also reported elsewhere that, despite the mere existence of such committees, there is a need to compose the membership from diverse educational backgrounds.

Such composition may enable proper and effective functioning of the review of submitted protocols (Nyika, Kilama, Tangwa, Chilengi, and Tindana, 2008).

The above authors also noted in a survey they conducted, that many Ethics Review Committees are not yet sufficiently multidisciplinary or multi-sectoral in their composition. Consequently, it is pointed out that membership is still problematic for ERCs in sub-Saharan Africa although this is not applicable to all Ethical Review Committees (ERCs) (COHRED, 2012). Furthermore, the problem of having as few as three members, in some cases on such committees, results in limited ethics reviews capacity (Nyika et al., 2008).

In addition to desirable composition of ERCs, training to empower the members is required. This study found that there is a need to build capacity for Health Research Ethics Committees. Over 80% of the ministerial (MoHSS) respondents and over 90% of respondents from exo-ministerial institutions support this finding.

In order to realise coordination of health research activities, WHO (2015) called upon member states to reinforce national health research systems. This can be done by means of improving the leadership and management of research for health through focusing on national needs. These actions are necessary because donor-driven research agendas would not fully address the research needs of a country.

The study respondents were requested to propose ways how HRS could be strengthened. 20% of the respondents suggested that inter-sectoral participation as a strategy to strengthen HRS, could be accomplished through participation of other institutions in the implementation of health-related research projects. A similar recommendation was preferred by WHO (2001).

According to 13% of the respondents, the above-mentioned strategy to strengthen HRS could also be achieved by co-funding research activities and also by inviting other institutions to serve on Review Boards.

The proposals discussed above can be regarded as guidelines that can be explored when developing strategies to strengthen the HRS. Research is a multi-sectoral activity and exo- ministerial respondents supported the idea of enhancing the roles for health research in more sectors such as Science and Technology, Economics, Social Sciences, and Education. This was indicated by all (100%) of the respondents. This is a crucial aspect with respect to the intergration of different sectors into HR which is referred to as inter-sectoral participation, (WHO 2001). Thus, inter-sectoral participation, community involvement and other related factors can be regarded as essential factors in enhancing a functioning HRS.

5.3.1 Stewardship and ensuring good governance of HRS in MoHSS

Respondents were asked to rate the stewardship function of HRS in MoHSS. 59% rated it as not very good.

Reasons given for this rating include: lack of coordination, support and motivation; resources are donor-driven; and dearth of research agenda. These factors would have an impact on the implementation of health research in the country.

These research findings are supported by Neufeld (2011) who argues that the main challenges facing National Health Research Systems in low and middle-income countries include: lack of coordination between research institutions, inadequate participation of stakeholders, lack of demand for research and lack of accessibility of research findings.

Findings in the study further indicated that there are challenges facing the stewardship function as expressed by 80% of the respondents. The World Health Organisation (2012) acknowledges these challenges by stating that there are neither fully functioning HRS mechanisms nor national research agendas in many countries in the African region. The World Health Organisation also stressed the need for African countries to formulate health research policies and strategies to strengthen HRS.

Related to dearth of research agenda, health research priority setting is also part of the stewardship function. The Research Management Policy indicates that there should be a national strategy to promote prioritisation of health research. However, findings in this study indicate that a national strategy is still not in place, resulting in the lack of prioritisation of research projects. Absence of a national strategy metamorphoses into donor-driven research.

In order to support national HR strategy and address the challenges facing the HRS functions, Neufeld (2011) acknowledges the need to set national health research priorities and develop a national health research policy.

Furthermore, COHRED (2012) recognises that international partners and research funding through international agencies play an important role in supporting efforts to strengthen national research systems for health including the setting of priorities in health research.

5.3.2 Components of the stewardship and ensuring good governance HRS functions

A comprehensive HRS stewardship function needs to have a vision, priorities, ethical instruments as well as monitoring and evaluation (M&E) components. The findings indicate that the existence of ethical instruments leads to the fulfilment of these components in the MoHSS. Notwithstanding the importance of ethical instruments, the majority of the respondents (60%) indicated that the health research vision, priorities, ethical instruments and M & E are not being addressed by MoHSS. These findings correspond with Gadsby (n.d), who argue that the setting and monitoring of ethical standards as well as monitoring and evaluation are neglected functions both at country and institutional levels in many jurisdictions.

On the question whether MoHSS provides HRS with health research leadership, strategic plan, vision and mission, health research regulations which is part of the stewardship component, 87% of the respondents concurred. Furthermore, 75% pointed out that the MoHSS was not providing the HRS with a research act in order to ensure good governance of the HRS. This is a similar finding with respect to the adopted WHO checklist.

Regarding lack of support, it was pointed out by 60% of the respondents that even if there were existing ethical instruments for HRS, there is a need to strengthen the ethical framework for HRS.

This finding is concordant with that of COHRED (2012), indicating that most of developing countries do not have strong research for health, which results in challenges such as research that is driven by the agenda and priorities of outside

donors rather than by the true needs of a country. In addition, Gadsby (n.d) further points out that nonexistence of official health research policies in many countries imply that the majority of these countries will not have identified health research priorities and stakeholder collaboration in policy development is uncommon.

The need for strengthening the ethical framework in the country was highlighted by 74% of the respondents. Proposed mechanisms to strengthen HRS ethical framework are as follow: formulation/drafting of legal enactments or policies to regulate health research; establishment of an independent research council; empower the Directorate of Policy Planning and Human Resource Development to take a lead in strengthening the ethical framework; identification of stakeholders to work with on the framework; Information, Communication and Technology, Health and Education sectors to be key players; alignment of clinical trials with guidelines; annual assessment of research priorities with key players; provision of technical assistance; more funding for research; drafting of strategies to identify gaps within health sector research; strategic planning for health research; strengthening of the ethics review process and addressing systems-related problems.

The findings further revealed that ensuring good governance depends on advocacy thus there is a need for promotion and advocacy for HRS as indicated by the vast majority (ninety-two percent) of the respondents.

The proposed HRS advocacy mechanisms from the respondents include reviewing and updating of the research policy; aligning HRS to institutions of high learning; introducing a bi-annual research forum; awareness raising and lobbying with

authorities for resources; establishing a networking forum with institutions such as National Statistics Agency, WHO, UNAM and Polytechnic of Namibia (now NUST); holding of joint planning and review meetings; disseminating information to stakeholders and the public; involving the grassroots communities; establishing HRS committees with stakeholders; publishing a newsletter for research related matters; holding symposia and ensuring a participatory approach to HRS.

5.3.3 Adherence of the MoHSS to the ethical standards of HRS stewardship functions

In this item on stewardship the focus was on whether MoHSS adhere to ethical standards as well as on the utilisation of knowledge benefits for health and health equity.

On these issues 13% of the respondents pointed out that the MoHSS does not adhere to ethical standards for health research while 46% indicated that the MoHSS does not link HR to the Millennium Development Goals. In addition 54% indicated that MoHSS is not adhering to research priorities or to the utilisation of knowledge benefits for health and health equity.

The national health policy needs to be in place for an HRS to function properly. The findings highlighted that the ethical standard of the stewardship function are not fully adhered to as expressed by 37% of the respondents whilst 46% agree that the views of stakeholders are not defined within a national policy on health research. Only 56% of the respondents indicated that the MoHSS is adhering to ethical standards.

On the aspect of the research agenda, 60% of the respondents revealed that there was no forum or process to coordinate the setting of national health research priorities. In addition, identifying factors to be considered in setting priorities in health research (e.g.national burden of diseases, human resources, political will, community participation, etc.) is not carried out as indicated by 40% of the respondents.

Nyika et al. (2008) noted that although the majority of countries in Africa are reported to now have at least some form of ethical review process in place, the operations of these processes are usually hindered by a combination of challenges. These include scarcity of resources, inadequate training of members as well as poor staffing levels. The same authors reported in their conducted study in Tanzania on health research ethics review and needs of Institutional Ethics Review Committees (ERCs) a that 49% of their respondents had had no training in health research ethics review.

5.4 CREATING AND SUSTAINING RESOURCES FOR HRS FUNCTION AND CAPACITY DEVELOPMENT

This study explored the above-mentioned HRS functions, namely creating and sustaining resources for HRS and capacity development.

These functions are critical for proper functioning of the HRS of the country and can be achieved through the involvement of staff in research activities and appropriate training.

On the issue of resources, human resources require capacity development; this study revealed that over two thirds of the respondents (67%) indicated that they are only occasionally involved in research activities.

The Council on Health Research for Development (2012) maintain that human resources for research is a major need which includes enhancing health research capacity. The foregoing is so because health researchers in the low- and middle income countries have multiple tasks to perform because they are responsible for a number of different roles and activities apart from research.

In relation to capacity development, 64% of the respondents indicated that they have not received any research-related training from MoHSS whereas only about one fifth (21%) indicated that they have received such training. The efficacy of training was another concern. One third (33%) of the respondents who had received such training, indicated that it did not address their research training needs adequately. This was also supported by the vast majority of the respondents that is, (94%) who indicated that there is a need for the training of mid-level managers and programme implementers in health research in the MoHSS in order to address the health research training needs. Just over half of the respondents (33%) point out that training different cadre of professionals as well as attending conferences and seminars could be modes of capacity development.

A minority of 7% indicated that refresher courses for long serving professionals, the existence of a research agenda that will determine training needs and long-term training through established courses are all appropriate ways to address training needs. The findings of this study are supported by IJsselmuiden et al. (2005-6) who

found that there is a critical shortage of researchers in many countries, which is part of the wider problem of inadequate human capacity.

The findings of this study are complimented by IJsselmuiden et al. (2005-6) who indicate that lack of human resources, capacity and expertise in HRS are noted in African countries, all these are observable in Namibia, where the Research Unit that is mandated with the coordination of health research in the entire ministry is understaffed and is currently manned by only three professionals. In the same vein, Heidari (2012) argues that attracting and retaining staff in the public research sector is a challenge in developing countries and NHRS sectors lose their best scientific talent, predominantly to the developed world or to the private sector through brain drain.

IJsselmuiden et al. (2005-6) propose that in order to attract and retain health research staffs, an incentive system needs to be in place which includes good career structure, suitable rewards, respect, grant schemes for young scientists, as well as innovative schemes to attract the scientists working outside the country. In this way, brain drain will be turned into brain gain for the country.

In addition, in order to attract members to ERCs and retain them, financial autonomy of ERCs is very important because dependency on the host institution for financial support compromises their independence (Nyika et al., 2008).

The researcher has observed that in the case of Namibia, the Research Management Committee (RMC) and the Biomedical Research Ethics Committees (BREC) fall

within the organisational structure of the MoHSS. Thus, they are not financially independent.

In addition to proper or desirable composition of ERCs, training to empower the members is required. This study found that there is a need to build capacity for Health Research Ethics Committees. Over 80% of the ministerial (MoHSS) respondents and over 90% of respondents from exo-ministerial institutions support this finding.

Furthermore, awareness-raising about existing Health Research Ethics Committees is necessary to enhance proper communication as indicated by the vast majority of respondents, namely, 98% of exo-ministerial respondents and 96% of MoHSS.

5.4.1 Types of research related trainings needed for mid-level and programme implementers in MoHSS

Related to the health research training needs, almost all the respondents, 98% indicated that research related training is needed by mid-level managers and program implementers in MoHSS. In addition, respondents were requested to indicate the types of research training that will help address the training needs of researchers and other staff in MoHSS.

The findings in this study further revealed that capacity building can be done through attending conferences, seminars, refresher courses for long serving professionals, and long-term training through established courses as already recommended by the respondents in chapter 4 (figure 4.9 and table 4.15). Wight (2005) point out that a

combination of short-term and long-term training strategies at individual, institutional and country levels are obligatory to build up sustainable systems for health research.

The study findings have highlighted the fact that only a few officials have received training in health research which is a matter of concern. In addition, it was revealed that for those who received training the training provided did not address their needs as expressed by one third (33%) of the respondents.

These study findings point out challenges that are also confirmed by Lê, Mirzoev, Orgill, Erasmus, Lehmann, Okeyo et al, (2014) who point out that the capacity strengthening universal frameworks that are existing apt to concentrate on needs with less contemplation of prospective human resources.

The findings of this study, when viewed with Lê et al (2014) observation, highlighted that, capacity strengthening frameworks may exist but their application can often be constrained, for example, by a prohibiting milieu and this may have implications for potential advancement in capacity strengthening for health research in Namibia and also in other parts of the world. Therefore, in order to address the challenges pointed out from the findings it is necessary to approach these challenges from Lê et al (2014) point of view.

The authors emphasises that capacity development need to be comprehensive, starting with a comprehensive capacity needs assessment of the wider environment in which the HRS is operating. Therefore, the capacity strengthening framework should

consider the three levels which are interdependent i.e. the individual working in the organisation, the organisation itself and the wider system where the organisation is operating in. To avoid disintegration, capacity strengthening efforts at all three levels should be addressed, either consecutively or concurrently.

5.4.2 The GRN's contribution towards creating and sustaining resources for HRS

The government's contribution towards creating and sustaining resources for HRS is vital. The study findings indicated that the Namibian government is not doing enough in contributing towards the creation and sustaining of resources related to health research and to human resources in this area.

The findings show that the GRN is not providing sufficient funds for health-related research as indicated by 65% of MoHSS respondents and 54% of exo-ministerial respondents. Furthermore, this study revealed that the GRN is also not providing incentives to researchers. These are evidence that there is no retention strategy for researchers in the public sector as indicated by 75% of MoHSS respondents and 60% of non-ministerial respondents.

The results of the study establish that there is a lack of financial resources for health research from the government although allocation of resources to health research is a common requirement from all governments.

These study findings suggest that a constricted funding system submits that health research in Namibia face severe financial insufficiencies. The country in such a situation lacks the dimensions to spearhead its own national research agenda. The findings in a study conducted by Jowi and Obamba (2013) substantiate this study

results as their study confirmed that inadequate and unexpanded funding systems remain a main challenge to the development of more rigorous research and progress in sub-Saharan region.

Literature has revealed that the country knew what needed to be effected on issues relate to the GRN's contribution towards health research through the MoHSS National Health Policy Framework 2010-2020 (2010) which shows that a specific strategic response in relation to information and research is needed. This strategic response should be reflected in the allocation of adequate human and other resources for information and health research aiming at reaching at least 2% of the total health budget (MoHSS, 2010). To date, this proposed strategic action has not yet materialised in the MoHSS. The findings of this study and the results from studies in literature validate the need for coherent strategies to health research funding in Sub Saharan countries (MoHSS, 2010, Jowi and Obamba, 2013,).

5.5 PRODUCING AND USING RESEARCH FINDINGS AS AN HRS FUNCTION

A combination of evidence from the literature and the findings demonstrated that there are challenges in the area of producing and using research findings as an HRS function.

Mchombu (2011) argued that ten years earlier intellectual property rights of research conducted in Namibia by outside researchers were not respected since outside researchers could carry out research in Namibia and then leave the country with their research and often with their findings. This situation led to a loss of benefits from research findings (lack of access to research findings) as well as to potential

duplication of efforts on previously researched areas as well as the under-utilisation of research findings. This is a concern in Namibia.

This study has revealed that, there is a need to strengthen different cadre of professionals with the capacity to conceptualise, conduct, analyse, disseminate and translate the findings of various forms of health research. Although the investigation into the need to strengthen different cadre of professionals in this study has not spread beyond capacity to conceptualise, conduct, analyse, disseminate and translate the findings. These may be factors that influence utilisation of research findings for health research. For the reason that they are closely related to the factors that impede utilisation of research findings as observed by Albert, Fretheim, and Maïga (2007) which include: access to information, relevance of and trust in the findings, competency in reading and interpreting the evidence, as well as having the time to read and interpret research.

