KAMUZU COLLEGE OF NURSING

ROLE STRESSORS AND JOB SATISFACTION IN HEALTH SURVEILLANCE ASSISTANTS IN MALAWI

DOCTOR OF PHILOSOPHY IN INTERPROFESSIONAL EDUCATION AND HEALTH CARE LEADERSHIP THESIS

SIMON WILLARD NTOPI

(MPH, Bsc. EH, Dip. EH, Cert. Public Health)

A Thesis Submitted to the University of Malawi, Kamuzu College of Nursing in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Interprofessional Education and Health Care Leadership

MAY 2019

Declaration

I, Simon Willard Ntopi, declare that the PhD thesis entitled 'Role stressors and job satisfaction of health surveillance assistants in Malawi' is my own original work and effort and has never been submitted to any other institution of higher learning for similar purposes. Except where otherwise indicated, the sources of information used in this thesis have been acknowledged in the reference list.

SIMON WILLARD NTOPI

Full Legal Name

Signature

7/05/2019

Date

Certificate of Approval

The undersigned certify that this thesis represents the student's own work and effort and has been submitted with my approval.

Signature _____Date _____

Ellen Chirwa, PhD (Professor)

Main Supervisor

Signature_____Date_____

Alfred Maluwa, PhD (Director of Research)

Second Supervisor

Dedication

I dedicate this thesis to all who have the desire and appetite for research on community health workers. I also dedicate this thesis to my family members who persevered and supported me during my entire Doctorate period. Finally, my dedication goes to Bill & Melinda Gates for their financial support that facilitated my thesis completion and may the hand that giveth bless them abundantly and that they should continue doing this to other needy PhD Candidates.

Acknowledgements

I would like to express my wonderful gratitude to all the Health Surveillance Assistants (HSAs) who well spent their time to fill the instruments without which this study would not have been possible. And special thanks need to go to my supervisors: Professor Ellen Chirwa and Dr. Alfred Maluwa for their support and guidance during the entire research process. A note of appreciation needs to go to Dr. Mathias Ngwale for his statistical guidance. Special thanks need to go to Fumukale Gondwe and John Manda for their support during data collection and data entry. Finally, special thanks to the District Health Offices (DHOs) in Mangochi, Lilongwe and Mzimba Districts for their support during data collection.

Abstract

This study explored Health Surveillance Assistants' (HSAs) role stressors and job satisfaction. The term community health workers (CHWs) is used as an umbrella term to embrace different health workers that work at the community level, including HSAs. The HSAs have been associated with many health gains, such as the reduction of child mortality. In the past their role was mainly preventive but now the curative role has been added. Following the addition of the curative role, many additional tasks have continuously been added to their existing roles. This is reported to have overloaded the HSAs. Therefore, the purpose of this study was to explore role stressors and job satisfaction in HSAs. Data were collected from 462 HSAs from the districts of Mangochi, Lilongwe and Mzimba. A self-administered questionnaire was hand delivered to a total of 462 HSAs with a response rate of 93.5%. The collected data was analyzed with the aid of the computer software package Statistical Package for the Social Sciences (SPSS) version 23. Statistics used for the analysis included: Mean, Standard Deviation and Analysis of Variance (ANOVA).

The key findings of this study are that HSAs in Malawi have lower role ambiguity (16%) and moderate levels of role conflict (28%) and role overload (32%) and high job satisfaction (83%) (all 75th fractional rank percentile scores). In addition, HSAs role ambiguity (P= 0.001) and role overload (P=0.001) were significantly negatively related to job satisfaction, while role conflict (P=0.472) was insignificantly related to job satisfaction. HSAs tasks of vaccination and growth monitoring were frequently prioritized tasks (vaccination= 77.3%, growth monitoring = 73.7%). Among the three role stressors role ambiguity was the most important predictor (r = -0.34 and P=.01) of job satisfaction while advancement was the most important factor for job satisfaction (r =-0.34 and P= .01). Since role ambiguity was the major predictor of job satisfaction in this study, the supervisor was found as the most important factor for role ambiguity.

The major recommendation to the policy makers at the Ministry of Health is that they need to take seriously the supervision of the HSAs in order to prevent and control role stressors and increase job satisfaction in HSAs.

Table of Contents

List of Tables

List of Figures

Abbreviations or Acronyms

AEHO	Assistant Environmental Health Officers
ANOVA	Analysis of Variance
CBMNC	Community-based maternal and newborn care
CHW	Community health workers
COMREC	College of Medicine Research Ethics Committee
DCT	District Coordination Team
DHMT	District Health Management Team
DIP	District Implementation Planning
ECHN	Enrolled Community Health Nurse
EHP	Essential health care package
HCT	HIV Counseling and Testing
HSA	Health surveillance assistants
HTS	HIV Testing Service
IPV	Inactivated poliomyelitis vaccine
JCE	Junior Certificate of Education
JDI	Job Descriptive Index
KMO	Kaiser-Meyer-Olkin
MCHIP	Maternal and Child Health Integrated Program
MJS	Measure of Job Satisfaction
MoH	Ministry of Health
MSCE	Malawi School Certificate of Education
MSQ	Minnesota Satisfaction Questionnaire

OPV	Oral poliomyelitis vaccine
PCA	Principal Component Analysis
PHC	Primary Health Care
PPS	Probability to proportional sampling
PSLCE	Primary School Leaving Certificate of Education
RCA	Role Conflict and Ambiguity
RN	Registered Nurses
ROS	Role Overload Scale
SHSA	Senior Health Surveillance Assistant
SPSS	Statistical Package for the Social Sciences
UWC	University of Western Cape
WASH	Water and sanitation hygiene
WHO	World Health Organization
AAOHN	American Association of Occupational Health Nurses
ANC	Antenatal Care
ART	Antiretroviral therapy
CHPS	Community Health Partnerships
DHO	District Health Officer
EPI	Expanded Programme on Immunization
HSD	Honestly Significant Difference
MNH	Maternal Neonatal Health
MRDT	Malaria Rapid Diagnosis and Treatment
NGO	Non-Governmental Organization

OPD	Outpatient Department
PNC	Postnatal Care
SCII	Subordinate Class II
SCIII	Subordinate Class III
TB	Tuberculosis
UNICEF	United Nations Childrens' Fund
VHC	Village Health Committee

Chapter 1

Introduction and Background

Introduction

The health care system in Malawi has undergone a series of changes since the introduction of the essential health care package (EHP) in 2002. The EHP in Malawi has brought several changes with it, such as the decentralization of certain functions to the District Health Offices (budgeting and planning) and the concept of universal health coverage. This has created a great demand for healthcare and has also improved the health-seeking behaviours among the rural population in Malawi. However, it has increased the workload among health workers in the country where the doctor/patient ratio is low (0.2/10,000) (Malawi Ministry of Health (MoH), 2017a). Thus, HSAs are being used in the delivery of health services to cover for the high demand for health care workers.

Historically, the role of the HSAs focused mainly on the delivery of preventive health services such as hygiene and sanitation promotion, immunization, and health education. Since then, the HSAs' role has expanded to include roles such as community-based maternal and newborn care (CBMNC), child health, nutrition, and family planning (MoH, 2014). The interventions delivered under the EHP by the HSAs are priority interventions, which are cost-effective and have a greater impact on the reduction of the major causes of morbidity and mortality in Malawi (MoH, 2014).

The changes made to the HSAs' roles have created some challenges related to their work. For example, the need for the HSAs to be trained supervised and work collaboratively with other health workers. There is increased interaction between HSAs and other health workers, a situation, which may likely contribute to communication challenges. Additionally, the

changes made have resulted in doubling the number of HSAs in Malawi from 4500 to 10,000 with an expected HSA/population ratio of 1:1000 (MoH, 2012). However, the increase did not consider increasing the number of supervisors to match the increased number of HSAs. This has created some challenges with their supervision as the Assistant Environmental Health Officers (AEHOs) are reported to be inadequate in numbers, preoccupied with other programme activities, and lack of capacity to supervise the HSAs considering that their training does not capture some of the topics the HSAs learn during their pre-service and in-service training (Martiniuk et al., 2014).

Further, there is need for the AEHOs to spare some time to provide direct supervision in the field to the HSAs. The HSAs need their supervisors for support, and if this is not provided it may end up in causing role conflict and role ambiguity. Despite the challenges, the point where it has reached now, it is no longer appropriate or possible to reverse the changes made as some of the newly added roles have proved to be quite beneficial to the community. Most especially, the provision of curative services through the village clinics has increased access to health care at community level. However, it is important to note that HSAs need not forget their traditional roles such as water and sanitation. Again, it is also important for the other health workers to know that HSAs have been and will continue to be a link between the community and the health services.

The concept of role in this study is defined as a set of expectations and obligations associated with the position one has in an organization (Biddle, 2013; Grace, 2012). Actually, it is the behaviour that is expected of employees of a given position in an organization on each other (Naylor, Pritchard, & Ilgen, 2013). Roles include expectations that employees expect from one another and the jobs they perform within the organization (Chiu & Ng, 2015). The role

stressors in this study will include role ambiguity, role conflict and role overload (Idris, 2011; Karimi, Omar, Alipour, & Karimi, 2014; Kath, Stichler, Ehrhart, & Sievers, 2013).

Background

Globally CHWs are widely distributed in both developed and developing countries and are engaged in a number of roles that are both preventive and curative. The CHWS are known by different nomenclature in Malawi they are known as Health Surveillance Assistants (HSAs), in Ethiopia they are known as Health Extension Workers (HEWs), in India, they are known as ASHAs, while in Pakistan they are known as the Lady Health Workers. There is a strong debate on the international arena on what should constitute the role of the CHWs (Lehmann & Sanders, 2007). Globally, the CHWs are classified into two: generalist CHWs and specialist CHWs (Koon, Goudge, & Norris, 2013). In the developed countries such the USA and Europe, specialist CHWs are present while in developing countries such as Malawi generalist CHWs are widespread (Koon et al., 2013). Generalist CHWs have a wider mandate and they attempt to serve the primary health care needs of the whole community. The specialist CHWs are specialized in a specific field such as population group (Maternal Health) or disease (Malaria) specifically in the management of chronic illnesses such as diabetes and hypertension (Javanparast, Windle, Freeman, & Baum, 2018). However, the same trend is gaining momentum in developing countries in sub-Saharan Africa specifically in areas of HIV/AIDS, TB and MNH (Lehmann & Sanders, 2007; Tsolekile, Schneider, & Puoane, 2018).

Historically, the HSA cadre has been in existence in Malawi for over some 50 years and they were first deployed as smallpox vaccinators. Later, in 1973, when Malawi was first hit with cholera disease, Cholera Assistants were recruited. The first cholera case in Malawi was reported at Ndamera Health Centre in Nsanje district. The Cholera Assistants played a very important role

in the containment of the disease. Since then, the HSAs began to gain momentum by being recognized by the Ministry of Health in Malawi (MoH, 2012b). The HSAs continued to be assigned other duties such as polio vaccinators where they played a commendable role in carrying out mass polio vaccination (the Kick out polio campaign) in all districts in Malawi from Nsanje to Chitipa (MoH, 2012).

In 1978, the World Health Organization (WHO) and UNICEF convened a conference on Primary Health Care (PHC) at Alma-Ata in the then Soviet State of Kazakhstan now Russia. Following the meeting which was attended by 134-member countries including Malawi and other NGOs, the international health agenda on CHWs was reset based on the PHC approach (Hafeez, Mohamud, Shiekh, Shah, & Jooma, 2011). Immediately after the Alma Ata declaration of Health for all through the adoption of Primary Health Care, the concept of community health workers was perceived and in Malawi, the CHWs began to be called HSAs. Initially, the HSA cadre was introduced with the intention to identify risk factors to health at the community level (Smith et al., 2014). With this given role the HSAs until now continue to perform preventive roles such as village inspection, immunization, and disease surveillance which are seen as the backbone of the cadre of the HSAs (Smith et al., 2014).

The first major transformation of HSAs roles followed an assessment which was conducted to assess the progress on EHP in Malawi after its introduction in 2002 which found gaps in its implementation due to the critical shortage of health workers in the country (Mueller, Lungu, Acharya, & Palmer, 2011). In response to this, the Malawi government decided to recruit more HSAs to assist with the delivery of the EHP in form of task shifting. Task shifting is the delegation of tasks to people who are in lower positions (Lehmann & Sanders, 2007; WHO, 2013). Its implementation is wholly supported by the WHO, which recommends each country

introducing task shifting through CHWs should have a National Framework to guide the roles and training of CHWs (Lehmann & Sanders, 2007; WHO, 2013).

However, there is a growing outcry about the number of roles the HSAs are performing in the country. Others have the opinion that the HSAs are overloaded with roles and that this is affecting their productivity as well as the quality of their work (Hermann et al., 2009; Jaskiewicz & Tulenko, 2012). With this expansion, other researchers, have indicated that HSAs are even being engaged in activities outside their job description, which is likely to bring role overload, competing demands, time pressure and role prioritization (Afsar & Younus, 2005; Smith et al., 2014). These role stressors if not properly managed could lead to lower job satisfaction, Therefore, it is the intention of this study to explore more about these role stressors and the job satisfaction in HSAs.

Problem Statement

Following the introduction of the EHP, a number of changes have been made in the health care system in Malawi resulting in the changes of HSAs roles. In the past, HSAs roles had a prevention focus but now their role has changed to include the provision of curative care services at the community level. The introduction of clinical roles among HSAs in Malawi has not only expanded their role but also divided their time. It is argued in the literature, that they spend most of their time at the health facility unlike at the community (Martiniuk et al., 2014). In addition, HSAs are engaged in certain roles, some of which are incompatible with their traditional roles (Smith et al., 2014). Subsequently, the changes made to the HSAs roles require new skills, sufficient time and quality supervision for them to effectively deliver health care services to the community.

Considering these changes and the significant contribution being made by HSAs towards health care delivery in Malawi, it is important to assess how the HSAs are coping with the changes. Evidence from the literature suggests that such changes if not properly managed would very likely contribute towards high levels of role conflict, role ambiguity, role overload and low job satisfaction among employees (Tarrant & Sabo, 2010).

Despite previous efforts studies conducted on HSAs job satisfaction, have not addressed issues of role conflict, role ambiguity, and role overload (Kalaya, 2014; Kok & Muula, 2013). In addition, the studies conducted were confined in one geographical location (district) of which their findings cannot be generalizable to the whole country.

Further, the literature search carried out did not retrieve any research from either Malawi or the African region that has discussed role conflict, role ambiguity, role overload and job satisfaction concurrently. This study will be the first of its kind to explore these concepts fully in HSAs in Malawi. Therefore, these study results are expected to fill this gap.

Rationale/Justification for the Research Project

The changes made to the roles of HSAs have created gaps in their training, supervision as well as their retention. Additionally, there is a general feeling among HSAs that they are doing too much in their work. This study, therefore, filled the gap in the literature and has provided the opportunity to assess the role stressors in HSAs. A study like this one is very important in terms of health care delivery in Malawi because the HSAs are the main providers of the EHP at the community level. This study is very likely to bring a very big impact on healthcare service delivery in Malawi because it will suggest solutions to policy makers on how to deal with role stress among HSAs.

Objectives of the Study

Broad objective.

To explore role stressors and job satisfaction in HSAs in Malawi

Specific objectives.

1) To identify which demographic variables are associated with role stressors and job satisfaction in HSAs
2) To establish if there is a relationship between role stressors and job satisfaction
3) To identify the predictors of role stressors and job satisfaction
4) To determine how HSAs, prioritize their activities in terms of frequency and importance

Definition of Terms

Role stressors: These usually refer to role ambiguity, role conflict and role overload (Idris, 2011; Karimi et al., 2014; Kath et al., 2013)

Role conflict: The simultaneous occurrence of two or more sets of pressures in the workplace such that compliance with one would make compliance more difficult with the other (R. L. Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964).

Role overload: A situation whereby an employee has too many roles or responsibilities for him/her to do everything well (Ahmady, Changiz, Masiello, & Brommels, 2007).

Job satisfaction: The extent to which individuals in their social positions like their jobs (Ge, Fu, Chang, & Wang, 2011).

Role ambiguity:. A lack of clarity on what is expected to be done (Boström, Hörnsten, Lundman, Stenlund, & Isaksson, 2013).

Chapter 2

Literature Review

Conceptual Framework

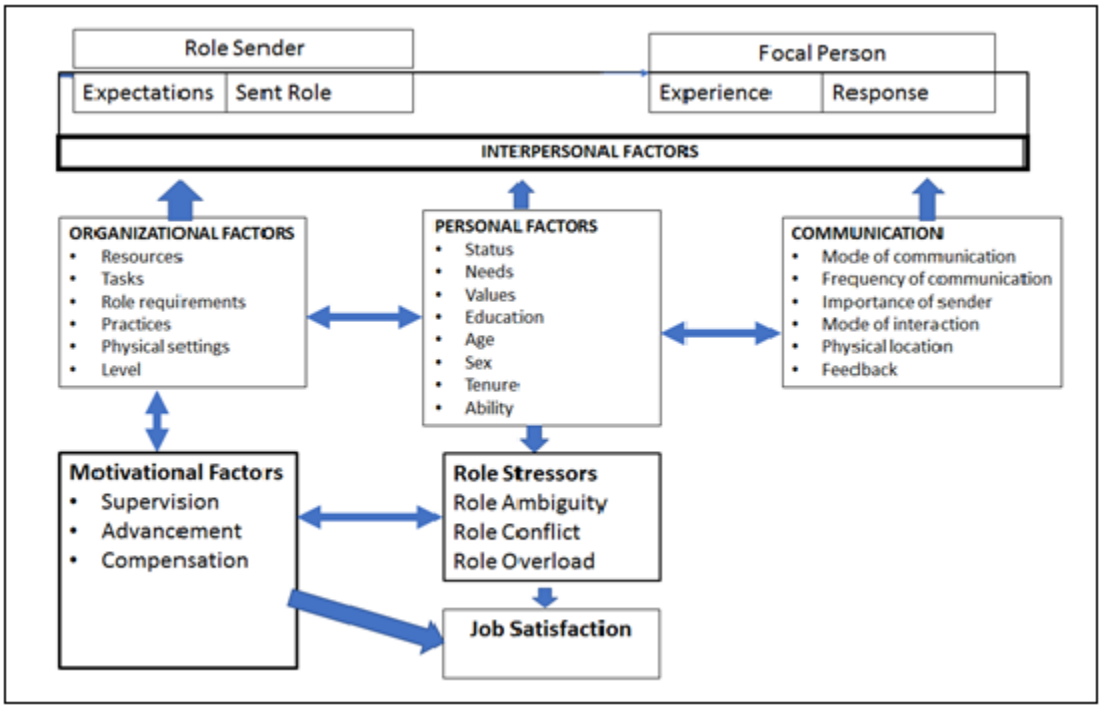

Figure 1: A Modified adaptation of Role Episode Model from the literature (Kahn et al., 1964).