When the results of this study and the findings of Albert et al (2007) are viewed with Oliver, Innvar, Lorenc, Woodman and Thomas 2014, Oronje, 2015), the factors that facilitate the need for strengthening different cadre of professional in utilisation of health research findings can be summarised as follows:

- Lack of technical skills necessary to enable research use,
- Inadequate appreciation of the significance of research use,
- Lack of time to use research particularly in view of the limited staff and competing demands,
- Insufficient staffing is one of the most critical challenges (very few technical staff),

- Lack of institutional guidelines to facilitate data and research use in policymaking,
- Weak institutional governance for evidence use,
- Lack of incentives for research use,
- Lack of research use culture,
- Nonexistence of a repository for health research in countries, (health research is dispersed in numerous reports and journals, and there are no ‘one-stop shops’ where one would find all health research executed in the country),
- Lack of subscriptions to journals and other online databases, and
- Lack of linkages with the researchers and research institutions.

The authors mention that these factors are similar in both developed and developing countries. With regard to dissemination of health research findings, the study results indicate that all (100%) exo-ministerial respondents and 87% of the MoHSS respondents supported the idea of securing international linkages and technical cooperation in health research.

Along the same line, the Health Research Policy for the Caribbean (2009) articulate the strategic directions such as securing and consolidating international linkages and technical cooperation as well as reinforcing mechanisms, tools, and capacity for knowledge management at regional and national levels.

It emerges from the findings that different modes can be used to secure international linkages. The findings indicate that half (50%) of MoHSS respondents and four fifths (80%) of exo-ministerial respondents agreed that international and technical

cooperation in health research can be secured through international fora. At country level the Research Management Policy (RMP) proposed that mechanisms to disseminate research findings dissemination mechanisms such as conferences, symposia, fora to discuss findings should be created. These should include dissemination mechanisms such as conferences, symposia, and formal fora to discuss findings.

5.6 FINANCING HRS FUNCTION

The financing function of HRS is about mobilisation of and securing financial resources for research for health. This goes hand-in-glove with allocating these financial resources accountably. As such, the financing in the context of HRS is a crucial function because research activities cannot be undertaken if funds are not available.

The financing for HRS in Namibia faces numerous challenges as indicated by half of all (50%) the respondents who indicated that funding from GRN is not provided in a way that is most appropriate for the country's research needs. The findings confirm that HR in Namibia is donor-driven.

The current study findings confirm that attributes related to the HRS financing function such as the importance of ensuring that there are diverse sources of health research funding in the country.

These should include funding from government tax revenues (fiscus), allocation of regular budget for health research; establishment of local financing systems as well

as existence of a budget line for HR are not in place. Only multi-lateral and bi-lateral donor funding by local and international NGO's are confirmed.

From the review of the RMP, which was adopted in 2003, it is noted that although the RMP mentions the need to make funds available for all research activities, no budget line item or dedicated development budget for health research has been set aside to date. Thus, health research remains more donor-driven with a lion's share of projects funded by development co-operation partners. In relation to the financing for HRS function,

When these study findings are viewed with findings from the literature there are similarities as Campbell (2008) points out those health research priorities in developing countries are donor-driven through funding of vertical programmes in specific areas of interest.

Campbell (2008) further stressed that these programmes can be used to channel resources towards developing HRS instead of concentrating on specific areas.

In order to address the health research funding challenges, the majority (87%) of the respondents indicate that there is a need to increase national commitment for HRS in order to address the lack of funds for HRS in the country. Furthermore, 79% of all respondents indicated that there is a need to ensure coordination of financial investments/support by development partners towards health research funding as a strategy to help address the challenges related to HRS financing.

The strategies identified are fundamental to the financing for HRS. Several opportunities can be explored and pursued in this context as revealed from the literature. These are: consistent increase of MoHSS budget to support HR; securing financial support from development co-operation partners to fund health research, and the possibility to establish local financing systems as pledged in the National Health Policy Framework on allocating 2% of total health budget to research (MoHSS, 2008).

The findings are also supported by the recommendation by the Health Research Policy for the Caribbean (2009), which identified the need to conduct a costing exercise to determine the financial resource requirements for accomplishing the regional health research agenda as well as campaigning for government funding of national health research. The policy argued that 2% of health budget should be allocated to health research as strategies to enhance HRS financing.

In conclusion, if these study findings are viewed in line with Kirigia and Ovberedjo (2007), similar challenges were identified; however, their study further revealed the causes of the HRS financing function challenges which include: deficiency of local competency to contest for internationally accessible research funds and absence of local private sector funding for health research the findings of this study.

5.7 SUMMARY

This chapter presented the discussion of findings from all the study phases i.e. phases 1A&B. The consolidated findings revealed the situation of HRS in Namibia and highlighted challenges that need to be considered when developing the strategies to reinforce HRS. The next chapter will present the conceptualisation for strategies development.

CHAPTER 6

CONCEPTUALISATION FOR THE DEVELOPMENT OF STRATEGIES TO STRENGTHEN HEALTH RESEARCH SYSTEMS IN NAMIBIA

6.1 INTRODUCTION

In the previous chapter, the results of the situational analysis (phases 1A & B) of the elements of Health Research System (HRS) were discussed. The results reveal the lack of a supportive environment for the implementation and governance of a health research system in Namibia. The results of the study form the basis for the development of strategies. The purpose of this chapter is to conceptualise the key findings on HRS from the study and link them to the practice theory of Dickoff, James and Wiedenbach (1968).

The significance of practice theory in this study is to demonstrate the relationship between theory and practice. In essence, health research systems as a discipline requires established strategies that are grounded in practical philosophical perspectives, (Dickoff et al, 1968. Chinn & Kramer, 1999). The practice-oriented theory is ideal in the development of the strategies as it assisted the researcher to identify main related concepts and describe their effects in relation to the strategies to be developed. Therefore, the concepts of agent, recipient, context, dynamics, and terminus serve as the basis for the development of strategies for supportive environment for the implementation and governance of HRS in Namibia.

6.2. CONCEPTUALISATION OF ELEMENTS

As a structured process, conceptualization is utilised to construct a concept map for each HRS function aimed at generating ideas from study findings by extracting key concepts from the study findings and illustrate how these key concepts are interrelated in developing the strategies (Trochim, 2008, Macmillan Dictionary 2015).

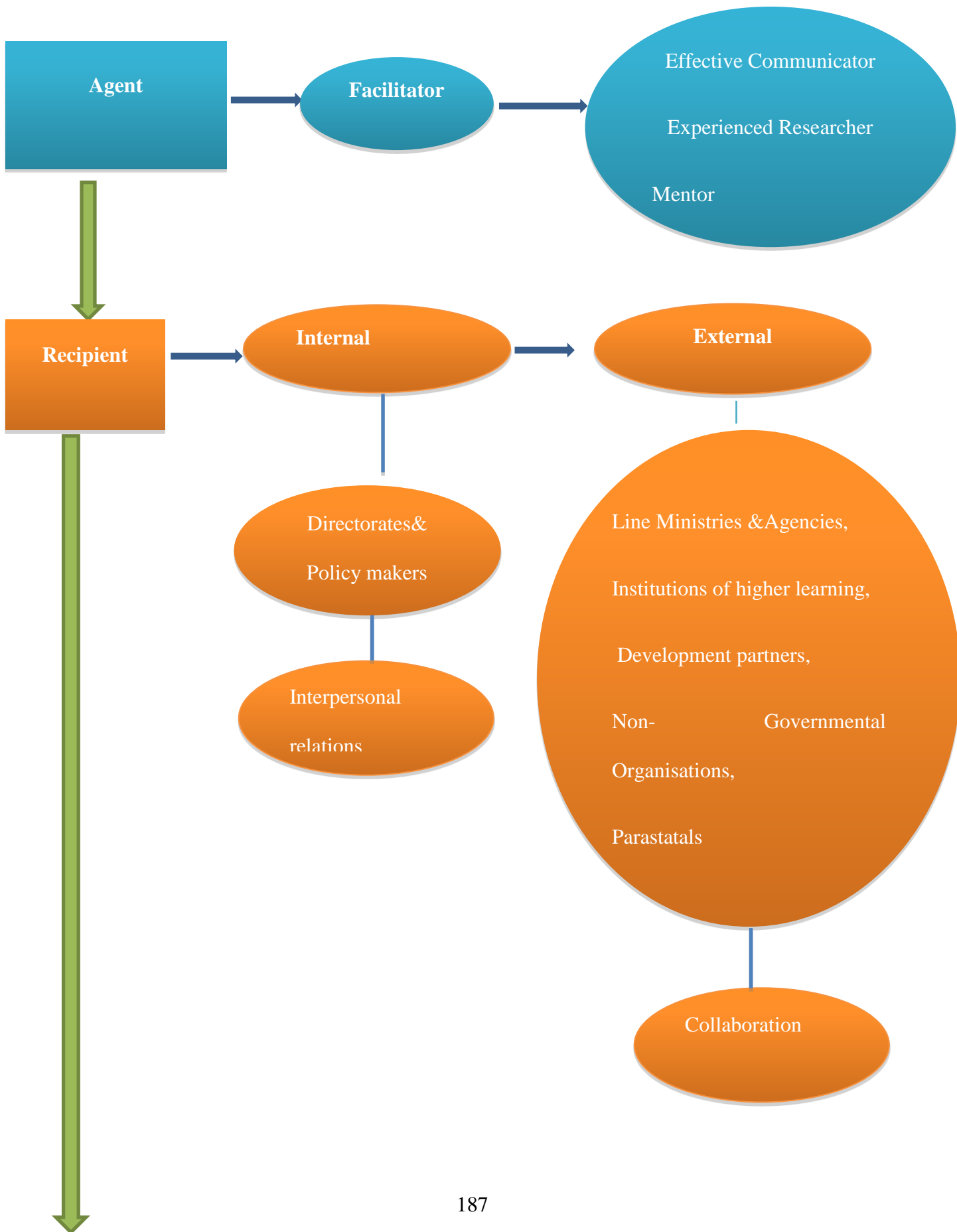
In this study, the survey list of Dickoff et al. (1968) was considered, which includes the elements of agent (someone who performs the activities), the facilitator (the implementer of the developed strategies), the recipient (one who is the recipient of the activities), the context (the environment in which the activities are performed, including time and place), the dynamics (progressive interaction between agent, recipient and context, challenges, findings), the procedure (guiding techniques of activities) and terminus (indicating the outcomes of activities).

The researcher followed the process of conceptualisation to illustrate and organise the ideas and design a visual illustration of the findings and challenges in the Health Research Systems implementation and governance such as: insufficient funding from Government for the country's research needs; lack of coordination of financial investments of development partners; Health Research System not functioning effectively thus not achieving results that are measurable; no sound platforms for presentation and discussion of health research findings; health research-related training received from MoHSS not addressing research training needs adequately, with the aim of providing a clear idea of the situation as well as the

actions that might be taken to ensure that matters work in the best way possible (Babbie, 2008). It is envisaged that what is illustrated through conceptualisation, strategies will address issues of concern.

6.3 REASONING MAP

The reasoning map reflected in figure 6.1 presents the structure of the concepts. These concepts are derived from phases 1A and B and refer to the major factors that hamper effective implementation and governance of HRS in Namibia according to practice-oriented theory described by Dickoff, James and Wiedenbach's (1968). This practice-oriented theory, essentially, consists of concepts such agent, recipient, context, dynamics, procedures and terminus. The relationship between these concepts is illustrated in figure 6.1 on page 186.



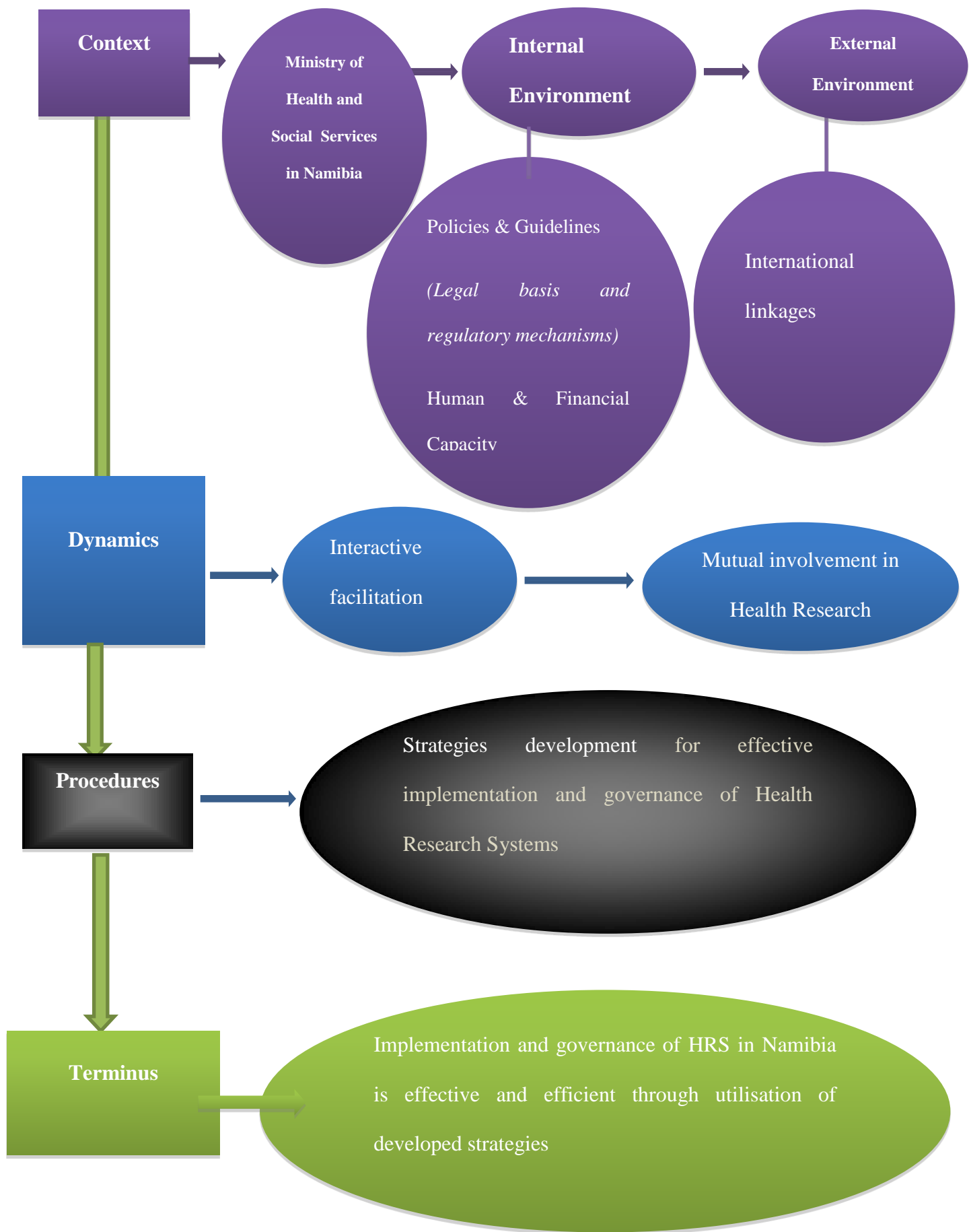


Figure 6.1: Reasoning Map

6.3.1. Agent

Figure 6.2 below illustrates the agent in this study.