The Role Episode Model by Katz and Kahn (1978) will be integrated with the role theory and the job satisfaction theories to further explore role conflict, role ambiguity, role overload and job satisfaction of HSAs.

The Role Episode Model

The Role Episode Model is also known as an interactional management tool by Role Set Members and the role incumbent. It is a very useful tool for researchers in integrating research on role conflict and ambiguity. The purpose of the model is to demonstrate that there is

a transactional relationship between role senders and focal persons. In addition, the model can be used by various researchers to identify predictors associated with role stress and job satisfaction in the management of stress. The focal person is also known as a role incumbent and he/she occupy a certain position such as an HSA within an organization. The people that send roles or expectations to the focal person regarding the way they are supposed to carry out their activities are known as role senders or Role Set Members. The expectations communicated to a focal person are known as sent role carries or role pressure. The process of communication between the two is cyclic in nature and it continues until a role episode finishes; creates shared expectations or postpone negotiations. The model suggests factors such as organizational, personal and interpersonal factors affect the communication process in the role episode model.

The organizational factors are the formal power structure, level in the organization, role requirements, task characteristics, physical setting, and organizational practices. The personal factors applicable to both role senders and focal person include variables such as an individual's status, needs, values, education, ability, age, sex or gender, and tenure are the variables that may affect the role episode.

The interpersonal factors in the relationship between role senders and focal person include variables such as frequency of their interaction, mode of communication, the importance of senders to focal person, physical location, visibility, feedback, and participation. Role senders, in this case, can be the HSAs supervisors, fellow HSAs or their clients within the organization.

This study will focus on the three dimensions of role stress: role conflict, role ambiguity, and role overload. A number of studies have been conducted on role sender-focal person relationship and have been investigated by gathering perceptual data on role conflict and role ambiguity and role overload. For example, a study conducted by (Kahn et al., 1964)) found out

that there were lower levels of job satisfaction for those with high role conflict and role ambiguity. These findings are congruent with those of (Rizzo, House, & Lirtzman, 1970). The role of an HSA, as the focal person, is continually undergoing changes in role expansion and therefore assuming different relationships with the role senders. Communication between the HSA and the role senders is influenced by many factors such as organizational, interpersonal and personal factors.

The expectations of the role senders about the role are sent to the HSA with an intention to influence his/her behaviour. The HSA using his memory schemata responds to these role pressures by interpreting them to his/her own expectations. The HSA expectations are influenced by the beliefs, values, and attitudes they share. In addition, their attitudes are modified by the length of job tenure, education level, experience, and age. When the role expectations of the HSA contradict the expectations of the role senders, role conflict is very likely to occur. If the conflict persists, the HSA is likely to experience role ambiguity, role overload, role stress and low job satisfaction.

Theories of Role Conflict and Role Ambiguity

In this section, the theories of the Classical Organization Theory and the role theory will be integrated into the model in order to understand the role stressors and job satisfaction in HSAs.

Classical organizational theory.

In this theory, there are two principles: the principle of chain of command and the principle of unity of command and direction. The two principles have implications for role conflict in complex organizations. The chain of command asserts that when an organization has a set up based on hierarchical relationships, where there is a clear and single flow of authority

from top to bottom, there is a more effective economic performance unlike those not following the principle.

The principle of unity of command states that an employee should only get orders from one superior and that there should be only one leader and one plan with the same goals and objectives for the organization (Rizzo et al., 1970). The purpose of this principle is to prevent role conflict in order to avoid an employee being subjected to incompatible orders or incompatible expectations from more than one superior. The tenets of this principle are similar to those of the principle of single accountability, which states that a person should only be accountable to one superior. The intended purpose of this principle is to ensure that there is systematic and consistent reporting, evaluation and control of the subordinates (Rizzo et al., 1970). In addition, it prevents the unnecessary allocation of time and effort to individual preferences; instead, it allocates time according to the demands of the task, or the direction of the superiors. In this study, the principle of unity of command will guide the discussion of the results as HSAs are exposed to multiple supervisors. This will assist in explaining the possible likely effects of such type of supervision on the role stressors and the general satisfaction of the HSAs

Role Theory.

Role theory states that when the behaviours expected of an individual are inconsistent, there is likely to be role conflict which may lead to stress and eventually get the employee dissatisfied with his job and have low work performance. Role theory is applicable in many real-life situations (Fellows, Kahn, & Kessler, 2016; Ozmete & Hira, 2011). It is no wonder that this role theory is applicable to this research study of role stressors and job satisfaction in HSAs.

Role theory states that when necessary information required for carrying out a task is missing, role ambiguity will occur as the employee tries to develop coping mechanisms and a

defensive mechanism to avoid stress. In addition, role theory states that role ambiguity is very likely to increase the chances for a person to be dissatisfied with his job. The individual is also likely to experience anxiety and may distort reality and eventually lead to low performance (House & Rizzo, 1972). In line with what has been stipulated above, this study suggests HSAs occupy a role, and this role is accompanied by expected and perceived behaviours' and actions which are applicable to the successful performance of their role (Jayasuriya & Bhadra, 2014).

Role theory is closely associated with the two principles in organization theory, dual authority and classical theory. Role conflict may occur when these principles are contravened. For example, with the addition of new roles, the HSAs are likely to be exposed to dual authority or multiple subordination. They can be caught between the two lines of authority: the environmental health and the medical hierarchies. Evidence from the literature suggests that employees that are exposed to dual hierarchy like the HSAs are very likely to experience role conflict in their job. It is not only the juniors that could be affected but also their leaders (Ebbers & Wijnberg, 2017; Reid & Karambayya, 2016). The main tenet of classical theory is that every position in a formal organization should have a specified set of tasks or position responsibilities. The specification of tasks is meant to ensure that subordinates are accountable for their actions. In addition, it provides guidance and direction to the subordinates from the management. If an employee is uncertain of what to do and his authority, he will hesitate in making decisions and will be tackling issues based on trial and error approach in meeting the expectations of his superiors.

In contrast, it is asserted in the literature, that sometimes the role conflict created might bring some positive changes in the organization for things to start running better. It may provide

an opportunity for leaders to strategize by redefining their roles and this may eventually lead into narrowing their role (Jehn, 1997).

Theories of Job Satisfaction

In this section, the job satisfaction theories are integrated in the model. The theories integrated are the Maslow's needs hierarchy and the Herzberg's motivator-hygiene theory.

Maslow's needs hierarchy theory.

For employees in an organization to have job satisfaction, their essential needs must be met by the organization (Upadhyaya, 2014). Maslow (1943), has proposed a hierarchy of needs that must be met. In the hierarchy, physiological needs are highly prioritized before embarking on higher needs (self-actualization). The employees are meant to gradually climb the ladder until they reach the realization goal which in this case is the self-actualization. The physiological needs are basic needs such as pay and incentives that are paid to employees and it is after the attainment of these needs that they start to think about issues of security, for them to feel secure in their employment (Upadhyaya, 2014). This is achieved through job security or when the organization has good policies and practices regarding the welfare of their staff (Imran, Majeed, & Ayub, 2015; Upadhyaya, 2014). Once this is achieved it is when they have the feeling of belongingness and a feeling of high esteem that they belong to the organization (Imran et al., 2015). This is manifested by the co-worker and supervisor relationship that exists at the workplace. It is after this that the workers now think about the issues of advancement at work (self-actualization) (McLeod, 2017). It has been a common practice among HSAs to ask about issues of a career path after working for some years. Many usually opt for consideration for them to be trained and later be employed as clinicians, nurses and Environmental Health Officers (EHOs) by the government (Ntopi, 2010). It is highly recommended that organizations need to

address first, the basic needs of their employees and have a plan for addressing their higher complex needs (McLeod, 2017).

However, there are some critics to the theory that argue the theory cannot apply to all scenarios as it is influenced by western culture, while others are in full support of the theory (Jerome, 2013). Others have a problem with the step of self-actualization they believe it lacks a clear definition and conceptual understanding of the concept of self-actualization. Further, other researchers believe that it is difficult to measure the concept and its intended goal (Maher, 2002).

Herzberg's motivator-hygiene theory.

This theory is also referred to as a two-factor theory because it has both motivational and hygiene factors. Motivational factors are intrinsic factors that motivate individuals at work, while hygiene factors are extrinsic factors that have the ability to demotivate individuals at work (Herzberg, 2005). The assumption of the theory is that job satisfaction and dissatisfaction are not two opposite ends of the same continuum, but instead are too separate and, at times, even unrelated concepts (Maher, 2002). In theory, motivation factors such as pay and benefits, recognition, and achievement are prerequisites for the job satisfaction of employees. On the other hand, hygiene factors include work conditions and organization policies and are usually associated with job dissatisfaction. For example, if the hygiene factors are low, the workers will be considered dissatisfied and if the hygiene factors are high they will be considered as not dissatisfied but not satisfied (Herzberg, 2005).

Hygiene and motivational factors are treated as independent entities and this is why employees are neither satisfied nor dissatisfied. It is the motivational factors that make an employee satisfied. This is very critical in accounting for the complexity of an employee's feelings, towards both satisfaction and dissatisfaction. The two may be experienced at the same

time, or workers may be neither satisfied nor dissatisfied. One notable difference between the Maslow's Theory and the Herzberg's Theory is that the Maslow Theory has a progressive continuum while the Herzberg's Theory has two factors (Surbhi, 2017). Generally, the theory has empirical support, but it is being criticized by others for its weak methodology during development. As a result subsequent attempts to test it have received mixed reactions from researchers with others supporting the results (Ewen, 1964; Maher, 2002); while others are not in support (Hill, 1986; King, 1970).

In this study, Herzberg's motivator-hygiene theory of job satisfaction will be applied. Achievement, recognition, advancement, compensation, authority, responsibility and the job itself will be considered as motivational factors while, organization policies and practices, supervision, relationship with co-workers, job security, social status and work conditions will be considered as hygiene factors (Surbhi, 2017).

In the context of this study, the integrated role episode and job satisfaction model will guide all the processes of this research. It will guide the objectives of the study, literature themes, and the discussion of results. The model as an interactional management tool will correspond with the activities of the MoH as an organization, where the HSAs belong. The MoH as an organization is liable to transformation, and this transformation is likely to affect the HSAs as its employees. The changes made, if not properly guided are liable to lead to role conflict and role ambiguity which is likely to affect the job satisfaction of its workers. The role conflict and role ambiguity are affected by factors such as personal, interpersonal and organizational factors. The study will look at all factors likely to affect the role stressors and job satisfaction in HSAs.

Introduction

In this chapter, the researcher reviewed the existing literature and researches on role conflict, role ambiguity, role overload and job satisfaction. The literature reviewed dates back from 1964 to 2016, and this has taken into consideration some of the old literature as classics in organization research. The literature search was performed in HINARI, Google Scholar, and Google search engines. The search terms included terms such as role stressors, role conflict, role overload, role ambiguity and job satisfaction. This chapter will summarize the relevant literature to the understanding of role stressors and job satisfaction in HSAs. The review will look at definitions, measurements, and relationships. Studies conducted elsewhere on CHWs and other professions were given attention in this review. The literature review was guided by the conceptual framework and the objectives of this study. However, literature pertaining to these concepts among HSAs and CHWs was scanty, and literature evidence from elsewhere used for other professions have been used in this study.

Role Prioritization in HSAs

In Malawi, the majority of HSAs are generalists and are engaged in both preventive and curative roles. There is a growing outcry about the number of roles the HSAs are performing in the country. Others have the opinion that the HSAs are overloaded with roles and that this has the potential to cause a negative impact on their productivity as well as the quality of their work (Hermann et al., 2009). Jaskiewicz & Tulenko (2012) agrees with this assertion and states that when CHWs have too many roles they become pressured and the quality of their work becomes compromised. The role episode model further suggests employees with role pressure tend to find ways to cope with the pressure they experience (Kahn et al., 1964). In support of this assertion, the literature evidence about CHWs suggests when CHWs are overwhelmed with roles, they tend

to develop mechanisms to cope with the pressure they encounter. One such mechanism is that they tend to prioritize roles they prefer and do best (Hermann et al., 2009).

Other literature evidence suggests task prioritization is done based on motivation. The Self Determination Theory suggests that employee's motivation to perform certain tasks is based on the internal and external stimuli (Deci, Olafsen, & Ryan, 2017). Under external stimuli employees only perform tasks they find rewarding or beneficial to them. For example, the HSAs will only be interested in tasks which they directly benefit, such as activities with a lot of workshops for them to get incentives. Under internal stimuli, employees perform a task for the sake of mastership for them to be competent and autonomous (Deci et al., 2017). The internal stimuli are good because its results are longer lasting than those of the external stimuli. For example, at the end of the day, the HSAs want to be given respect in the community. Other researchers suggest HSAs are directly benefiting from this expansion, as these roles provide important psychological benefits such as status, ego gratification and increased self-esteem (Williams & Alliger, 1994). For example, those who dispense drugs at the community are more highly regarded by the community members and are referred to as "*A dokotola*" (meaning a Doctor), unlike their counterparts who do not dispense drugs (Lehmann & Sanders, 2007; Ntopi, 2010). This is especially true when a reliable stock of medicines and other supplies are readily available and the needs of the communities are well provided for (Lehmann & Sanders, 2007). Other researchers in the literature have suggested an increase in the number of roles should be accompanied by a salary increase or else programmes must avoid the addition of new roles among CHWs (Afsar & Younus, 2005; Haines et al., 2007).

A qualitative study conducted in Zomba district where the purpose of the study was to understand the roles HSAs perform and how they prioritize their tasks found HSAs had too many

roles outside their job description (Smith et al., 2014). The study was a situational analysis which examined the role and experiences of HSAs in Zomba, Malawi. Specifically, the study looked at HSAs contribution towards the delivery of health services in Zomba District. The study results indicated that HSAs were engaged in a variety of tasks including others outside their job description which were likely to cause overloading, specialization and competing demands (Smith et al., 2014). A qualitative study conducted in Pakistan to assess the strengths and weaknesses of the national programme for family planning and primary health care from the Lady Health Workers (LHWs) perspective found similar results where the LHWs were involved in activities outside their job description and that these activities consumed their precious time they could have spent on tasks contained in their job description (Afsar & Younus, 2005).

Similarly, a qualitative study conducted in Zomba district of Malawi observed during an interface meeting that HSAs were prioritizing and spending much of their time on health facility-based activities unlike community-based activities (Martiniuk et al., 2014). In contrast, the task force committee reviewing HSA's job description argued that the HSAs only spend 35% of their time at the health facility and the rest is spent at the community (Martiniuk et al., 2014). Kalaya, 2014 in a study on the effect of job incentives on the job satisfaction of HSAs in Nsanje district of Malawi, the study results revealed they spend most days (4 to 5 days per month) on Maternal and Neonatal Health (MNH), health education and sanitation promotion activities. This finding is consistent with the finding of (Kadzandira & Chilowa, 2001)who found HSAs allocated 40 % of their time on immunization and 25% on water and sanitation activities.

In contrast, others have mixed reactions about the expansion of HSAs roles, as others are in support while others are not in support. However, looking at the current demand for health care in Malawi, it is necessary to have their roles expanded (Martiniuk et al., 2014; Smith et al.,

2014). The critical shortage of human resources in the country necessitates this to be done the emphasis is on HSAs because professional nurses are few e.g., the Nurse /population ratio is still high at 1:5000. Ideally, it should be at 1:1000 according to the WHO standard for low- and middle-income countries (LMIC). On the other hand, the HSAs are required to deliver the EHP at the community level. Additionally, the nurses are already delegated some of the doctor's roles such as ART therapy. Additionally, there is growing resistance for graduate nurses to be deployed in rural remote areas (Bvumbwe & Mtshali, 2018).

In conclusion, HSAs are involved in many roles that are both preventive and curative. They are pivotal in terms of service delivery in Malawi as they are involved in the provision of health services at all levels in Malawi. The review has also revealed that there are mixed reactions about the expansion as others are in support while others are not in support. This situation is very likely to contribute towards role prioritization among HSAs. In this study, the focus will be on examining tasks that are usually performed and highly prioritized among HSAs considering there have been changes in HSAs roles. In light of this, the study hypothesizes that the addition of clinical roles to the existing HSAs roles has a contribution towards the role stressors and job satisfaction.