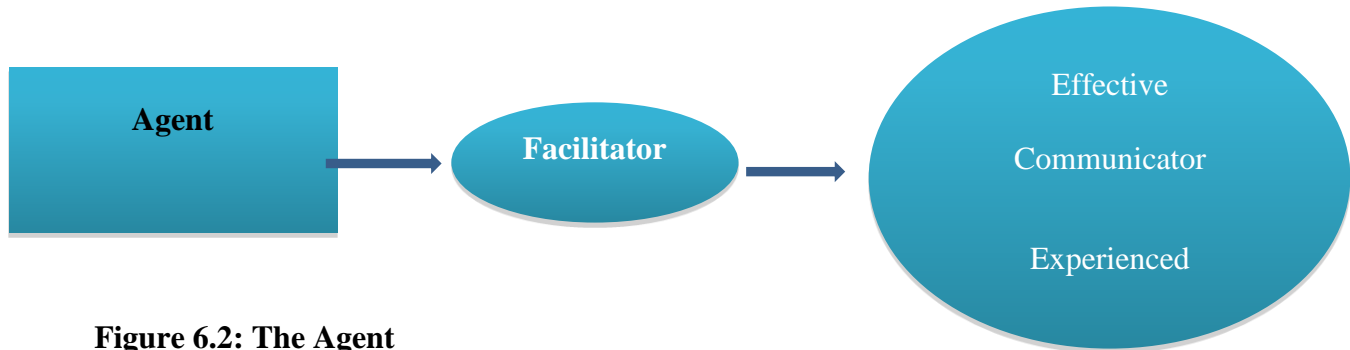


Figure 6.2: The Agent

Agent is defined by Webster’s New World College Dictionary (2014), as someone that can make something happens. In this study, the agent is the facilitator who has experience in HRS governance and implementation with the power and authority to implement the health research governance tools, which include the research policy.

The facilitator, according to the Oxford Advanced Learner’s Dictionary (2015), refers to someone who makes the process easy through discussing problems and providing guidance to the recipients. In the context of this study, the facilitator is an employed staff member of the MoHSS who occupies a managerial position in the research unit. The facilitator’s roles include: overseeing overall health research activities in the MoHSS, implementation of research governance tools in MoHSS, provide feedback to the recipients and participate in decision making related to health research. Furthermore, in this study, the agent who is a facilitator has developed strategies for implementation and governance of a health research system and validated the developed strategies for supportive environment for implementation and governance of a health research system.

In order to be able to bring about the desired outcome which is effective governance and implementation of HRS, the agent should be an effective communicator, experienced researcher mentor and a decision maker. These qualities will enable the agent to establish rapport and a conducive working environment with the recipients.

6.3.2 Effective communicator

An effective communicator is a skilled person, able to communicate information, concepts, policies guidelines, rules and regulations to individuals as well as to the public according to Mifflin (2011). In communicating with the recipients, the agent observes the elements of effective communication outlined by Wilbers (2015) such as the approach which includes providing feedback timeously through the appropriate medium, significant and to the point, accurate as well as detailed information. This approach ensures that the agent communicates the precise purpose or central idea to the recipient.

In addition, the agent considers the following effective communication principles when providing feedback to the recipients: answers all the questions asked and gives extra information when desirable by the recipient which ensures completeness; maintains conciseness by shortening the message through avoiding over-long sentences and includes only relevant statements to avoid unnecessary repetition. The agent applies integrity and ethics by observing a professional code of conduct when communicating with the recipients.

In order to ensure that the communicated message is clear and concrete, the agent makes sure that the level of language used is appropriate, specific, and accurate and uses everyday diction.

The agent constructs effective sentences and paragraphs which are readable and uses facts and figures. In addition, courtesy is used by communicating a message that is honest and appropriate, avoids discriminatory and hurtful expressions and does not demean the recipients (Corey 2005).

6.3.3 Experienced researcher

An experienced researcher according to EURAXESS (2015) is defined as a researcher who has at least four years of research experience. The agent in this scenario is an experienced researcher who has headed the research unit, which oversees the governance and implementation of health research in the MoHSS for at least nine years. As an experienced researcher, the agent is a contemporary researcher who is resourceful and innovative, with the capabilities to convert scientific and technical inquiries into harmonious solutions. The agent also possesses outstanding knowledge and skills, attained through the use of different tools and techniques in the relevant field. The researcher is the agent who has identified the needs and has developed the strategies to strengthen the implementation and governance of HRS in the country.

6.3.4 Mentor

A mentor is an experienced and trusted advisor, counsellor or consultant (Oxford Dictionary, 2015). The researcher in this study is a mentor, who facilitates,

coordinates, and provides technical advice on the implementation of HRS functions in the MoHSS. Similarly, the mentor ensures that the rules and regulations related to health research are adhered to by all stakeholders.

It is stated in the discussion above, that the agent should be an experienced and trusted advisor, counsellor or consultant, a mentor. The agent, therefore, is a role model who consistently fulfils the organisation's role according to the context, is a good listener who nurtures confidence in the recipients, is a guide and can develop skills by offering guidance to all stakeholders in HRS through assuming a teaching or coaching role around health research activities (Donovan. n.d).

6.3.5 Decision-maker

As an agent, the researcher is involved in the process of decision-making. Decision-making refers to critically investigating and providing information in order to reach a judgement or conclusion based on the provided information (Mosby's Dental Dictionary, 2008). Therefore, as a decision maker, the agent behaves professionally and is authentic in all the decisions considered and taken regarding health research (Stefanadis, 2006).

In the decision-making role, the agent explores all facts related to HRS in order to make decisions, determines the standards and principles to be employed related to the alternatives of the decision, establishes and describes standards to be in place for weighting the criteria to be used in taking the decision as well as critically explores alternatives for consideration and weighs the consequences of the decision made regarding health research (Gallo, 2012).

Figure: 6.3. Recipients

Figure 6.3 below presents the recipient in this study.

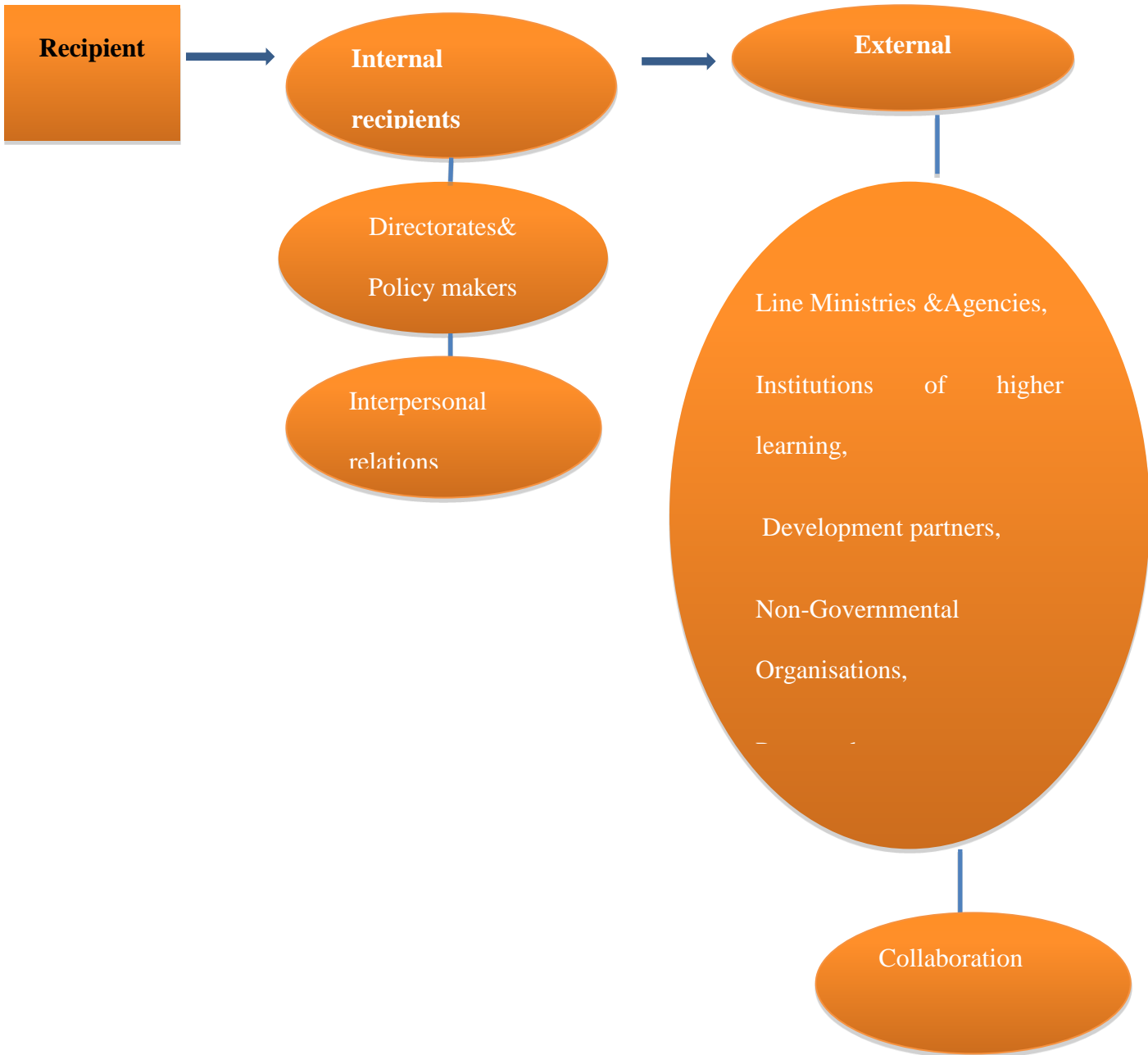


Figure 6.3: The Recipient

Dickoff et al. (1968) define the recipient as an individual or group that benefit from an intervention; therefore, in this study, the recipients refer to all individuals and groups involved in health research in Namibia. These are institutions and persons who directly or indirectly benefit from health research. In this study, the recipients are divided into two categories namely the internal and the external recipients, also referred to as the ministerial and exo-ministerial HRS beneficiaries. The agent-recipient relationship in health research is collaborative. It requires that the internal and external environments work together towards a mutual goal. The mutual goal in this collaboration is that quality health research is carried out within national and international rules and regulations.

6.4.1 The internal recipients

The internal recipients include interrelated functional units in the MoHSS comprising all directorates that are tasked with implementing research activities. These directorates are the recipients for HRS. Health research activities submitted by them are coordinated within HRS parameters.

The internal recipient's critical role is to promote the implementation of quality health research, while taking into consideration that the rights of human subjects in health research are fully protected. Policy makers such as the permanent secretary and the directors need to be provided with high quality and adequate recommendations made by the ethics review committee. This is essential in order to approve technically and ethically sound research projects.

The permanent secretary, as accounting officer and the chairperson of the ethics review committees in the MoHSS is also a recipient of HRS functions.

In this role, he/she needs to have a productive HRS that protects the rights of human subjects in health research and the health research outcomes that conform to national and international health research standards.

In their role, the internal recipients as policy makers, facilitate the coordination of health research projects with the aim of minimising duplication of research projects; promote information sharing; and avoid unacceptable projects through collaborative research efforts with the external recipients.

Unacceptable projects are those research projects that do not meet the standards prescribed in the MoHSS Research Management Policy and the Guidelines on Clinical Trials in Human Subjects. Such projects include proposals that do not address the national health research priorities, nor conform to technical and ethical standards of the MoHSS research policy and guideline. They also include projects that threaten the welfare, safety and the rights of human subjects (MoHSS, 2003).

The agent and the internal recipients through the collaborative relationship also involves the external recipients follow written procedures for ensuring prompt reporting to appropriate institutional officials regarding submitted research protocols.

It was noticed from the study findings that internal recipients encounter certain obstacles in ensuring that HRS functions are fulfilled.

These impediments included the important findings in areas of concern for the stewardship and ensuring good governance; creating and sustaining resources for HRS and capacity development; producing and using research findings for HRS; and financing which are the key HRS functions.

6.4.2 The external recipients

The external recipients include line ministries and agencies, institutions of higher learning, development partners, NGO's, parastatals and researchers (academic and operational) who are involved in health research, and the participant's/human subjects participating in research activities. Institutional Review Boards (IRBs) in other organisations, such as academic institutions, require that the HRS function tools such as the standard operating procedures of the review process are in line with their own procedures; hence a coordinating mechanism needs to be in place.

The challenge at this level springs from absence of IRBs in some institutions, ERCs in MoHSS and IRBs in other institutions which are not well-structured nor comprehensively composed (no representatives from other institutions on the boards) and not fully functioning as borne out in the study findings.

The participant's/human subjects participating in research activities need and demand full protection of their human rights, especially those of vulnerable populations such as persons with disabilities, children, HIV positive people, the elderly and expectant women. Their dignity needs to be protected through ethically and technically sound health research activities.

In order for the HRS stewardship function to adhere to ethical considerations, the study findings indicate that there is a need to ensure involvement and participation of human subjects/affected communities in research governance, lack of such involvement hampers the fulfilment of this function.

The international community such as the World Health Organization, which is an umbrella body that determines international standards of Health Research, is an external recipient of HRS functions.

The World Health Organization, therefore, requires that a country's HRS adheres to these standards and that health research activities meet both national and international standards. These international standards include those set out in the WHO HRS checklist, WHO Handbook for Good Clinical Research Practice (GCP) Guidance for Implementation, the International Conference on Harmonization (ICH) Good Clinical Practice Guidelines, the Declaration of Helsinki of the World Medical Association, as well as the 2008 Ouagadougou and 2008 Algiers Declarations on Health Research Systems (MoHSS, (2003); WHO (2005); WHO (2008). In this regard, the findings of the current study point out that there is a need for setting standards and norms for HRS in the country. The respondents suggested that issues to be considered when setting standards and norms for HRS in Namibia should include: reflecting on what type of research to be undertaken; compilation of all standards, policies, legislation related to research; conducting gap/situation analysis; and taking into account the level of training of committee members.

6.4.3 Collaboration

The external recipients require that the review committee and technical staff understand circumstances such as their timelines for completing their projects and make provision for ad hoc approval of proposals as necessary. Furthermore, open communication and sharing the status of the applicant's proposal through a customer feedback system is a critical element that the external recipients require.

Regarding collaboration between the internal and the external environments, the MoHSS Research Management Policy of 2003 clearly states that networking with the research unit with the various stakeholders as well as establishment of linkages between line ministries and agencies, institutions of higher learning, development partners, and NGO's parastatals is essential. The policy further encourages multidisciplinary research approaches from various academic disciplines and participation of various professional groups.

The challenge that was observed from the findings related to the collaboration is that: stakeholders' views not defined and expressed within a national policy on health research of MoHSS. This result is linked to the absence of a forum or process to coordinate the setting of national health research priorities which does not exist in MoHSS.

6.5 CONTEXT

Figure 6.4 below, presents the context.