Sociodemographic Variables, Role Stressors and Job Satisfaction

In order to understand issues about job satisfaction and role stressors, there is need to take into account demographic, situational, and other variables associated with employees as they have an influence on role stressors and job satisfaction (Franek & Vecera, 2008; Spector, 1997). According to the role episode model personal factors such as age, gender and tenure have a role to play in the role episode model (Kahn et al., 1964). In addition, different results have been found regarding demographic variables influence on role stressors (Al-Kahtani & Allam,

2016; Kahn et al., 1964; Rizzo et al., 1970). Similarly, demographic characteristics have demonstrated to be related to job satisfaction (Franek & Vecera, 2008).

Many literature evidence has reported age is significantly related to job satisfaction (Bilgiç, 1998; Clark, 1997; Fargher, Kesting, Lange, & Pacheco, 2008; Gazioglu & Tansel, 2006). It is asserted in the literature that when the average age of the employees is above 30 years, it is when they start to get committed to their work and value issues about career development and advancement at work (Clark, 1996; Fargher et al., 2008; Gazioglu & Tansel, 2006; Kunte, Gupta, Bhattacharya, & Neelam, 2017). Franek and Vecera (2008) agree with this assertion where young people aged less than 30 were found to be less satisfied with their job. Additionally, personal characteristics such as age have been found to be positively correlated with job satisfaction (Masum et al., 2016). In contrast, a study conducted among Chinese nurses reported a weaker relationship between age and job satisfaction (Lu, Barriball, Zhang, & While, 2012). Others have found with increased age, employees become more realistic with their expectations (Masum et al., 2016). In contrast, other researchers have found no significant differences in job satisfaction across different age groups (Duc, Van, Huu, & Tang 2015).

In terms of role ambiguity, other literature evidence have found age to be significantly related to role ambiguity and not with role conflict (Gormley & Kennerly, 2010). In a study focused to determine the relationship of socio-biographical variables on role ambiguity and role conflict amongst the subordinate staff of Prince Sattam Bin Abdulaziz University, Kingdom of Saudi Arabia found younger aged employees had higher levels of role ambiguity compared to other age groups (Al-Kahtani & Allam, 2016). In contrast, a study conducted to analyze and describe the relationship between role ambiguity and burn out of social workers using the survey design in the USA found no statistically significant relationship with gender, age group,

education, marital status, job function and income (Wilson, 2000). On the other hand, role conflict had a different perspective where older employees aged over 60 years had higher levels of role conflict (Dua, 1994).

A study conducted to examine Nurse Educators' perceptions of role conflict, role ambiguity and job satisfaction found role conflict and role ambiguity were related to education level, years at service post and the present position. The study used a survey design and had a sample size of 285. The instruments used were the job descriptive index and the role questionnaire. In the analysis, hierarchical multiple regression analysis was used to examine the relationships between demographic variables, role conflict, role ambiguity and job satisfaction. Additionally, a series of one-way multivariate analysis of variance (MANOVA) was conducted to determine whether there were significant differences between demographic variables and role ambiguity, role conflict and job satisfaction. In contrast, other researchers have found role conflict not related to any demographic variable including age (Coll, 1989; Tarrant & Sabo, 2010).

On the other hand, role overload was not related to any of the demographic variables measured such as age, sex, marital status and education level (Mustafa, Looper, Zelkowitz, Purden, & Baron, 2012). In contrast, a study conducted in Turkey to investigate the levels of job satisfaction and role overload among professional women found gender had an influence on both job satisfaction and role overload. Women were found to be less satisfied and had more role overload than their male counterparts because of stereotyping (Bozkurt, Aytaç, Bondy, & Emirgil, 2011).

According to the literature evidence, many literature studies reviewed were in support of the role episode model that stipulates socio-demographic variables have an influence

on the role stressors and job satisfaction. It is important to note that demographic variables have an important role to play in the understanding of both the role stressors and job satisfaction. Therefore, in this study, it is hypothesized that the sociodemographic variables are related to the role stressors and job satisfaction.

Overview of the Constructs

This section of the literature review is dedicated to the defining of the constructs, discussing theories, and the measures commonly used in role stress and job satisfaction studies. Specifically, the review will look at the various theories that are used in role ambiguity, role conflict, role overload and job satisfaction studies. Additionally, the review will look at the measurement instruments that are commonly used to measure these constructs. Further, the review will discuss the limitations of the various instruments that are used as measures of the constructs

Definition of the constructs

Role conflict and role ambiguity.

Role conflict.

Role conflict in the literature has been defined as "the simultaneous occurrence of two or more sets of pressures in the workplace such that compliance with one would make compliance more difficult with the other" (Katz & Kahn, 1966). Other researchers have referred it as the incompatibility of expectations and demands associated with the role (Ashforth & Lee, 1990; Ivancevich & Matteson, 1980; Rizzo et al., 1970). Grace (2012) and Millslagle and Morley (2004) assert that role conflict occurs when there is incompatibility, especially when role expectations or behaviours are viewed as incompatible for multiple roles or positions in society. In addition, Katz and Kahn (1966) assert that role conflict occurs when a single individual is

simultaneously involved in the enactment of contradictory role obligations that lead to strain. Other literature evidence from more recent publications confirms that role conflict is usually experienced when differences exist between the perceived role and the enacted role (Yongkang, Weixi, Yalin, Yipeng, & Liu, 2014).

Evidence from the literature suggests there are four types of role conflict: person-role conflict, intra-sender role conflict, inter-sender role conflict, and inter-role conflict. These are concepts that are commonly applied in role conflict (Kahn et al., 1964). Person-role conflict occurs when the role expectations are inconsistent with the occupant's attitudes, values, and professional behaviour (Ritter, Matthews, Ford, & Henderson, 2016). For example, an HSA who has a religious belief that modern family planning methods are not good, may have difficulties promoting family planning methods. In other cases, the person's needs and aspirations may be different to what he is expected to do by his colleagues; for example, he might be ambitious and overstep others toes for him to be promoted at work.

Intra-role conflict.

Intra-role conflict is associated with time, resources or the ability of the individual to fulfil the role (Yu et al., 2017). A typical case in point could be an HSA who is asked to submit timely reports when he/she is not given the necessary resources such as stationary. Another example could be the supervisor expecting from the HSAs to achieve a high immunization coverage when the HSAs are not supported with the necessary resources such as vaccines and transport. Inter-sender role conflict usually involves pressures from one role sender which opposes pressures from another sender or set of senders. For example, an HSA may like supervision by an AEHO and hate clinician supervision just because of the AEHO practices laisses-fair supervision while the clinician is a very strict supervisor.

Intra-sender conflict.

Occurs when the role expectation of a sender (e.g., supervisor) contradicts the expectations of others (e.g., clients/co-workers) (Petersen & Eys, 2017; Rizzo et al., 1970). For example, a supervisor may ask an HSA to be residing and operating within his/her catchment area while an HSA may have a dissenting view. There might be many reasons why HSAs might opt to stay away from their catchment areas. One of the reasons could be that at the community there is no electricity or potable water which most often acts as a motivator for HSAs' stay in communities.

Inter-role conflict.

Occurs when an individual is involved in the performance/enactment of different roles (Beutel & Marini 1995; Petersen & Eys, 2017). It arises when the role respondent has several roles which may require different behaviours or incompatible behaviours or changes in behaviour according to the situation (Petersen & Eys, 2017; Suozzo, 2015). In this case, the role pressures associated with membership in one role become in conflict with the other roles in other groups. For example, an HSA may be required to perform immunizations and at the same time, he or she might be required to conduct WASH related activities.

The concepts highlighted in the above literature are congruent with the concepts explored in this study. HSAs are very likely to experience different types of role conflict depending on the circumstances they are in. Operationally, the role conflict classification as described above will enable a more detailed understanding of role conflict in HSAs. With regard to the addition of new roles the HSAs roles now are multiple and situations, where role conflict might occur, are inevitable.

Role ambiguity.

Role ambiguity has been defined in different ways by many authors in the literature. Graen (1976) and (R. L. Kahn et al., 1964) have defined role ambiguity as the degree to which clear information is lacking regarding the expectations associated with a role; methods of fulfilling known role expectations; and the consequences of role performance. Sinha and Subramanian (2012) have defined role ambiguity as the degree of uncertainty that is there when employees lack authority and knowledge to accomplish a task. However, others have contrasted it with role clarity and they see role ambiguity as the reverse of role clarity (Idris, 2011; Olaleye & Arogundade, 2013).

Other literature evidence suggests role ambiguity occurs due to lack of clarity on job information such as roles and responsibilities (Boström et al., 2013; Duze, 2012). Specifically, when employees are not provided with their job descriptions (Boström et al., 2013; Duze, 2012). Role ambiguity is also reported to occur among employees who receive contradictory messages regarding their roles (Boström et al., 2013). This is especially the case among employees under the dual leadership and is prone to receive contradictory messages from their supervisors. In this study, the definition of role ambiguity by (Kahn et al., 1964) has been taken as the most fitting definition of role ambiguity. The justification for this is that when there is no clarity on what one is expected to do, the end result is usually doing wrong things and may lead to role ambiguity.

Role overload.

According to the literature evidence, role overload has been defined as having too much to do and too many responsibilities to do everything well (Ahmady, Changiz, Masiello, & Brommels (2007). Role overload has also been defined as the level of pressure to which an employee finds him/herself because of the numerous duties and responsibilities (Jones, Chonko,

Rangarajan, & Roberts, 2007). Other researchers have defined role overload as one's ability to complete all obligations but not at the acceptable level of competence as it would have happened if an individual had few obligations to meet (Bozkurt et al., 2011; Brumels & Beach, 2008; Goldstein & Rockart, 1984). In addition, the evidence from the literature suggests role overload occurs when an employee is given too many responsibilities or several roles/tasks to perform at the same time with a short deadline. Further, they suggest role overload may occur when an employee is supervised by several supervisors due to multiple role performances at the same time (Spector & Jex, 1998). For example, an HSA who is assigned too many roles to perform might have various supervisors to direct his/her activities (such as clinical officers, nurses, and EHOs), a situation which might trigger role overload in HSAs as it would be too much for them to accomplish their expectations (Spector & Jex, 1998).

In the workplace, role overload is easily demonstrated by the feeling individuals have towards their work. They feel their work is unmanageable and has too many expectations (Lopopolo, 2002). This feeling is usually the result of increased expectations and responsibilities that come along with additional roles which may demand them to work many hours in a day and even at night (Andrews & Kacmar, 2014). A typical case in point could be what is contained in a study conducted in Zomba district where many HSAs during focus group discussions felt they had too many tasks to perform and were overburdened with roles (Smith et al., 2014). In contrast, other literature evidence suggests role overload and role conflict are synonymous terms that can be used interchangeably (Coverman, 1989; Kahn et al., 1964). However, it is argued in the literature that the two terms role conflict and role overload are not the same and that they are distinct concepts that need to be treated separately (Coverman, 1989; Hecht, 2001). To differentiate the two, role conflict occurs when an employee is expected to perform competing

roles that interfere with other roles Lopopolo(2002) while, role overload is associated with feelings one has towards his/her work that it is too much for him/her to manage (Jones et al., 2007).

The term role overload in the literature has been classified into two: quantitative role overload and qualitative role overload (Ahmad & Saud, 2016). Quantitative role overload occurs when an individual is unable to complete a task due to time limitation while qualitative role overload is mainly associated with an employee's inability to perform a task due to lack of skills (Bacharach, Bamberger, & Conley, 1991; Kahn & Kram, 1994) . In this study, both quantitative and qualitative role overload will be explored.

Job satisfaction.

Job satisfaction can be defined as the extent to which individuals in their social positions like their jobs (Ge et al., 2011). Chen, Lin, and Lien (2011) has defined job satisfaction as feelings people have towards their job, whether they like (satisfaction) or dislike (dissatisfaction) their job. Job satisfaction is more of an affective feeling or an emotional reaction one has towards his/her job. In instances where employees are satisfied with their job, they become good ambassadors for the organization and show greater commitment to their job (Agho, Price, & Mueller, 1992). Although job satisfaction is a very important construct in organization theory, it is a very complex concept which is multi-dimensional and is influenced by situational factors such as work environment and individual characteristics. Evidence from the literature proposes further research needs to be carried out in order to understand the complexness and the interrelations in job satisfaction (Locke, 1976). In addition, evidence from the literature asserts that promotions, recognition, benefits, working conditions, supervision, colleague relations, resources, job content, professional concerns, professional working relationships, emotional

reactions to work and external pressures, company and management as some of the common aspects of job satisfaction (Locke, 1976; Tovey & Adams, 1999).

Further, the job satisfaction construct has been categorized into two: extrinsic and intrinsic job satisfaction. Extrinsic job satisfaction means the employees get satisfied with aspects that have little to do with the job tasks or content of the work itself such as pay, working conditions, and relations with co-workers while intrinsic job satisfaction means satisfaction with the aspects of the job tasks such as variety and autonomy (Buitendach & Rothmann, 2009). In this study, the job satisfaction definition by Chen, Lin, & Lien (2011) where they have defined job satisfaction as feelings people have towards their job, whether they like (satisfaction) or dislike (dissatisfaction) their job will be used. In addition, both extrinsic and intrinsic factors that lead to the job satisfaction of the HSAs will be fully discussed.

Measurement of the Constructs

In this section, the review will focus on the measures that are commonly used in measuring role ambiguity and role conflict, role overload and job satisfaction in research. The review will discuss their strengths and weaknesses and will justify their selection in this study.

Measurement of role conflict and role ambiguity.

Evidence from the literature suggests the most commonly used instrument to measure role conflict and role ambiguity is the one developed by (Rizzo et al., 1970). The instrument is a 30-item questionnaire that has role ambiguity (even numbers) and role conflict (odd numbers). However, critics to the (Rizzo et al., 1970) measure have identified two limitations to the use of the measure. First, the item wording for role ambiguity is reverse scored (e.g., “I know what my responsibilities are”) and that all the role conflict items are positively scored (e.g., “I receive incompatible requests from two or more people”). This may be reported as a confounder and

may render factor analyses using the (Rizzo et al., 1970) scale ambiguous (Bowling et al., 2017; Kelloway & Barling, 1990; McGee, Ferguson, & Seers, 1989; Tracy & Johnson, 1981). Additionally, it might affect the construct validity of the instrument (King & King, 1990). The second limitation of the (Rizzo et al., 1970) measure is that many of its items have questionable content validity (Bowling et al., 2017; King & King, 1990). For example, the role ambiguity item "I know that I have divided my time properly" may be confused with time management content while the role conflict items "I receive an assignment without the manpower to complete it" and "I receive an assignment without adequate resources and materials to execute it" might actually measure role overload. House, Schuler, & Levanoni (1983) also developed a similar instrument to measure role conflict and ambiguity all contained in one instrument. Role conflict has 11 items such as "my power matches up the assigned responsibilities," and "I do not know what I am expected to do." Role ambiguity, on the other hand, has 7 items, such as "I often get involved in such situations full of conflicting requirements," and "I must do different things under different circumstances". Both of them use a 5-point Likert–type response format (Yongkang et al., 2014).

Despite the limitations, the (Rizzo et al., 1970) measure is still widely used and remains the most dominant instrument (Gilboa, Shirom, Fried, & Cooper, 2008; Jackson & Schuler, 1985). Therefore, in this study, the instrument developed by Harris, 1991 will be used to measure role conflict and role ambiguity. The original scale had 30 items and, in this study, only 14 items will be used (eight items for role conflict and seven items for role ambiguity).

Measurement of role overload.

In this section, the review will focus on the measures that are commonly used in measuring role overload in research. Some of the measures identified include the role overload

scale (ROS), and the instrument developed by (Bacharach et al., 1991). The review will discuss their strengths and weaknesses and will justify the selection of some of these measures in this study.

The Role Overload Scale (ROS) is used to measure role overload (Reilly, 1982) and is based on an earlier measure of role conflict and role ambiguity designed by House & Rizzo (1972). The ROS is a 13-item questionnaire (e.g., “There are too many demands on my time”) with a 5-point Likert–type response format. Scores could range from 13 to 65, with higher scores representing more role overload and lower scores representing less role overload. The instrument had a Cronbach’s alpha of 0.88 (Reilly, 1982) and a Cronbach’s alpha ranging from 0.89 to 0.94 (Pearson, 2008; Perry-Jenkins, Seery, & Crouter, 1992).

Another instrument reported in the literature to measure role overload is the one developed by (Bacharach, Bamberger, & Conley, 1991). The instrument has three items included, such as “I am busy with my work”. The instrument uses a Likert–type response format and is reported to have a Cronbach’s α of .789 (Yongkang et al., 2014). In this study, the ROS will be adopted for use because it is commonly used in many studies and has a higher Cronbach's alpha 0.88.

Measurement of job satisfaction.

In this section, the review will focus on the measures that are commonly used in measuring job satisfaction in research. Some of the measures identified include the Minnesota Satisfaction Questionnaire (MSQ), the Measure of Job Satisfaction (MJS), and the Job Descriptive Index (JDI). The review will discuss their strengths and weaknesses and will justify the selection of some of these measures in this study. However, it is important to note that in job satisfaction measurement there are two types of job satisfaction measures: single-question versus

multiple-item measures. For example, a single-question measure would ask a question such as: "On the whole would you say you are satisfied or dissatisfied with your job?" (Buitendach & Rothmann, 2009). An example of the multiple-item measure is the MSQ short form. Its advantage is that as a multi-dimensional measure of job satisfaction, its components may relate differently to other variables of interest in a manner that advances the science and practice of organizational psychology (Buitendach & Rothmann, 2009).