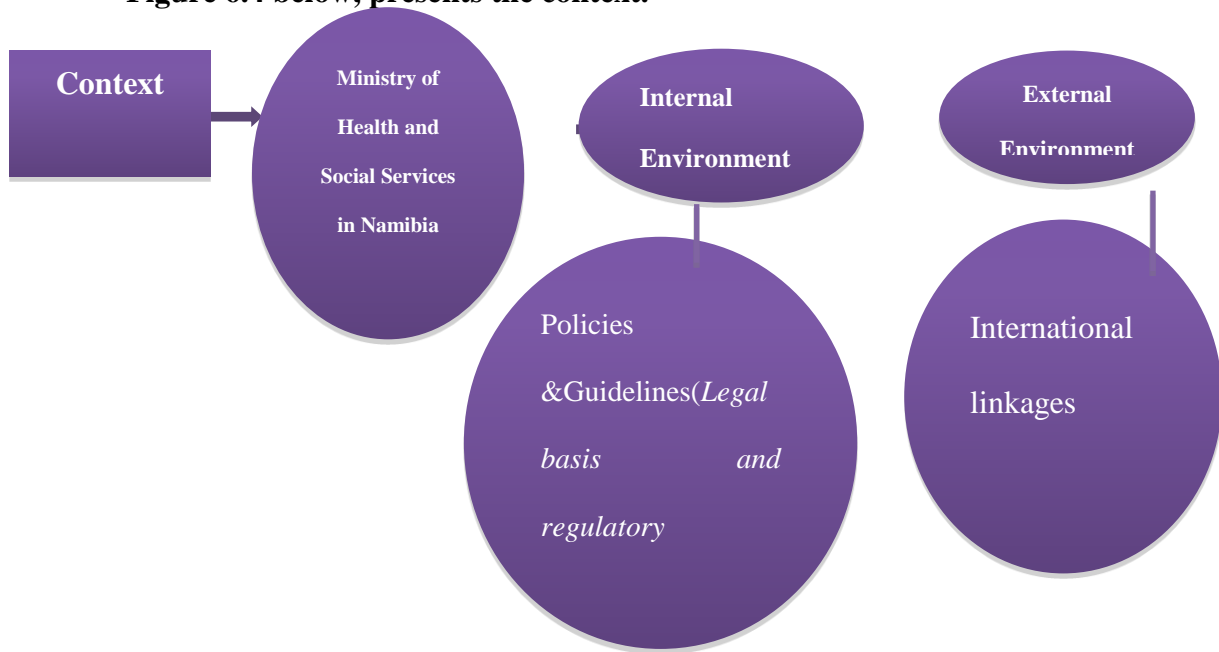


Figure 6.4: Context

A context is the setting where the phenomenon under investigation is being undertaken (Dickoff et al., 1968).

For the purpose of this study, context is the Ministry of Health and Social Services which is the custodian of all health-related research in the country also observe the performance standards of the HRS. Hence, the context in terms of place/location is Namibia and the time is post-independence (i.e. post-1990). The HRS consists of internal and external environments.

The Ministry of Health and Social Services in Namibia, as the context for HRS, strives for the execution of quality operational and academic health research activities, promotes the undertaking of health research by scholars and professionals, coordinates and supports health research activities, collaborates with relevant research partners, stakeholders and utilises research findings for evidence-based

policy making (MoHSS, 2003). Related to this, the findings indicate that there is a need to strengthen different cadres of professionals with capacity to conceptualise, conduct, analyse, disseminate and translate the findings from various forms of health research. Despite the fact that a clinical setting (MOHSS) provides a supportive environment, according to Dickoff et al. (1968), it is influenced by the internal and external context.

6.5.1 Internal environment

The HRS functions need an enabling environment for the stewardship and the ensuring of good governance. This is the legal basis of the HRS which includes health research legislation i.e. the law related to health research, a strategic health research plan and research coordination mechanisms, national health policy, strategic health plan, health research policy, strategic vision for health research and the research agenda.

Establishment of acceptable standards, procedures, rules and regulations that govern the implementation of health research activities in the country are critical to an enabling environment for HRS. However, the study findings point out that there is a need to set standards and norms, as well as to strengthen the ethical framework for HRS in the country.

The research agenda as a national guideline recognises the existence of both the internal and the external environments. Consequently, a national research agenda is focused on national health research priorities and is a participatory process that involves all stakeholders and parties concerned (MoHSS, 2003).

The research agenda ensures that due regards is taken of the country's health research priorities; hence lack of such a research agenda negatively affects HRS. This concern was evident in the findings of the study that the HRS in Namibia is not addressing HR priorities, and therefore highlights a need for national and local authorities that support health research, secure international linkages and technical cooperation in health research.

As regards to the internal environment, the research management policy and the guidelines on clinical trials in human subjects explicitly lays out the processes of appraisal of proposals in MoHSS through different committees i.e. research management committee, biomedical research ethics committees and the advisory board.

The research management committee has the function of appraising research projects and making necessary recommendations, regular monitoring of the research policy implementation and initiating policy revision if and when necessary. The biomedical research ethics committees, on the other hand, reviews clinical research and make recommendations to RMC for the approval of clinical trials (MoHSS, 2003).

The internal environment also considers human and financial capacity as critical factors to a conducive HRS environment. Building human resources capacity in research is a priority area of the MOHSS; therefore, networking, partnership, and institutional linkages with relevant academic and research institutions are of paramount importance.

Financial resources require specific internal and external funding, disbursement and accounting mechanisms for research activities through collaboration between the internal and the external environments (MoHSS, 2003). The challenges identified from the current findings related to financial resources include among others insufficient funding for health research activities by the government. This research suggested that there is a need to advocate for increased national commitments towards HRS. It further suggests that the financial investments of development partners towards health research need to be coordinated.

6.5.2 External environment

The external environment considers international linkages as a crucial factor to a conducive HRS environment; therefore, MoHSS recognises the importance of the development of ties with sister ministries in SADC (Southern African Development Community) and beyond.

However, the study findings point out that there is a need to secure international linkages and technical cooperation in health research, and the mechanisms that can be used to achieve goals such as participation in global, regional and international fora; international conferences and meetings; participation in inter-country health research projects; using internet websites to download research articles written by researchers from other countries; providing basic training in research for managers; and collaboration with neighbouring countries in health research as well as domestic fora.

The World Health Organization (2012) specifies the functions of an HRS which should include stewardship and ensuring good governance, strengthening research capacity, producing and using research findings, capacity development and sustaining resources for health research and financing. These functions are connected to people, processes, and financial performance. Additionally, the health research system adheres to the international health research systems as determined by the World Health Organization; therefore, the adopted WHO checklist was used to review HRS functions. World Health Organization further outlines the attributes that need to be in place for the HRS to fulfil its mandate. These attributes were explored in this study.

Among the attributes that are specified by WHO, the results of the study showed that the following attributes were not in place, and therefore pose challenges to effective functioning of the HRS in Namibia. They include non-functional NHRS; no clear terms of reference for NHRS; non-functional (or defunct) National Health Research Management Forum (NHRMF); non-functional Ethical Review Committee (ERC); no hospitals with ERCs to review clinical research proposals; no National Network of Health Research and Development (NNHRD) that includes universities; no national guidelines on development of collaboration agreements on health research involving human subjects; no NNHRD that includes district medical officers of health; no NNHRD that includes national medical associations.

Namibia is a signatory to the 2008 Ouagadougou and 2008 Algiers Declarations on Health Research Systems. The Declarations require member countries to strengthen HRS in their countries. Therefore, MoHSS needs to ensure that the undertakings in these Declarations are observed. The study findings however indicate that the HRS function needs acceptable political commitment, promotion and advocacy for HRS in the country.

6.6 DYNAMICS

Figure 6.5 illustrates the dynamics in this study

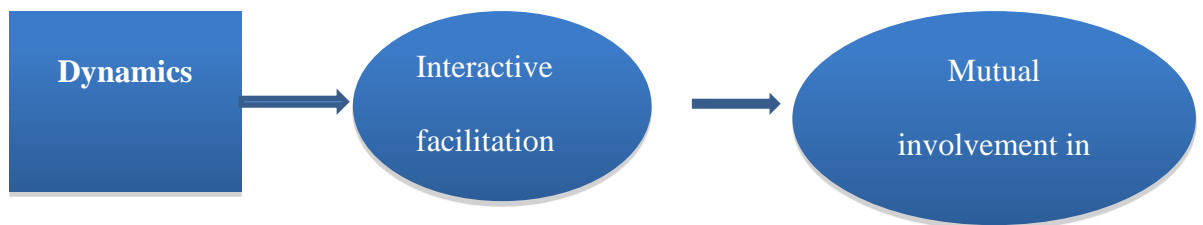


Figure 6.5: Dynamics

Dynamics are interrelated forces and motions that characterise a system (Mifflin, 2014). Therefore, the dynamics in this study are the progressive interactions between the MoHSS (context), the researcher (agent) who is the head of the research unit and other stakeholders (recipients) involved in the implementation of health research.

These interfaces through interactive facilitation and mutual involvement are related to the processes and procedures to be followed in order to address the challenges being faced by the HRS in fulfilment of its functions. The challenges that emanated from the study are summarised under the dynamics as follows:

- Lack of legal basis and regulatory mechanisms,

- Lack of coordination mechanisms for health research in the country,
- Lack of research capacity,
- Lack of human capacity development for health research,
- Inability to attract and retain researchers in the public health sector,
- Lack of adequate financial support for the country's research needs,
- Lack of data dissemination to enhance a data sharing culture, and
- Lack of research ethics committees' coordination.

Based on the above challenges, if the HRS functions are to be effective, it is critical that strategies are developed and implemented, with the aim to tackle the challenges recorded above through clear dynamics, utilising the process of interactive facilitation and mutual involvement in health research by the agent, the context and the recipient.

6.7 INTERACTIVE FACILITATION

In this study, three elements are in progressive interaction to facilitate conducive environment that will enhance effective implementation and governance of Health Research Systems. These three elements are: the agent who is the facilitator and an effective communicator, researcher and a mentor; the context (MoHSS) with its internal and external environment including policies and guidelines, human and financial capacity; and the recipients who are internal and external role players. The above elements are parts of the progressive interactive facilitation process whereby they influence each other in issues related to HRS (Dixon, 2016).

Interactive facilitation aids involvement opportunities for the agent, the recipient and the context to engage in discussions, conversations to determine the standard that are related to the establishment of a conducive HRS environment.

In this study, the interactive facilitation process started in phase 2 of the study in which the recipients' (internal and external) views were solicited on issues related to the HRS functions and they proposed remedial actions to the identified issues of concern, that form the basis for strategy development.

6.8 MUTUAL INVOLVEMENT IN HEALTH RESEARCH

According to Mifflin, (2011) 'mutual' refers to an act performed by each of two or more with respect to the other while involvement is an act of participating or engaging in something. In this study, mutual involvement in health research refers to the collective or combined efforts between the agent/researcher, recipients and the context.

The mutual interaction of the various players involved in HRS through the MoHSS research unit is responsible for the protection of rights of human subjects involved in health research. The aim is to ensure that health research activities in the MoHSS and in the country at large are carried out according to national and international standards.

Involvement of recipients in the processes related to health research of the context provides the prospect for individual recipients to contribute and use their talents and provide inputs to HRS functions.

Therefore, the role of MoHSS as the context and the custodian of health research is to establish health research policies and guidelines that are communicated to the recipients for them to be empowered to contribute to HRS environment. Active feedback from the agent and the context to the recipient fosters stable involvement in the functions of the HRS.

6.8.1 Procedures

The figure below (figure 6.6), presents the procedures in this study.



Figure 6.6: Procedures

Dickoff et al. (1968) define procedures as the guiding principles, an approach or a method that can be used to guide how activities are to be carried out. In this study, procedures refer to the process followed by the agent in the development of strategies for effective implementation and governance of Health Research Systems.

The procedures followed in developing the strategies involved consolidation of findings from phases 1 & 2.

In addition, the strategies in this study were developed using Howe's Compass Aligned Performance System (c@ps), which was developed in 2011. Howe (2011) indicates that the Compass Aligned Performance System (c@ps) simplifies the strategy and develops a process for easy implementation.

Howe (2011) emphasises that a strategic plan needs to be simple; therefore, the compass condenses a strategic plan into a one-page document, which outlines key performance indicators, strategic objective/s, and the proposed actions/critical success factors.

The components of the strategic plan are linked by colour coded arrows which represent each strategic component. These strategies which aim at the effective implementation and governance of HRS include steps to effectively deal with the policies and guidelines, human and financial capacity, and international linkages necessary for conducive environment for HRS. After the strategies were developed, consultation with the MoHSS management and the technical staff in the Research Unit was conducted to validate the developed strategies. The actual HRS strategies are presented in the next chapter, namely chapter 7.

6.9 TERMINUS

Figure 6.7 below presents the terminus in this study.

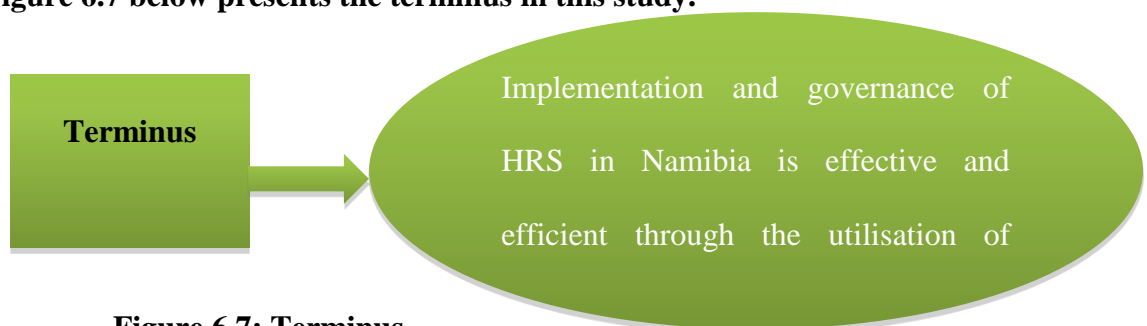


Figure 6.7: Terminus

According to Dickoff et al (1968), terminus refers to the desired end result of the activity that was carried out or achievement of the goal of the project. In this study, the terminus is the development of strategies for effective implementation and governance of HRS in Namibia, which would support and facilitate a conducive and supportive environment for the implementation and governance of Health Research Systems in the country.

The developed strategies will support and contribute to creating a conducive environment and strengthening Health Research Systems to ensure the execution of technically and ethically sound health research, effective national HRS, quality health research implementation as well as adherence to national and international standards related to health research activities.

6.10 SUMMARY

In this chapter, the conceptual framework was discussed. The six elements of the practice oriented theory of Dickoff et al. (1968), namely agent, recipients, contexts, procedures, dynamics and the terminus were used to guide the discussion of the constructs that are relevant to the development of strategies to strengthen HRS in Namibia. In the next chapter, the development of strategies for effective implementation and governance of HRS in Namibia will be discussed, based on the key findings of the collected data.

CHAPTER 7

DEVELOPMENT AND VERIFICATION OF THE STRATEGIES FOR STRENGTHENING THE IMPLEMENTATION AND GOVERNANCE OF HEALTH RESEARCH SYSTEMS IN NAMIBIA

7.1 INTRODUCTION

The previous chapter described the conceptualisation of elements on which the development of strategies for effective implementation and governance of the Health Research Systems (HRS) is based. The current chapter describes the third phase of the study, which aims at the development and verification of the strategies to strengthen the implementation and governance of HRS in Namibia

The World Health Organization appeals for action by governments in the African region to strengthen national health research systems (HRS) through several instruments at both the global and regional levels (Kirigia et al, 2015). This study aims to answer the call to action by the WHO to strengthen HRS governance and implementation in Namibia at country level through evidence-based HRS strengthening strategies. This chapter presents the rationale, the guiding principles, the process of development of the strategies and the verification of the strategies

7.2 RATIONALE FOR THE DEVELOPMENT OF STRATEGIES FOR STRENGTHENING THE IMPLEMENTATION AND GOVERNANCE OF HRS IN NAMIBIA

Strategies are comprehensive ways which include several subsets of skills, including techniques contained in a high level plan developed to achieve one or more goals in an organisation (Mintzberg, 2011). They are important means used to pursue complex issues and achieve goals with available resources.