The Minnesota Satisfaction Questionnaire (MSQ). The MSQ commonly referred to as the shorter version is commonly used internationally in both developed and developing countries. The MSQ short form is a 20-item questionnaire with a 5-point Likert –type response format (from 1=very dissatisfied to 5= very satisfied). The test-retest reliability score reported for this instrument is between 0.70 and 0.80 with an alpha coefficient of 0.96 (Buitendach & Rothmann, 2009).

The MSQ comprises two dimensions of job satisfaction extrinsic job satisfaction and intrinsic job satisfaction. Extrinsic job satisfaction measures feelings about situational job aspects, external to the job and includes six items namely: supervision, human relations, company policies and compensation (Buitendach & Rothmann, 2009; Ge et al., 2011). A typical example could be question 13 on the MSQ short form which covers "My pay and the amount of work I do" (Spector, 1997). Intrinsic job satisfaction measures feelings about the nature of the job tasks and has 12 items such as activity, ability, utilization and achievement (Ge et al., 2011). A typical example is question 15 on the MSQ short form which covers: "The freedom to use my own judgment". The MSQ short form can be used to measure these two distinct components: intrinsic job satisfaction and extrinsic job satisfaction (Buitendach & Rothmann, 2009).

However, evidence from the literature suggests that the assigning of items to extrinsic and intrinsic subscales on the MSQ short form as specified by the MSQ manual, results into lower construct validity (Buitendach & Rothmann, 2009; Spencer, 1997). In addition, other authors express dissatisfaction with the way the intrinsic and extrinsic subscales were constructed using an empirical approach that relied on factor analytic results (Weiss, Dawis, & England, 1967). Further, they assert that the content adequacy of the original MSQ short-form subscales is questionable (Weiss et al., 1967).

Measure of job satisfaction (MJS)**.** The MJS is another instrument reported in the literature to measure job satisfaction is the MJS an instrument developed by (Traynor & Wade, 1993). The MJS was developed and tested in the United Kingdom and has an internal consistency with a Cronbach's alpha of 0.88. The MJS is a 38-item questionnaire with a 5-point Likert–type response format (from 1=very dissatisfied to 5= very satisfied).

A five-item scale developed by (Bacharach & Mitchell, 1982; Conley, Bacharach, & Bauer, 1989) . This instrument has a 4-point Likert–type response format ranging from 1-very dissatisfied to 4-very satisfied. Respondents are usually asked how they are satisfied with: their present job when compared to jobs in other organizations, their progress towards goal achievement, the chance the job gives them to do what they like, their present job when they consider the expectations they had at employment time, their present job in light of their career expectations (Bacharach et al., 1991).

Job Descriptive Index (JDI**).** The JDI is an instrument developed by Smith (1969) and is used to measure job satisfaction. The JDI is a well-established instrument that is oftentimes used in measuring job satisfaction. In addition, its reliability and validity are well established with an internal reliability coefficient of 0.86 reported for the combined scores of items for all five scales

(Wiener, Muczyk, & Martin, 1992). A Cronbach's alpha of 0.72 has been reported by (Sekaran, 1986) and a Cronbach's alpha of 0.90 by Pearson (2008). The JDI is a 72-item questionnaire that measures job satisfaction in five areas: work, pay, promotions, supervision, and co-workers. Each item consists of a "yes," or "no" response to a word or short phrase. However, positively worded items are scored 3, 1, or 0 for each response, and negatively worded items are scored 0, 1, or 3 for each response respectively. A total score is obtained by adding the scores from all items in each of the scales, resulting in possible scores from 0 to 216.

In this study, to measure job satisfaction the MSQ short form was used based on its multidimensionality and its ability to measure both intrinsic job satisfaction and extrinsic job satisfaction. In addition, the instrument is widely reported to be used in job satisfaction measurement internationally (Buitendach & Rothmann, 2009; Hirschfeld, 2000; Weiss et al., 1967).

The relationship between Role Stressors and Job Satisfaction

Role conflict, role ambiguity and job satisfaction.

In search of the relationship between role conflict or role ambiguity and job satisfaction in HSAs, the review has identified that the relationship of the four constructs role conflict, role ambiguity, role overload and job satisfaction are not fully discussed in the literature for CHWS and HSAs. Therefore, this study's literature review will focus on studies that were carried out in other professions that have discussed the relationships among these constructs. Many studies conducted about these relationships have been conducted in the West and some Asian countries and very few in the African region. The majority of the studies carried out have reported a negative relationship between role conflict, role ambiguity and job satisfaction (House & Rizzo, 1972; Yaacob & Long, 2015; Karadal, Ay, & Cuhadar, 2008; Rizzo et al., 1970; Kahn et al., 1964).

A study investigating the relationship between role ambiguity and role conflict and their influence on job satisfaction perceptions of workers within a higher technology manufacturing organization, has provided evidence that there is a negative correlation between role conflict ($r=-0.53$; $p<0.05$) and role ambiguity ($r=-0.47$; $p<0.05$) on the job satisfaction of executives in the area of high-tech (Montgomery, 2012). This is usually the case in situations where employees are not sure of what they are supposed to do. In this study, the executives indicated they were responsible for many roles and that they were not sure of how to achieve the organizational objectives and goals. Situations like this are likely to contribute towards role ambiguity and lower job satisfaction among employees. This study was a correlational quantitative design and it used two instruments to measure role ambiguity, role conflict and job satisfaction. The Rizzo et al. (1970) tool was used to measure role ambiguity and role conflict, while the Bowling Green University's Abridged Job Descriptive Index was used to measure job satisfaction.

A cross-sectional study conducted on Nurse Executives views on role ambiguity, role conflict, job satisfaction and depression found a negative relationship between role conflict, role ambiguity and job satisfaction (Tarrant & Sabo, 2010). The study's sample size was 1000 and 380 respondents responded to the questionnaire. Additionally, the study used the demographic questionnaire, the role conflict and role ambiguity scale by (Rizzo et al., 1970) and the job satisfaction questionnaire by Schriesheim and Tsui (1980) to elicit the data. In addition, the study found moderate levels of role ambiguity and role conflict in Nurse Executives. In conclusion, the study indicated that as long as health care services continue to evolve, the Nurse Executive role will exert more pressure to the Nurse Executives.

A quantitative study conducted in Spain and Mexico among industrial workers of which its sample sizes were 130 in Spain and 407 in Mexico found a negative correlation between role

ambiguity and job satisfaction (Urien, Osca, & García-Salmones, 2017). Another quantitative study among Financial Controllers in Brazil found a negative correlation between role ambiguity and role conflict (Palomino & Frezatti, 2016). Another quantitative study conducted to examine the relationship between role ambiguity, role conflict, and work overload and their influence on job satisfaction among educators who are sport facilitators at primary and secondary schools in the Vaal Triangle in South Africa found significant negative relationships between role ambiguity, role conflict, work overload and job satisfaction (Dhurup & Mahomed, 2011). Additionally, Dhurup and Mahomed found all the three variables role ambiguity, role conflict and work overload as significant predictors of lower job satisfaction.

In terms of role overload, a survey conducted to enhance the understanding of job satisfaction of direct care workers among 984 direct care workers in 108 assisted living facilities in the USA found job satisfaction was negatively associated with role overload. The study used Pearson correlation and stepwise regression analysis to analyze the data. This finding is consistent with the findings of a study conducted to examine the relationship of the organizational role stress: role overload, role self-distance, and role stagnation with job satisfaction and turnover among private and public sector banks which found role overload was negatively related to job satisfaction with banking job employees (Kunte et al., 2017).

A quantitative correlational study to examine the relationship of role overload to job satisfaction and intent to leave among Registered Nurses in acute care settings in the USA is consistent with the finding and found a significant correlation between role overload and some job satisfaction facets (job satisfaction with scheduling and job satisfaction with work-family balance), role overload and intention to leave, and between role overload and the level of education in nursing (Morter, 2010). The study was carried out in two hospitals using a

structured questionnaire with a sample size of 217. The results indicated the importance of Registered Nurses (RN's) perception of role overload and the need for further research to determine other factors that might be related to role overload and intention to leave among RN's in the acute care settings (Morter, 2010). Similarly, many other studies have found role overload is negatively correlated to job satisfaction.

In conclusion, the literature reviewed has found the three role stressors are negatively correlated to job satisfaction. This means that increasing role ambiguity, role conflict and role overload levels among employees would yield lower job satisfaction among employees. Additionally, the studies reviewed have suggested future researchers should conduct similar studies in other groups of employees to expand the knowledge of these relationships (Karadal et al., 2008). This type of study has not been conducted among the HSAs hence, the need for carrying out this research study.

Factors for Role Stressors and Job Satisfaction in Other Professions

According to the role episode model, there are two factors that affect the role episode: organizational factors and interpersonal factors. The organizational factors look at issues such as the structure, role requirements, physical setting, task characteristics and organization practices while interpersonal factors address issues such as the importance of sender, mode of interaction, feedback and participation.