Thus, strategies are described as problem-solving mechanisms and ways of describing how an organisation may get things done. They are adopted to address identified problems in an organisation (Mintzberg, 2011, Rumelt, 2011, Community Tool Box, 2015). According to the Community Tool Box (2015), the rationale for formulating, developing and implementing strategies is a way to focus on organisational efforts and ascertain how issues of concern can be addressed in order to achieve the desired goals in an organisation. Strategies take advantage of resources and emerging opportunities, and respond effectively to resistance and barriers through the efficient use of time, energy and resources.

Mintzberg (2011) states that strategies describe how the end results or the anticipated goals are going to be achieved because they are developed as a series of activities that are to be logically adopted in addressing issues of concern within an organisation.

In developing the strategies, the agent observed the articulated rationale for developing the strategies outlined above to address issues related to creating a conducive environment and ensuring human and financial resources for HRS. These were the major areas of concern indicated by the study findings.

7.3 THE GUIDING PRINCIPLES FOR DEVELOPMENT OF STRATEGIES

According to Rumelt (2011), strategy formulation and strategy implementations are the two major processes that are involved in strategy development. Formulation involves situation analysis to diagnose the challenges as well as proposing guiding policies, while implementation involves the actions to be undertaken to achieve the desired goals and objectives of the organisation. Furthermore, Rumelt (2011) stresses that good strategy development includes a diagnosis that describes the following principles: the nature of the challenge at hand; guiding policies which define how the challenges are going to be dealt with; comprehensive actions or the critical success factors designed to implement the content of the guiding policy. As guiding principles, the developed strategies will guide policy makers and technical staff to address challenges related to HRS governance and implementation.

As mentioned above, the researcher followed the steps, based on the Compass Aligned Performance System (c@ps) of Howe (2011) for the development of the strategies for strengthening HRS. The compass covers critical components of the strategies, namely:

The key performance indicators:

The key performance indicators are used to monitor implementation and measure achievement of each strategic objective. They are related to the strategic objectives and measure the critical success factors or the proposed actions to be undertaken in order to achieve the strategic objectives.

The strategic objective/s

Strategic objectives are set objectives or ideals, which are components of the Compass Aligned Performance System (c@ps) providing directions towards realisation of the proposed strategies.

The critical success factors or the proposed actions

The critical success factors are the actions to be undertaken in order to achieve the strategic objectives, which are also derived from the study findings.

Values and vision

The compass also allows the developed strategies to be aligned to the values and the vision of the organisation/institution. In the current context, the values describe the MoHSS corporate culture that is to be observed by the agent and the recipients of HR, while the vision is the description of what the MoHSS would like to achieve over the mid- to long terms, therefore the developed strategies contribute to the achievement of the MoHSS goals (MoHSS, 2014).

The nature of the components of the Compass Aligned Performance System (c@ps) allows alignment of the strategies with the MoHSS Management Plans which encompasses: strategic interventions, action steps and indicators for outputs, therefore the developed strategies conform to the MoHSS programme execution plans.

7.4 THE PROCESS OF STRATEGY DEVELOPMENT [METHODOLOGY]

The strategies that were developed are aimed at addressing factors that hinder HRS functions to create a conducive environment for HRS. Conducive environment will ensure effective governance and implementation of HRS. Furthermore, such supportive environment will guarantee that health research activities that are carried out are technically and ethically sound.

As previously indicated by Rumelt (2011), good strategy development includes a diagnosis of the nature of the challenges at hand; guiding policies defining how the challenges are going to be dealt with as well as comprehensive actions or the critical success factors designed to effect the content of the guiding policy.

7.4.1 Situational analysis

In this study, a situational analysis was conducted in phases 1& 2 in order to gain a clear picture of areas that needed to be reinforced. Specific areas that required interventions related to creating a supportive environment for HRS were identified as the following:

Policies and guidelines (legal basis and regulatory mechanisms)

The elements of the stewardship function which include policies and guidelines are crucial to fortify the legal basis and regulatory mechanisms for HRS, coordination mechanisms for research ethics committees and also to establish the mechanisms for coordination of health research. Policies and guidelines are principles that guide the interaction and practices between the context, the agent and the recipients outlining procedures that are acceptable by all parties. Absence of guidelines and policies has an adverse effect on the conducive environment because it hampers accomplishment of the roles and responsibilities of the agent and the recipient in health research.

Human and financial resources for HRS

Human and financial resources include: research capacity, human capacity development for health research i.e. capacity development for staff at different levels, retention of human resources for HRS in the public sector, production of results, dissemination platforms of health research findings to enhance a data sharing culture as well as for coordination of financial investment by development partners and enhancement of adequate financial support for the country's research needs. Lack of financial and human resources affects the functions of the HRS negatively.

7.4.2 Consultation with relevant experts

The proposed strategies were presented to the decision-makers as well to the technical staff in the research subdivision of MoHSS. Other experts in the field to whom the strategies were presented include following officials in the MoHSS: the deputy permanent secretary, deputy director and the senior health programme

administrators who are involved in health research and policy development in the MoHSS.

7.5 STRATEGIES FOR STRENGTHENING THE GOVERNANCE AND IMPLEMENTATION OF HRS IN NAMIBIA

The strategic objectives relate to creating a conducive and supportive environment for governance and implementation of HRS in Namibia. They emanated from the study findings and are also emphasised by Council on Health Research for Development COHRED (2012), which sets out components of an effective HRS.

These components are: to provide strategic vision, allow system to work in coordinated way, build synergies, develop and implement policies, facilitate better use of resources, drive better use of research results and ensure effective monitoring and evaluation of research for health.

This section deals with the presentation of the proposed HRS strategies. The Compass Aligned Performance System (c@ps) model was used to summarize strategies covering the key performance indicators for monitoring implementation strategic objective/s and the critical success factors which set out the proposed actions to be implemented in order to achieve the objectives.[Refer to Annexure G&H].

Implementation of the strategies to invigorate HRS in the county is guided by MoHSS institutional values namely: confidentiality, empathy and caring, honesty, integrity and dignity, impartiality, professionalism and respect (MoHSS, 2014). The

developed strategies are aimed at strengthening the MoHSS's health research and contributing to quality health and social services delivery through evidence-based decision-making. The principles are incorporated into the vision of the MoHSS. The agent that will spearhead the implementation of the developed strategies is the research division in the MoHSS.

The strategies were developed on the basis of the key findings in areas of concern for each of the HRS functions. These functions cover the following: stewardship and ensuring good governance; creating and sustaining resources for HRS and capacity producing development; producing and using research findings for HRS; and financing HRS. The strategic objectives, critical success factors and key performance indicators are set out in Table 7.1 on page 204.

Table 7.1: Strategies for strengthening the implementation and governance of HRS in Namibia

1. STEWARDSHIP FUNCTION AND ENSURING GOOD GOVERNANCE		
Strategic objectives:		
To strengthen the legal basis and regulatory mechanisms for HRS (Policies and Guidelines)		
To establish mechanisms for coordination of HR and Ethics Committees		
Objective	Critical success factors	Key performance indicators
To fortify the legal basis and regulatory mechanisms for HRS in the country	Review the RMP and the Guidelines for Clinical Trials in Human Subjects	RMP and Clinical Trial Guidelines reviewed and implemented during 2018/19 financial year
	Conduct a situational analysis through consultative meetings with key stakeholders	RMP and Clinical Trial Guidelines reviewed within the 1st quarter (April–June) 2018
	Present the findings of the situational analysis to decision-makers of MoHSS	Findings of the situation analysis presented to decision-makers in MoHSS within the 1 st quarter (April- June) 2018

	Incorporate the inputs from decision-makers and finalise the RMP and Guidelines for Clinical Trial on Human subjects	The inputs from decision makers incorporated, RMP and Guidelines for Clinical Trial on Human subject finalised within the 1 st quarter (April- June) 2018
	Develop the health research strategy, vision and mission for Health Research (HR)	Health Research Strategy (vision, mission)and research agenda for Health Research developed during the 2017/18financial year within the 2 nd quarter of 2017 (July-September)
	Present the health research strategy, vision and mission for Health Research to decision- makers of MoHSS for inputs Incorporate the inputs from decision-makers and finalise and submit the health research strategy, vision and mission for Health Research	Health research strategy, vision and mission for Health Research presented to decision- makers in MoHSS for inputs within the 2 nd quarter (July to September) 2017 Inputs from decision makers incorporated, health research strategy, vision and mission for Health Research submitted for approval by MoHSS management within the 2 nd quarter (July to September) 2017

	<p>for approval by MoHSS management</p> <p>Develop the research agenda for health Research</p> <p>Conduct research agenda consultative meetings with key stakeholders</p>	<p>Research agenda for health research developed during 2017/18 financial year, within the 2nd quarter (July to September)</p> <p>Research agenda consultative meetings with stakeholders conducted within the 2nd quarter (July to September) 2017</p>
	<p>Conduct consultative meetings with key stakeholders on Health Research Bill</p>	<p>Health Research Bill drafted during 2017/18 financial year</p>
	<p>Draft and present the research agenda to management for input and approval</p>	<p>Health Research Bill finalised during 2018/19 financial year</p>
<p>To develop mechanisms for</p>	<p>Establish linkages with</p>	<p>Workshops to establish linkages with relevant stakeholders to improve</p>

<p>coordination of the functions of research ethics committees</p>	<p>relevant stakeholders to improve coordination of health research activities through workshops.</p>	<p>coordination of health research activities conducted during 1st quarter (April –June 2017)</p>
	<p>Consult individual stakeholders [line-ministries, tertiary education institutions, development partners and civil society organisations, and SOEs] in setting priorities in health research</p>	<p>Individual stakeholders involved in priority setting, planning and development of the health research agenda consulted in the 1st quarter (April –June 2017)</p>
	<p>Plan and develop the health research agenda with other institutions through consultative meetings with line ministries, tertiary education institutions, development partners and civil society organisations, and SOEs</p>	<p>Annual stakeholders’ consultative meeting on setting the health research agenda held during 2017/18 financial year within the 1st quarter (April-June 2017)</p>

	<p>Create a platform for setting the country's research agenda through annual consultative meetings with stakeholders</p>	<p>Platform for setting the country's research agenda created by the 1st quarter (April- June 2018)</p>
	<p>Re-constitute MoHSS Ethics Review Committees with representatives from other stakeholders.</p> <p>Raise awareness about existing health research ethics committees, institutional review boards in other institutions</p> <p>Harmonise Ethics Review Committees and institutional review boards and their functions by establishing a focal point/secretariat that will coordinate ethics review</p>	<p>Ethics committees reconstitute during 2017/8 financial year in 2nd quarter (April – June)</p> <p>Ethics committees/review boards in other institutions consulted and documented during 2017/18 financial year</p> <p>Focal point/secretariat for coordination of ethics review functions established during 2nd quarter (July to September) 2017</p>

	functions	
	Create mechanisms for communication among different ethics committees and institutional review boards through meetings/workshops	Communication mechanisms among different ethics committees and institutional review boards created during the 3 rd quarter of 2017/2018 Financial Year
2. CREATING AND SUSTAINING RESOURCES FOR HRS AND CAPACITY DEVELOPMENT STRATEGIES		
Strategic objectives:		
To develop capacity-development training programmes for staff at different levels		
2. To establish mechanisms to retain human resources for HRS		
1. To develop capacity, create and sustain resources for HRS	Design training programmes on research for different staff levels	Training programmes designed and implemented during 2017/18 financial year during the 2 nd quarter
	Implement training programmes on research for different staff levels	Health research training sessions conducted during the 3 rd quarter (2017/18 financial year)
	Establish relationships with	Identify number of institutions having a relationship with MoHSS for

	training institutions for training on Health Research (HR)	training on Health Research (HR)
To propose an incentive and retention strategy for researchers	Design an incentive strategy for researchers in health research	Incentive and retention strategy for researchers developed by 2017/18 financial year
	Conduct a situational analysis with health researchers to determine proposals for incentive strategy	Situational analysis with health researchers to determine proposals for incentive strategy conducted during the 1 st quarter (April-June 2018)
	Compile and present the proposed incentive strategy to management for approval	Proposed incentive strategy presented to management for approval during the 2 nd quarter (July –September 2018)
	Design a retention strategy for researchers	Situational analysis with health researchers to determine proposals for retention strategy conducted during the 1 st quarter of 2018/2019 financial year.
	Compile and present the	Proposed retention strategy presented to management for approval

	proposed retention strategy to management for approval	during the 2 nd quarter (July –September 2017)
PRODUCING AND USING RESEARCH FINDINGS		
Strategic objective:		
To develop mechanisms for provision of sufficient funds to conduct health research and disseminate HR findings		
1. To develop mechanisms for provision of sufficient funds for Health Research (HR)	Design a funding mobilisation mechanism for Health Research (HR) to produce results	Funding mobilisation mechanism designed by 2017/18
	Motivate for health research budget line in the MoHSS during the annual budgeting planning meeting	Health research budget motivation presented during 2017/18 financial year budget planning meeting in the 2 rd quarter (July- September 2017)
	Develop proposal to motivate for external funding for health research	External funding proposal for health research developed during the 3 rd quarter (July- September 2017)
	Secure international linkages and technical cooperation in health research	Number of international linkages established by 2017/18 financial year

	Attend international health research symposia, health research fora	Number of health research symposia, health research fora attended during 2017/18 financial year
2. To establish mechanisms for dissemination of health research findings	Establish platforms for the dissemination findings of health research	Number of seminars and workshops to disseminate health research findings conducted during 2017/18 financial year
4. FINANCING HRS STRATEGIES		
Strategic objectives: To develop mechanisms for financing the country's HRS To establish mechanisms for coordination of financial investment from development partners		
1. To motivate for the allocation of 2% of national health budget to HRS as stipulated by WHO	Advocate for HRS to be given national funding priority	Number of meetings/workshops held to advocate for HR funding by 2017/18 financial year
	Present a motivation to the management for health research to be included in the budget during the national	Motivation for health research to be included in the budget during the national annual budgeting meeting presented to management

	annual budgeting meeting	
	Draft position paper to advocate for the allocation of 2% of total health budget to research	Drafted position paper for the allocation of 2% of total national health budget to research completed during the last quarter of 2017/2018 financial year
	Present a motivation to the management for the allocation of 2% of the total health budget to health research to be presented during the national budgeting meeting	Motivation for the allocation of 2% of the total health budget to health research presented during the national budgeting meeting during the last quarter of 2017/2018 financial year
	Propose a mechanism that will ensure that Health Research (HR) is adequately funded	Proposed mechanism to ensure that Health Research (HR) is adequately funded presented to Management during the last quarter of 2017/2018 financial year
2. To establish mechanisms for coordination of financial investment from development partners	To develop a mechanism for the coordination of financial investment of development partners in Health Research (HR)	Coordination mechanism for financial investment by development partners developed by 2017/18

	Develop a monitoring and evaluation tool on financial investment of development partners in Health Research (HR in MoHSS	Monitoring and evaluation tool on financial investment of development partners developed during 1 st quarter (April-June 2017)
	Monitor and evaluate financial expenditure of financial investment of development partners' in Health Research (HR) on a quarterly and annual basis	Quarterly and annual financial reports of expenditure of financial investment by development partners in Health Research (HR) produced

7.6 Verification of the strategies

The proposed strategies were presented to the decision-makers and technical staff in the research subdivision of MoHSS. The purpose of the presentation was to subject the proposed strategies to the scrutiny of these professionals and for them to identify shortcomings in the proposed strategies and for them to complement the proposed strategies with inputs from their respective perspectives. This would ensure practicality and quality of the proposed strategies. A one-day meeting was organised with the team of experts where a power point presentation of the proposed strategies was made by the researcher. The experts to whom the strategies were presented are: the deputy permanent secretary, deputy director and the senior health programme administrators who are involved in health research and policy development at the MoHSS.

After the presentation, the team discussed the proposed strategies and provided their inputs and proposed some changes. The review process included scrutinising the key performance indicators, strategic objectives and the key success factors proposed for each HRS function. The following comments emanated from the discussion:

Generally, the team indicated that the proposed strategies are relevant and address the issues that are critical to HRS functions. Not many substantive suggestions were made by the team regarding the stewardship and ensuring good governance and financing for HRS strategies. The team agreed that pertinent issues related to these functions are well covered under the proposed strategies. However, the team proposed that there is a need to incorporate capacity-building to support registration

and documentation of research projects under the function dealing with creating and sustaining of resources for HRS and capacity-development.

The team also indicated that the inclusion of awareness-raising on the usefulness of operational research as part of producing and using of research findings is fundamental to any organisation. In addition, the team highlighted the need to enhance information-sharing for on-going improvement of the organisation and encouraging of an organisational culture that openly creates impact. The inputs and proposed changes from the team of experts were incorporated into the study. Incorporation of the comments made during the discussion enabled the researcher and the team of experts to reach consensus and to ensure that all the areas of concern were covered under specific strategic areas.

7.7. SUMMARY

This chapter presented the proposed strategies that were developed to strengthen the HRS in Namibia. The strategic areas are presented according to the HRS functions. The developed strategies in this study represent the terminus of the study. The aim is for these strategies to be implemented in order to address those issues that have a negative impact on a conducive HRS environment. It is foreseen that they would serve to strengthen the implementation and governance of Health Research Systems in Namibia. The diagrams depicting the strategic plan for strengthening HRS functions of creating a conducive environment, and human and financial capacity, respectively are presented as Annexures G and H at the end of the report. The last chapter will present the conclusions, recommendations and limitations of the study.

CHAPTER 8

CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

8.1 INTRODUCTION

The previous chapter dealt with the development of strategies for strengthening the implementation and governance of Health Research Systems (HRS) in Namibia. In this last chapter, the researcher will illustrate whether the purpose and the objectives of this study have been achieved. Therefore, in this chapter, the researcher focuses on the entire study outcomes, conclusions and provides recommendations obtained from the study findings. Furthermore, limitations of the study are presented.

8.2 RATIONALE OF THE STUDY

The rationale for conducting this study was to investigate the current state of HRS in Namibia, identify any challenges and to develop strategies based on the study's findings that will strengthen the implementation and governance of Health Research Systems (HRS) in Namibia. This study was a result of the researcher's concern about the status of the HRS in the country, taking into account the growing need to ensure that Health Research is carried out in a coordinated manner. The study findings are supported by the WHO (2015) study which reveals that the main challenges such as lack or outdated policies and guidelines need to be addressed in order to ensure a conducive environment for HRS in all countries.

Furthermore, the increased interest that is observed in health systems research by scholars, public and private institutions, with both academic and operational research

increasing on annual basis, calls for an effective HRS that is able to coordinate health research.

New developments such as the establishment of new universities and faculties of health in local universities, such as those for medicine, nursing and public health, contribute to the increase of scholarly research that needs to be effectively coordinated.

Additionally, to above rationale, the absence of empirical data related to HRS in Namibia gave rise to the need for an investigation in order to develop evidence-based strategies that will reinforce HRS in Namibia. Country-specific information is essential in order to develop tailor-made strategies that are able to address the country's HRS needs. Therefore, a study of this nature was deemed necessary. In order to ensure that the HRS fulfils its functions, it was found that factors related to the internal and external environments as well as the human and financial capacity, all of which impede conducive environment for HRS, should be addressed.

This study is supported by the findings of a survey conducted in African countries by Kirigia, et al (2015), which concluded that an enabling environment for National Health Research Systems needs to be created to ensure that health research realises its goals.

This study was motivated by the need to find out how health research systems in Namibia function and what strategies would strengthen the implementation and governance of health research systems in Namibia.

8.3 CONCLUSIONS

In this study, conclusions are drawn from the objectives of the three phases of the study which are: situational analysis (phase 1A&B); development of conceptual framework (phase 2); and the developing and verification of the strategies to strengthen the implementation and governance of HRS (phase 3), as well as from the evaluation of the research methodology and the developed guidelines.

8.3.1 Purpose and objectives of the study

Given the state of HRS in Namibia that is characterised by outdated governance tools and absence of HRS essential attributes, the overall purpose of the study was to investigate and evaluate the current state of the HRS and develop strategies that will contribute to strengthening the implementation and governance of Health Research Systems (HRS) in the country. The conclusions derived from the study are discussed according to the objectives of the three study phases which are: situational analysis (phase 1A&B); development of conceptual framework (phase 2) and developing and verification of the strategies to strengthen the implementation and governance of HRS (phase 3).

The purpose of this study was achieved because this study was conducted within a positivistic paradigm which assumes that the authenticity of a particular reality is established by objective measurement, therefore data and its analysis is value-free (Atieno, 2009). The methodological paradigm used in this study was the quantitative approach. Literature consulted has revealed that HRS is a complex phenomenon that needs a holistic approach. It is, therefore, concluded that the research design and the

methodological paradigm employed in this study were appropriate because the strategy generated the requisite study findings. The ultimate purpose has been to develop strategies for strengthening the implementation and governance of Health Research Systems (HRS) in Namibia.

The developed strategies are designed to provide a theoretical framework of references for all those who are involved in HRS i.e. the agent, context and the recipients because these strategies are the problem-solving mechanisms and principles, describing how the HRS can be effectively implemented and governed in the country. In this study, the following objectives were formulated to achieve the above general aims. A description of each objective and how it was to be achieved are outlined below.

8.3.1.1 Phase 1: Situational analysis

Objectives were to:

1. Conduct a situational analysis by exploring and describing the current approach as well as the viewpoints of stakeholders with regard to HRS implementation and governance in Namibia.
2. Identify and describe factors that influence the implementation and governance of HRS in Namibia.

In order to attain the objectives in Phase 1, the literature related to the HRS functions was reviewed and a situational analysis was conducted in phases 1A&B of this study. Phase 1 A included the document review, while in phase 1 B a survey was

conducted. The findings of the situational analysis revealed the challenges that are faced by the HRS in the country as follows:

- MoHSS is not providing HRS with health research leadership, a strategic plan, vision and mission and health research regulations are lacking. There is:
 - Lack of legal frameworks and regulatory mechanisms,
 - Lack of coordination mechanisms for health research in the country,
 - Lack of research capacity,
 - Lack of human capacity development for health research,
 - Inability to attract and retain researchers in the public health sector,
 - Lack of adequate financial support for the country's health research needs,
 - Lack of data dissemination to enhance a data sharing culture, and
 - Lack of coordination of research ethics committees.

Therefore, from the challenges identified as part of this study and as listed above, it stands to reason and to conclude that there is a lack of a conducive environment for effective implementation and governance of HRS in the country.

The study findings, therefore, are supported by the World Health Organization, (WHO) (2015) which revealed that health research capacity in the African region is low owing to weak health research systems, because countries lack a health research agenda; research plan; laws governing health research as well as a dedicated budget to support research in their health ministries. In addition, the study findings are also reinforced by COHRED (2012), which stresses that countries, including Namibia,

should follow the example of Tanzania, which pronounced its commitment to increase research and development funding from 0.3% to 1% of Gross Domestic Product.

Furthermore, it is concluded that, with regard to creating and sustaining resources for HRS, both incentives to attract and retain researchers in the public sector and capacity development programmes for health research need to be established. Therefore, in this regard, the researcher agrees with Kabra (2014) that these two aims can be achieved through research capacity strengthening by empowering individuals, organisations, institutions and the nation's health research focus.

In order to enhance a data-sharing culture, the researcher concludes that the MoHSS should establish mechanisms to stimulate a culture of utilising research findings among policy- and decision-makers.

8.3.1.2 Phase 2: Development of conceptual framework.

Objective: To develop a conceptual framework for the development of strategies to strengthen implementation and governance of HRS in Namibia. In order to develop the conceptual framework of the study, the researcher conceptualised the elements on which the strategies for strengthening the implementation and governance of HRS were based. The elements of practice-oriented theory of Dickoff et al, (1968), namely agent, recipient, context, dynamics, procedure, and terminus were used to guide the conceptualisation process. The conceptualisation process is fully discussed in chapter 6 of the study.

8.3.1.3 Phase 3: Development and verification of the strategies to strengthen the implementation and governance of HRS

Objective: To develop and verify the strategies to strengthen the implementation and governance of HRS in Namibia.

During this phase, strategies were developed using the results from phases 1 and 2. They were verified to strengthen the implementation and governance of HRS in Namibia. This objective was achieved. Strategies for strengthening the implementation and governance of HRS were developed, based on empirical data and the literature. The process of strategy development in this study was based on the Compass Aligned Performance System (c@ps) of Howe (2011), which covers critical components of the strategies such as key performance indicators, strategic objectives, critical success factors or the proposed actions and values and vision.

The draft strategies were reviewed and verified by different subject experts. The developed strategies are designed to be used by the internal recipients such as the policymakers, as well as by the external recipients, including line ministries and agencies, institutions of higher learning, development partners, NGOs, parastatals and researchers (academic and operational) who are involved in health research and the participants/human subjects participating in research activities to strengthen the implementation and governance of HRS. The researcher concludes that verification of the proposed strategies has added value to them for the reason that ideas and thoughts pertinent to the developed strategies were explored and included in the final document.

The researcher is also convinced that involving the management and the technical staff in the verification process of the strategies created a sense of ownership of the developed strategies, a process that will make implementation and monitoring of the strategic plan a success. The overall conclusion is that the aim of verification of the strategies was reached successfully.

8.4 LIMITATIONS OF THE STUDY

Limitations as explained by Burns and Grove (2009) can be theoretical or methodological aspects that may impact the generalisability of the study results. This study was limited in various ways.

The researcher considered the following limitations, which related to data collection, study scope and research subjects in this discussion.

8.4.1 Limitations regarding data collection

Although this study succeeded in attaining its stated goals, the researcher has the responsibility to highlight the limitations observed. One of the limitations, which manifested itself as a challenge relate to the completeness and promptness of responses from respondents in this study. There were delays in the response rate of some respondents. The most often cited reason was that respondents did not have time to fill in the questionnaires owing to their busy schedules. The researcher sent out several written reminders, made phone calls and also paid visits to individual

respondents in order to address these limitations. In part because of these interventions, a 70% response rate was achieved, on which research findings and conclusions were based. In terms of established norms, a response rate of 70% is regarded as high because many researchers have described their response rate(s) as adequate based on a response rate of as low as 10%, and as high of 65% response rates (Biersdorff, 2009).

8.4.2 Scope of study

The nature of the study area that is the HRS was limited to a specific accessible population that is eligible to be studied those entities that deal with health related research. To counteract the effects of this limitation to the study and its findings, the total assessable population was included in the study thus no sampling was performed.

The comprehensiveness and interrelatedness of the HRS functions which required individual exploration made the study broader. This, in turn, necessitated the design of lengthy questionnaires.

On the other hand, some issues to be investigated per specific HRS functions yielded almost the same findings and this required heightened levels of vigilance in handling of the data.

To address the challenge of lengthy questionnaires, which were necessitated by the comprehensiveness and interrelatedness of the HRS functions, the researcher employed triangulation. In applying this technique, the researcher used different data collection methods such as the HRS check list and the survey. This technique

facilitated validation through cross-referencing of data from the HRS check list and from the survey. Data from these two sources were consolidated in order to develop the strategies.

8.4.3 Research subjects and response rate

The nature of the study indicated the need for inputs from executive management respondents, as they are the policy-makers who were hard to reach; a few did not participate in the study because of their busy schedules.

The limitation was addressed through presentation of the proposed strategies to the management and the technical staff before the final HRS strategic plan was drawn up.

8.5 CONTRIBUTION TO THE BODY OF KNOWLEDGE

This study in itself is a unique contribution to HRS, an area which lacks documented empirical research findings in the country. The strategies developed for strengthening implementation and governance of the HRS in Namibia represent a unique outcome who close an important aspect in the existing body of knowledge.

Therefore, the developed strategies will serve as knowledge resources to help the agent and the recipient better understand the state of affairs of HRS in the country.

The strategies will also provide guidance on how to identify strategic interventions to improve HRS in the country. Another vital contribution that the study makes to the existing body of knowledge relates to assisting policy- and decision makers in recognising why it is important to strengthen governance and implementation of HRS in the country. When the developed strategies are well understood and

internalised, the agent and the recipients would be able to apply them appropriately to scientific approaches resulting in the improvement of health research and health research systems.

A conceptual framework was developed to be used as a reference for further research in this area. The original concepts as identified by Dickoff et al. (1968) are the agent, recipient, context, dynamics, procedures and terminus. They demonstrate that Health Research Systems is a complex field, which is influenced by factors revolving around several core concepts which need to be addressed in order to ensure a conducive environment for HRS.

Similarly, utilization of the practice theory of Dickoff et al. (1968) ensured that the developed strategies took into account the fact that the factors, which influence HRS are complex and change overtime. As such, the developed strategies need to be able to address these changes.

It is anticipated that the implementation and governance of HRS in Namibia will become effective and efficient through the utilisation of these strategies. The role of the researcher on the coordination and facilitation of technically and ethically sound health research activities nationally will be enhanced through the implementation of the developed strategies.

8.6 RECOMMENDATIONS

The research study suggests the following recommendations, based on the findings, especially with respect to the practice, education, as well as future research.

8.6.1 Recommendations for practice

The researcher recommends that MoHSS provide a conducive environment for effective implementation and governance of HRS through effective leadership that guarantees fortification of:

- Policies and guidelines for HRS;
- Human and financial capacity.

In this context, it is necessary for the leadership at national level to effectively expand their involvement and spearhead implementation and governance of HRS functions (Kirigia al., 2015).

Effective leadership should be enhanced by ensuring that the HRS governance tools are reviewed and updated, by involving stakeholders in the HRS functions and by having a strategic plan in place, which directs HRS governance and implementation. Furthermore, on the issue of HRS financing, the researcher agrees with IJsselmuiden et al. (2006) who emphasise that transforming the NHRS towards national goals will require substantial funding. Therefore, it is recommended that the GRN provide sufficient funding for HRS by apportioning 2% of the total health budget to health research and alignment of foreign development aid investments in health research taking into account national health research priorities in Namibia.

In addition, the researcher recommends that the MoHSS implement capacity building in research as a matter of priority through on-the-job, in-service and pre-service training. Long- and short-term courses, seminars and workshops should also be offered for key MoHSS staff at all levels.

The researcher further recommends that MoHSS implement the following: establish a career advancement programme for researchers; provide a market related remuneration package and benefits for researchers; and offer attraction and retention strategies for HR human resources such as introducing incentives for researchers.

The researcher recognises that producing and using research findings is very important for evidenced-based decision making; therefore, she recommends that platforms to ensure effective dissemination of research findings be created at institutional and country levels. Thus, the researcher recommends that the MoHSS establish mechanisms to stimulate a culture of utilising research findings by policy and decision makers.

Furthermore, the researcher agrees with the strategies outlined in the RMP towards enhancement of dissemination of research findings such as through the holding of seminars and consultations.

The researcher also recommends that the HRS strategic plan should be integrated into the overall MoHSS strategic plan.

In order to maximise the utilisation of the strategies developed as part of this study, it is recommended that the researcher should conduct information sharing sessions with HRS technical staff to support them in their roles and functions as implementers of these strategies.

The researcher should conduct workshops at national, regional and district levels with the MoHSS management, technical staff and stakeholders to launch the strategies and to encourage the execution of these strategies by the MoHSS in Namibia.

In addition, the researcher in her role as the head of the research division where the HRS functions are performed should spearhead the implementation as well as the monitoring and evaluation of the strategies in the MoHSS in Namibia.

8.6.2 Recommendations for education

In light of the findings, the researcher recommends that:

Since the study findings have revealed the need for capacity development for health research it is recommended that the MoHSS work in partnership with tertiary training institutions in the country to participate in the design of training programmes that would fortify health research skills and capacity of MoHSS staff members.

The MoHSS further needs to conduct a training needs assessment related to health research in order to identify the training needs of staff members. The MoHSS should encourage individual training programmes and professional advancement through the provision of funds to students undertaking health research at Masters and Doctoral levels to ensure a highly skilled health research workforce.

8.6.3 Recommendations for future research

The researcher recognises that the findings and conclusions reached in this study have given rise to new possible topics and areas for further research. As such:

- This study should be replicated to verify the conclusions that have been reached using similar or different subjects and methodologies.
- A training needs assessment be carried out to identify the training needs on HR at individual, institutional and national levels.
- A study be undertaken that explores how the external and internal environments affect HRS functions, and
- A study be conducted on HRS contemporary issues that are not just locally significant, but which also have international dimensions and application.

8.8 SUMMARY

This study explored the current status of HRS in the country in order to gain understanding for development of strategies to strengthen the implementation and governance of HRS. Based on the findings, the strategies for strengthening the implementation and governance of HRS were developed.

In this chapter, the researcher discusses whether or not the purpose and objectives of the study have been met. Limitations of the study were identified, recommendations proposed and direction of future research emphasised. Possible future actions to ensure effective implementation of the recommendations were also laid out. The

purpose is to ensure that the strategies developed as part of this study are effectively implemented in order to create a conducive environment for HRS in the country.

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ANNEXURE A- University of Namibia approval letter



UNIVERSITY OF NAMIBIA
Private Bag 13301, 340 Mandume Ndemufayo Avenue, Pionierspark, Windhoek, Namibia

FACULTY OF MEDICAL AND HEALTH SCIENCES

**Letter of permission:
Post graduate students**

To: Post graduate students
From: Dr K. Hofnie-//Hoëbes

Date: 7 June 2011

Dear Student: Ms H. Nangombe (Student number: 910195)

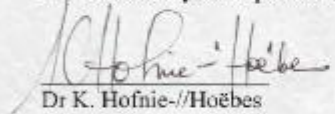
The post graduate studies committee has approved your research proposal.

Investigation and development of the strategies to strengthen implementation and governance of health research systems (HRS) in Namibia

You may now proceed with your study and data collection.

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.


Dr K. Hofnie-//Hoëbes

UNIVERSITY OF NAMIBIA
Faculty of Medical and Health Sciences
OFFICIAL
2011 -06- 07
PRIVATE BAG 13301
WINDHOEK, NAMIBIA
OFFICE OF THE DEAN

ANNEXURE B- Ministry of Health and Social Services Ethics Committee approval
letter

9 - 0/0001



REPUBLIC OF NAMIBIA

Ministry of Health and Social Services

Private Bag 13198 Windhoek Namibia	Ministerial Building Harvey Street Windhoek	Tel: (061) 2032510 Fax: (061) 227786 E-mail: eshaama@mhss.gov.na Date: 02 August 2011
Enquiries: Ms. E.N. Shaama	Ref: 17/3/3	

OFFICE OF THE PERMANENT SECRETARY

Ms. H. Nangombe
P.O. Box 6660
Ausspannplatz
Windhoek

Dear Ms. Nangombe

Re: Investigation of the Health Research Systems (HRS) and development of strategies to strengthen implementation and governance of Health Research Systems (HRS) 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 in Public Health;
 - 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 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,


MR. K. KAHURE
PERMANENT SECRETARY

"Health for All"

**ANNEXURE C- Ministry of Health and Social Services Ethics Committee approval
letter on amendment of the study title**



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: Ester.Shaama@mhss.gov.na

OFFICE OF THE PERMANENT SECRETARY

Ref: 17/3/3

Enquiries: Ms. E.N. Nepolo

Date: 13th July 2016

Ms. Hilma Nangombe
P.O. Box 6660
Ausspanplatz
Windhoek

Dear Ms. Nangombe

Re: Amendment on an academic study title.

1. Reference is made to your request to change your PHD in Public Health study title.
2. The new title has been evaluated and found to have merit.
3. **Kindly be informed that permission to change your study title from "Investigation of Health Research Systems (HRS) for development of strategies to strengthen implementation and governance of Health Research Systems in Namibia" to "Investigation for development of strategies to strengthen implementation and governance of Health Research Systems (HRS) in Namibia" has been granted under the following conditions:**
 - 3.1 The changed title should only be used for completion of your PHD in Public Health;
 - 3.2 No any other changes should be made to the study without the approval from the Ministry's;
 - 3.3 All the conditions indicated in the initial approval should be adhered to.

Yours sincerely,

Andreas Mwoombola (Dr)
Permanent Secretary



Annexure D: Questionnaire for MoHSS

**STUDY TITLE: INVESTIGATION AND DEVELOPMENT OF STRATEGIES
TO STRENGTHEN THE IMPLEMENTATION AND GOVERNANCE OF
HEALTH RESEARCH SYSTEMS (HRS) IN NAMIBIA**

INVESTIGATOR: HILMA NANGOMBE

**MAIN SUPERVISOR: DR. K. HOFNIE-//HOËBES (UNIVERSITY OF
NAMIBIA)**

CO SUPERVISOR: PROF. L. F. SMALL (UNIVERSITY OF NAMIBIA)

Informed consent

Dear respondent

**RE: INVESTIGATION AND DEVELOPMENT OF STRATEGIES TO
STRENGTHEN THE IMPLEMENTATION AND GOVERNANCE OF
HEALTH RESEARCH SYSTEMS (HRS) IN NAMIBIA**

My name is **Hilma Nangombe**; I am a PhD candidate in Public Health at the University of Namibia. In order to fulfill the requirements for the above mentioned degree, I have to submit a full research thesis to the University.

The purpose of the study is to investigate and develop strategies to strengthen implementation and governance of health research systems (HRS) in Namibia

The data will help me to understand Health Research Systems and enhance the development of strategies to strengthen the implementation and governance of HRS in the country.

Therefore, it will be highly appreciated if you complete the attached questionnaire to the best of your knowledge and understanding.

Participation is voluntary; however, you are encouraged to share information as much as possible. All information will be treated confidentially by ensuring anonymity as nowhere on this form your name will be written.

However, you are free at any stage decide to withdraw your consent and participation in the study without prejudice.

Permission to conduct the study has been obtained from the University of Namibia and from the Ministry of Health and Social Services Research Management Committee.

Before answering the questions, please familiarize yourself with the important concepts attached to this questionnaire.

In case of queries or doubts, please do not hesitate to contact the researcher at telephone number: 061 2032562 or email hngombe@gmail.com or my supervisor at 061 2063207 or 0812343205

Thank you for taking part in this study. Your inputs will greatly assist the development of strategies to strengthen implementation and governance of HRS in the country.

DEFINITION OF CONCEPTS

Before answering the questions, PLEASE read the explanation of the terms as illustrated below:

Health Research System (HRS) refers to a system for planning, coordinating, monitoring and managing health research resources and activities; and for promoting research for effective and equitable national health development. It is a concept that integrates and coordinates the objectives, structures, stakeholders, processes, cultures and outcomes of health research towards the development of equity in health and in the national health system. The HRS include the below listed functions:

Stewardship -It is quality leadership that needs to continuously promote and develop effective and efficient health research systems. The main task is to develop a strategic vision for health research development, both medium and long-term, according to the knowledge needs of the local or national health system, and to be responsible for steering the whole research community in a coherent manner, including the oversight function.

Capacity development-A key function within a health research system is to strengthen its own health research capacity. Both the demand and supply sides of capacity need to be strengthened.

Ensuring Good Governance of Health Research Systems –at national level ensuring good governance of health research begins with the involvement of people and the society in identifying research problems and priorities and to some extent deciding on resource allocation. The central importance of ownership and involvement of the public is to be emphasized

Financing-securing research funds and allocates them accountably.

Creating and sustaining resources- build, strengthen and sustain the human and physical capacity to conduct and absorb health research.

Producing and using research-produce scientifically validated research outputs, translate and communicate research to inform health policy, health practice, and public opinion, promote the use of research to develop drugs, vaccines, devices and other applications to improve health. (WHO, 2001).

I fully understand the content of this consent form and hereby, with my signature below, declare that my participation in the study is with my free and unfettered consent, without any form of duress.

Participant Signature

Please indicate the selected response with an X in the appropriate box

SECTION A

1. Demographic Information

1.1 Gender:

Male Female

1.2 Age

20-30 years 30-40 years
40-50 years 50 years and older

1.3 Position

What is your position in the organization?

.....

1.4 Experience

How long have you been working in your organization?

1-5 years 5-10years 10years and above

SECTION B: STEWARDSHIP

1. Research activities in the Ministry of Health and Social Services are coordinated by:

Institution itself	Development Partners	Donors	Institution and donors	Other (please specify)
			

2. The stewardship function of research activities in MoHSS is good.

Agree Disagree Don't know

3. The following components of the stewardship function of HRS are adhered to in the Ministry of health:

	Agree	Disagree	Don't Know
3.1 Ethical standards for health research			
3.2 Linking health research to millennium development goals and research priorities			
3.3 Utilization of knowledge benefits to health and			

health equity			
2. 4. National policies on health research involving all key stakeholders			
2.5. Stakeholders' views defined and integrated within a national policy on health research			
2.6. Existence of a forum or process to coordinate the setting of national health research priorities			
2.7. Identifying factors considered in health research priority setting (e.g., national burden of disease, human resources, political will, community participation, etc.)			
2.8. Ethical review committees meet regularly			
2.9. Ethical review committees fully functioning			
2.10. Existence of monitoring and evaluation activities clearly linked with strengthening HRS			

4. There are challenges related to the stewardship function of health research activities in
 Namibia.

Agree Disagree Don't know

5. In relation to the steward function of the HRS, the following components existing.

	Agree	Disagree	Don't know
5.1 Vision			
5.2 Priorities			
5.3 Ethical instruments			

6. The health research vision, priorities, ethical instruments are fulfilled in the MoHSS.

Agree Disagree Don't know

7. Monitoring & evaluation of Health research as a component of the stewardship function is

being fulfilled by MoHSS

Agree Disagree Don't know

8. Monitoring & evaluation of HRS is clearly linked to with HRS strengthening being fulfilled by MoHSS

Agree Disagree Don't know

8. The coordination of health research in Namibia can be rated as:

Adequate Not adequate Don't know

9. The composition of the Ethics committees that review the research proposals submitted

to the MoHSS for approval can be rated:

Comprehensive Not comprehensive Don't know

10. The research committees are properly reviewing the proposals submitted for review.

Agree Disagree Don't know

11. The composition of the ethics review committees of the Ministry is well structured.

Agree Disagree Don't know

12. If you disagree, please suggest what the composition of the ethics review committee should be.

13. The MoHSS Ethics Review Committees are fully functioning

Agree Disagree Don't know

.....

SECTION C: CAPACITY DEVELOPMENT

1. I am involved in research activities

Always Occasionally Other please specify.....

2. I have received related research trainings from the MoHSS.

Agree Disagree Don't know

3. The training I received adequately addressed my research related training needs.

Agree Disagree Don't know

4. The following will help will in addressing research training needs of researchers in MoHSS.

	Agree	Disagree	Don't know
Short term course on Research methodology			
Post basic degree related courses			
Peer review			
Workshops			
Symposium			
Other health research related trainings specify.....			

SECTION D: ENSURING GOOD GOVERNANCE OF HRS

1. Political commitment towards health research in Namibia is acceptable

Agree Disagree Don't know

2. The MoHSS should ensure that the HRS is provided with the following elements of the system in order to produce the necessary research.

Health Research Leadership

Health Research strategic directions

Health Research vision and mission

Health Research regulatory authority

Health Research Act

Other, please specify.

3. Promotion and advocacy for the HRS

3.1 There is a need for the promotion and advocacy for the HRS.

Agree

Disagree

Don't know

3. If you agreed that there is a need for the promotion and advocacy for HRS, **please specify** what **mechanisms** that can be used to promote and advocate for HRS.

.....

4. There is a need for setting of norms and standards for the HRS in Namibia.

Agree

Disagree

Don't know

5. If you agreed that there is a need for setting of norms and standards for the HRS in Namibia **please specify what** should be considered in setting standards for HRS

.....

6. The ethical frameworks for HRS in Namibia need to be strengthened.

Agree

Disagree

Don't know

7. If you agreed that there is a need to strengthen the ethical framework for HRS in Namibia, **please specify** what should be done.

.....

SECTION E: FINANCING HRS

14. Health research funding from government is provided in a way that is most appropriate for the country's research needs.

Agree Disagree Don't know

15. If you disagree with the above statement, **please provide** suggestions on how Namibia can set provide appropriate health research funding.

.....

16. Advocacy for increased national commitments for HRS

16.1 There is a need for advocating for increased national commitments for HRS

Agree Disagree Don't know

17. If you agree, please suggest how advocating for increasing national commitment should be done.

.....

18. There is a need to ensure coordination of the financial investments of development partners towards health research financing.

Agree Disagree Don't know

19. If you agree with the above statement, please suggest how this should be done.

SECTION F: CREATING AND SUSTAINING RESOURCES FOR HRS

1. Please indicate whether you agree or disagree with the sentences listed below about the contribution of the government to health related research:

Government contribution to HRS	Agree	Disagree	Don't know
1. The government is providing enough funds for health related research			
2. The government is doing enough to provide incentives to researchers			
3. The government is doing enough to retain researchers in the public sector			

2. There is a need to build capacity for health research ethics committees in Namibia.

Agree Disagree Don't know

3. There is a need to raise awareness about existing health research ethics committees in the country.

Agree Disagree Don't know

4. Mechanisms for communication and coordination between different Research Ethics

Committees for health research need to be created in Namibia.

Agree Disagree Don't know

4. If you agree with the above, please suggest how this can be done.

5. A legal framework for health-related research, including issues such as human subjects' protection, intellectual property rights, and information is existing in Namibia

Agree Disagree Don't know

20. If you disagree with the above statement please suggest how the legal framework can be formulated.

SECTION G: PRODUCING AND USING RESEARCH

1. The HRS is functioning and achieving results that are measurable.

Agree Disagree Don't know

2. The HRS producing results with a reasonable level of resources and time?

Agree Disagree Don't know

3. The HRS addressing health research priorities in the country

Agree Disagree Don't know

4. The HRS adheres to the ethical considerations that deal with human subjects /populations in the country.

Agree Disagree Don't know

5. There are sound platforms for presentation and discussion of health related research

findings were all sectors carrying out health research present their findings.

Agree Disagree Don't know

6. Namibia needs to secure international linkages and technical cooperation in

Health research.

Agree Disagree Don't know

7. International linkages and Technical Corporation in health research need to be secured through:

Participation in inter- country health research projects

International research forums

Other please, specify.....

Thank you for the time you have taken to provide me with views about HRS in Namibia.

Annexure E: Questionnaire for Exo- ministerial respondents

**INVESTIGATION FOR DEVELOPMENT OF STRATEGIES TO
STRENGTHEN THE IMPLEMENTATION AND GOVERNANCE OF
HEALTH RESEARCH SYSTEMS (HRS) IN NAMIBIA**

INVESTIGATOR: HILMA NANGOMBE

**MAIN SUPERVISOR: DR. K. HOFNIE-//HOËBES (UNIVERSITY OF
NAMIBIA)**

CO SUPERVISOR: PROF. L. F. SMALL (UNIVERSITY OF NAMIBIA)

**Line ministries, development partners, institutions of higher learning, NGOs,
civil society, and parastatals.**

Informed consent

Dear respondent

RE: INVESTIGATION FOR DEVELOPMENT OF STRATEGIES TO STRENGTHEN THE IMPLEMENTATION AND GOVERNANCE OF HEALTH RESEARCH SYSTEMS (HRS) IN NAMIBIA

My name is **Hilma Nangombe**; I am a PhD candidate in Public Health at the University of Namibia. In order to fulfill the requirements for the above mentioned degree, I have to submit a full research thesis to the University.

The purpose of the study is to investigate and develop strategies to strengthen implementation and governance of health research systems (HRS) in Namibia

The data will help me to understand Health Research Systems and enhance the development of strategies to strengthen the implementation and governance of HRS in the country.

Therefore, it will be highly appreciated if you complete the attached questionnaire to the best of your knowledge and understanding.

Participation is voluntary; however, you are encouraged to share information as much as possible. All information will be treated confidentially by ensuring anonymity as nowhere on this form your name will be written.

However, you are free at any stage decide to withdraw your consent and participation in the study without prejudice.

Permission to conduct the study has been obtained from the University of Namibia and from the Ministry of Health and Social Services Research Management Committee.

Before answering the questions, please familiarize yourself with the important concepts attached to this questionnaire.

In case of queries or doubts, please do not hesitate to contact the researcher at telephone number: 061 2032562 or email hngombe@gmail.com or my supervisor at 061 2063207 or 0812343205

Thank you for taking part in this study. Your inputs will greatly assist the development of strategies to strengthen implementation and governance of HRS in the country.

DEFINITION OF CONCEPTS

Before answering the questions, PLEASE read the explanation of the terms as illustrated below:

Health Research System (HRS) refers to a system for planning, coordinating, monitoring and managing health research resources and activities; and for promoting research for effective and equitable national health development. It is a concept that integrates and coordinates the objectives, structures, stakeholders, processes, cultures and outcomes of health research towards the development of equity in health and in the national health system. The HRS include the below listed functions:

Stewardship -It is quality leadership that needs to continuously promote and develop effective and efficient health research systems. The main task is to develop a strategic vision for health research development, both medium and long-term, according to the knowledge needs of the local or national health system, and to be responsible for steering the whole research community in a coherent manner, including the oversight function.

Capacity development-A key function within a health research system is to strengthen its own health research capacity. Both the demand and supply sides of capacity need to be strengthened.

Ensuring Good Governance of Health Research Systems—at national level ensuring good governance of health research begins with the involvement of people and the society in identifying research problems and priorities and to some extent deciding on resource allocation. The central importance of ownership and involvement of the public is to be emphasized

Financing-securing research funds and allocates them accountably.

Creating and sustaining resources- build, strengthen and sustain the human and physical capacity to conduct and absorb health research.

Producing and using research-produce scientifically validated research outputs, translate and communicate research to inform health policy, health practice, and public opinion, promote the use of research to develop drugs, vaccines, devices and other applications to improve health. (WHO, 2001).

I fully understand the content of this consent form and hereby, with my signature below, declare that my participation in the study is with my free and unfettered consent, without any form of duress.

Participant Signature

SECTION A

Please indicate the selected response with an X in the appropriate box

1. Demographic Information

1.1 Gender:

Male Female

Select the appropriate age group with a cross [X]

1.2 Age

20-30 years 30-40 years
40-50 years 50 years and older

1.3 Position

What is your position in the organization?

.....

1.4 Experience

How long have you been working in your organization?

1-6 years 5-10years 10years and above

SECTION B: STEWARDSHIP

2.1 My institution implements health research activities

Agree Disagree Don't Know

2.2 There are mechanisms that govern the implementation of health research activities in my institution

Agree Disa Don't Know

2.3 Mechanisms that govern implementation of health research in my organization include:

2.3.1 Research policy

Agree Disagree Don't Know

2.3.2 Institutional Review boards

Agree Disagree Don't know

2.3.3 Other specify.....

2.4 There are existing mechanisms addressing research priorities for my institution.

Agree Disagree Don't' Know

2.5 The mechanisms addressing research priorities for my institution include:

2.5.1 Research agenda

Agree Disagree Don't' Know

2.5.2 Research strategic plan

Agree Disagree Don't' Know

2.5.3 Other please specify.....

2.6 There is an Institutional review board for health related research exist in my organization?

Agree Disagree Don't' Know

2.7 The institutional review board in my organization carry out the following functions:

Proposal review and approval Supervise research projects

Other please specify.....

2.8 The Institutional review board in my organization is comprehensively composed.

Agree Disagree Don't know

2.9 The Institutional review board in my organization is fully functioning

Agree Disagree Don't know

2.10. The Institutional review board include representatives from other institutions

Agree Disagree Don't know

2.11 . There is a need to develop strategies that can be implemented in order to strengthen health research systems in Namibia.

Agree Disagree Don't know

2.12 If you agree with the above statement, please suggest which strategies should be developed.

2.13 Integration of HRS in other national systems

2.13.1 The health research systems need to become part of other national research systems.

Agree Disagree Don't know

2.13.2 Enhancing the roles of Health Research Systems among sectors such as Science and Technology, Economics, Social Sciences and Education

Agree Disagree Don't know

2.14 Intersectoral participation at all levels

2.14.1 There is a need for inter-sectoral participation in all stages and levels of health research systems in the country

2.14.2 Inter-sectoral participation can be ensured in HRS through:

2.14.3 Other institutions serving on the institutional review boards

Agree Disagree Don't know

2.14.3 Co- funding health research activities

Agree Disagree Don't know

2.14.4 Participation of other institutions in the implementation of health related research projects

Agree Disagree Don't know

SECTION C: CAPACITY DEVELOPMENT

1. There is a need to strengthen different cadre of professionals with the capacity to conceptualise, conduct, analyze, disseminate, and translate the findings of various forms of health research.

Agree Disagree Don't know

2. The following need to be done to develop capacity for health research in the country:

Train different cadre of professionals Attend conferences and seminars

3. Other, specify -----

SECTION D: ENSURING GOOD GOVERNANCE FOR HRS

1. Political commitment towards health research in Namibia is acceptable

Agree Disagree Don't know

2. The MoHSS should ensure that the HRS is provided with the following elements of the system in order to produce the necessary research.

2.1 Health Research Leadership

2.2 Health Research strategic directions

2.3 Health Research vision and mission

2.4 Health Research regulatory authority

3. The Health Research Systems (HRS) in Namibia is addressing the country's health research priorities

Agree Disagree Don't know

4. There is a need to ensure involvement and participation of human subjects/ affected communities in research governance

Agree Disagree Don't know

5. There is a need for support from the relevant national and local authorities for health research?

Agree Disagree Don't know

SECTION E: FINANCING HRS

Please indicate whether you agree or disagree with the sentences listed below about the contribution of the government to health related research:

	Agree	Disagree	Don't know
4. The government is providing enough funds for health related research			
5. The government is doing enough to provide incentives to researchers			
6. The government is doing enough to retain researchers in the public sector			

SECTION F: CREATING AND SUSTAINING RESOURCES FOR HRS

1. There is a need to build capacity health research ethics committees in Namibia.

Agree Disagree Don't know

2. There is a need to raise awareness about existing health research ethics committees in the country.

Agree Disagree Don't know

3. Mechanisms for communication and coordination between different research ethics committees for health research need to be created.

Agree Disagree Don't know

6. A legal framework for health-related research, including issues such as human subjects' protection, intellectual property rights, and information is existing in Namibia.

Agree Disagree Don't know

SECTION G: PRODUCING AND USING RESEARCH

1. There are sound platforms for presentation and discussion of health related research findings where all sectors carrying out health research present their findings.

Agree Disagree Don't know

2. International linkages and technical cooperation in health research.

2.1 Namibia is needs to secure international linkages and technical cooperation in health research.

Agree Disagree Don't know

3. International linkages and Technical Corporation need to be secured through:

Participation in inter- country health research projects

International research forums

Other please specify.....

4. Please provide any suggestions that will enhance HRS strengthening in Namibia.

Thank you for the time you have taken to provide me with views about HRS in Namibia.

ANNEXURE F: Adopted WHO Health Research Systems Analysis Initiative Checklist

**STUDY TITLE: INVESTIGATION FOR DEVELOPMENT OF STRATEGIES
TO STRENGTHEN THE IMPLEMENTATION AND GOVERNANCE OF
HEALTH RESEARCH SYSTEMS (HRS) IN NAMIBIA**

INVESTIGATOR: HILMA NANGOMBE

MAIN SUPERVISOR: DR. K. HOFNIE-//HOËBES (UNIVERSITY OF NAMIBIA)

CO SUPERVISOR: PROF. L. F. SMALL (UNIVERSITY OF NAMIBIA)

Health Research Systems [HRS] checklist (Adopted from WHO Health Research Systems Analysis Initiative, 2010) (Adopted with changes e.g. Attribute were arranged per HRS

Stewardship function and ensuring good governance strategy			
Concepts	Attributes	Affirmed /present	Not affirmed / not present
Health Research Policy	Official national health policy		
	Strategic health plan		
	Official health research policy (HRP)		
	HRP with a preamble		
	HRP with health research situation analysis		
	HRP with a strategic vision for health research		
	Working plan for the NHRS/ research agenda		
	National health research policy statement (aim, objectives)		
	HRP needs updating		
Health Research Legislation	Has a law relating to health research		

Strategic Health Research Plan	Has a strategic health research plan (SHRP)		
Research Coordination Mechanisms			
	Existence of a functional NHRS		
	NHRS have clear terms of reference		
	Existence of a functional national health research management forum (NHRMF)		
	Existence of a functional ethical review committee (ERC)		
	Have a scientific review committee (SRC)		
	Existence of health institutions with institutional review committees (IRC)		
	Existence of a national health research focal point		
	Existence of hospitals with ERCs to review clinical research proposals		

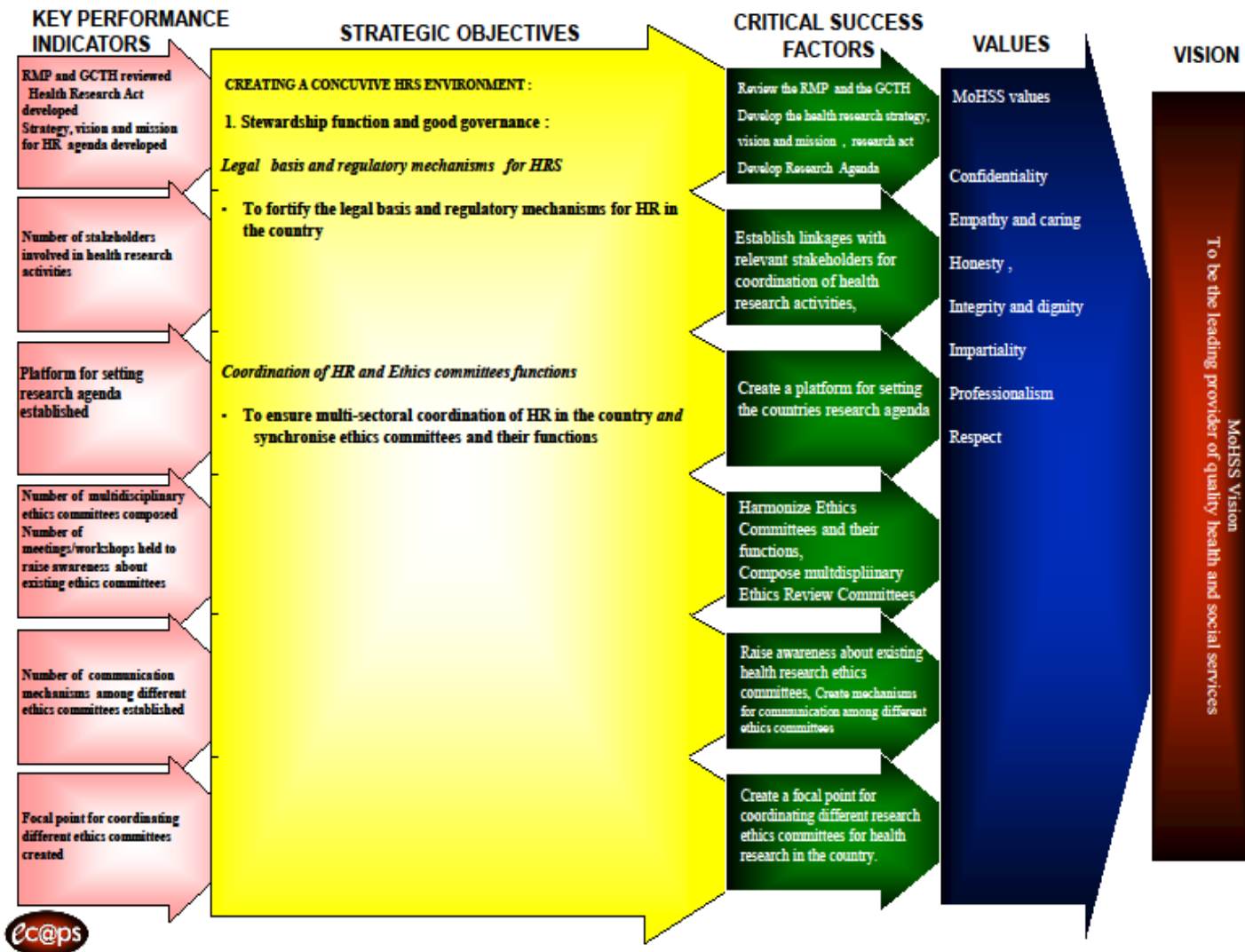
	Existence of a national network of health research and development (NNHRD) that includes universities		
	Existence of national guidelines on development of collaboration agreements on health research involving health		
	Existence of a NNHRD that includes district medical officers of health		
Financing function Attributes			
	Importance of various sources of health research funding the country such as government tax revenues,		
	multi-lateral and bi-lateral donor funding,		
	local NGOs and International NGO		
	allocate regular budget for health research		
	establish local financing		

	systems		
	Existence of a budget line for health research		
Creating and sustaining resources function and capacity development strategy			
	Incentives for researchers and clear career paths,,		
	Establish networking with institutions and individual researchers,		
	Clearly define structural and institutional arrangements for health research		
	Strengthen research capacity		
	Existence of a budget line for health research		
	Strengthen health research collaboration and linkages		
	Provide technical training opportunities		
	Establish consultative exchange visits and forum		
	Promote networking and technical support		
	Strengthen health research		

	systems		
	Help with health research equipment		
	Promote networking and technical support		
Producing and using research findings			
	Research institute		
	Dissemination of research through: seminars and conferences, through: In-house seminars, Newsletters, Institutional publications International journals Annual, quarterly and monthly reports Utilization of research findings.		

Thank you for the time you have taken to provide me with views about HRS in Namibia

ANNEXURE G: Strategic plan: Creating a conducive HRS environment



ANNEXURE H: Strategic plan: Human and financial capacity