A quantitative study conducted in mainland China in Beijing which explored views of nurses and their experience regarding their working lives found 40% of the variance in job satisfaction was explained by a set of independent variables such as organization commitment, occupational stress, professional commitment, role conflict, role ambiguity, educational level, age and working experience (R2=0.396 (Lu, Kao, Chang, Wu, & Cooper, 2008). Among these

variables organization commitment, occupational stress, and role conflict had the strongest impact on job satisfaction of (31%, 5.5% and 1.9%) respectively (Lu et al., 2008).

A cross-sectional study conducted in Taiwan in five acute care teaching hospitals found role stress variables such as role ambiguity and role overload as the best predictors of job satisfaction at $P<0.01$ (Chen et al., 2007; Tarrant & Sabo, 2010). The results indicated that role stress variables predicted 24.8% of the variance in job satisfaction. The study components of job satisfaction included: professionalism, interaction, demand/reward, and control/recognition (Chen et al., 2007).

Similarly, a study conducted to determine the level of job stress, role conflict, role ambiguity, job satisfaction and their relation and to examine whether the same variables predict job satisfaction among staff nurses in Thai Nguyen Provincial General Hospitals in Vietnam found lower levels of job stress and role stress and moderate level of job satisfaction (Ha, Rattanajarana, & Sakulkoo, 2011). Ha et al. (2011) found role conflict and role ambiguity had moderate negative significant correlation with job satisfaction (r= -0.338, P <0.01; r = -0.354, P < 0.01). Both role ambiguity and role conflict explained 25% of the variance in job satisfaction (R^2 = 0.245, P < 0.05) and were found to be significant predictors of job satisfaction (Ha et al., 2011). The study used a sample size of 150 staff nurses and multistage sampling technique in sampling. Additionally, a self-administered questionnaire and descriptive statistics such as the Pearson Correlation and stepwise multiple regression analysis were used in the analysis.

A study conducted in mainland China Beijing which explored views of nurses and their experiences regarding their work life found 40% of the variance in job satisfaction was explainable by a set of independent variables such as organization commitment, role conflict, role ambiguity, educational level, age and work experience (R2=0.396) (Lu et al., 2008). Among

these variables' organization commitment, occupation stress, and role conflict had the strongest impact on job satisfaction. In addition, the study results revealed that nurses' role perceptions and actual role content had some influence on job satisfaction, role conflict, role ambiguity and occupational stress (Lu et al., 2008).

A quantitative study carried out to investigate the causes and effects of role ambiguity as perceived by the human resources management in Zimbabwe found five causes of role ambiguity which were size and complexity of the organization, rapid rate of change, restrictions on employees' authority, vaguely defined tasks and task interdependence. The perceived consequences of role ambiguity were interpersonal tensions, poor self-image, low job satisfaction, a decrease in affectivity, a decrease in propensity to leave and extreme behavior (Nyanga, Mudhovozi, & Chireshe, 2012). The study had a sample size of 130 (61M; 69F) and used descriptive statistics for analysis.

Role Stressors and Job Satisfaction in HSAs

In this section, the literature review has focused on HSAs experiences regarding role ambiguity, role conflict, role overload and job satisfaction. The literature search has found no specific studies conducted about these role stressors. However, elements that are characteristic of role conflict, role ambiguity and role overload have been featured in this literature review. Situations such as the frequent changes in roles, the subsequent addition of new tasks without adequate training, the limited availability of resources, and the increased number of interactions with different supervisors.

Role ambiguity.

A qualitative study conducted in Zomba to understand HSAs performed and documented roles found many HSAs were not sure of their job description (Martiniuk et al.,

2014). This could be explained by the continuous addition of new roles to their existing roles. Some of the roles added and performed by HSAs do not appear in their job description. Situations like this, are consistent with the role episode model which depicts such situations as triggers to role ambiguity (Kahn et al., 1964). Kahn et al. (1964) suggest in rapidly changing organizations changes made can contribute towards employees' role ambiguity. For example, the addition of new roles and the introduction of some modern technologies such as the Mobile Tool Kit for HSAs have the potential to trigger role ambiguity. Tankha (2006) suggests role ambiguity can be a source of greater uncertainty among employees and may lead to work attitudes that may affect commitment and satisfaction among them. Huber (2017) suggests training and support provision as prerequisites for the containment of role ambiguity in such type of employees.

Role conflict.

An assessment carried out in Chikhwawa district to assess HSAs current satisfaction with their positions and their priorities in terms of activities and career progression reported that the main likely causes of role conflict in HSAs were poor group dynamics and lack of collaboration among HSAs (University of Strathclyde, 2017). Some HSAs were reluctant to join their friends to participate in group activities such as mobile clinics. This type of conflict could be classified under inter-sender conflict, where the role senders (supervisors or co-workers) want the HSAs to participate in mobile clinics but the HSAs do not participate in the mobile activities. Another source of conflict presented in the Chikhwawa study pertains to the selection of participants to the workshop. Many HSAs have the interest to attend such workshops but are not given a chance to attend the meetings. Some HSAs felt there was bias in the selection of workshop participants. Additionally, HSAs lacked the spirit of sharing, some HSAs were

unwilling to share the limited resources available such as motorcycles (University of Strathclyde, 2017).

Additionally, personal and institutional conflicts are likely to occur where jobs overlap between HSAs and their supervisors. Other literature evidence suggest some health workers view the addition of new roles to CHWs as a threat to their profession (Lopopolo, 2002; Shindul-Rothschild & Duffy, 1996). For example, when some clinicians' roles changed to make them work efficiently and in an interdisciplinary manner, some clinicians perceived the changes as a threat to their profession (Lopopolo, 2002). In contrast, other clinicians viewed the changes as an expansion of their professional responsibilities into collaboration with other practitioners and the coordination of services. In the case of HSAs, their roles do overlap with the roles of others such as the Enrolled Community Health Nurses (ECHNs) and the Assistant Environmental Health Officers (AEHOs). In this situation, ECHNs and AEHOs are likely to have a feeling that their responsibilities are being taken away by the HSAs. It is important to note according to Merton (1957), the idea of role sets that every role has boundaries spanning roles which have role sets that overlap others roles. Hence the need for health workers to be clear of each other's role to avoid possible conflicts at the health facility. Debacker (2013) suggests mechanisms need to be in place to moderate these roles.

Role overload.

The HSAs role overload in Malawi is contributed by factors such as the addition of new roles that are continuously being added to their existing roles (Kadzandira & Chilowa, 2001; Kok & Muula, 2013). Further, the literature evidence suggests the time factor has a contribution to their role overload. Some literature evidence suggest some HSAs are spending much of their time at the health facility conducting health facility-based roles when they were supposed to be

at the community performing community-based activities (Martiniuk et al., 2014). This is said to be affecting the HSAs in terms of time needed to perform activities at the community level. To address this, they are reported to be prioritizing their roles as they do not have adequate time to perform all their roles (Smith et al., 2014).

The perception of HSAs' overload has been there even before the development of the integrated Community Case Management (iCCM) policy in Malawi. The concerns surrounding HSAs role overload have been two-fold: their capacity and capability to adequately perform the tasks that are continually being added to their existing roles. Other researchers have the opinion that it was an oversight on the part of the government to continue entrusting HSAs with more new responsibilities without taking away some of their old roles (Smith et al., 2014).

Job satisfaction.

Globally, this literature review has identified a number of factors for the job satisfaction of CHWs. Some of the factors that have been identified as satisfiers are an interpersonal relationship, working conditions, supervision, recognition, pay and benefits (Blaauw et al., 2013; Chevalier, Lapo, O'Brien, & Wierzba, 1993; Fischer & Sousa-Poza, 2008).

A cross-sectional study conducted to investigate overall job satisfaction and satisfaction with eight aspects of job satisfaction (work itself, coworkers, management, workload, promotion, organization structure, working conditions, payment and benefits) among CHWs in the Islamic Republic of Iran found work itself and co-workers support as satisfiers while the other 6 aspects especially payments and benefits were dissatisfiers (Kebriaei & Moteghedi, 2009). The study used a self-administered questionnaire, the job descriptive index and the employee satisfaction inventory to elicit the data (Kebriaei & Moteghedi, 2009). This study's finding is in agreement to a cross-sectional study conducted in the Volta Region in Ghana to examine the determinants of

job satisfaction among CHWs (Bempah, 2013). The study found work conditions as the most important predictor of job satisfaction (Bempah, 2013). Work conditions in an organization usually refer to lighting, heating, and air circulation. They are regarded as important because they can affect workers' productivity and can cause physiological as well as psychological stress in employees (Akin Aksu & Aktaş, 2005). Other job satisfaction predictors were recognition and interpersonal relationship. To collect the data, the study used the MSQ and job satisfaction factors were identified through factor analysis. To achieve job satisfaction in CHWs the study recommended a holistic strategic approach when addressing the determinants of job satisfaction (Bempah, 2013).

In contrast, a study conducted in the Morogoro Region of Tanzania to assess motivation and satisfaction in CHWs using a quantitative study design in a sample of 238, found co-worker support and relationship with community, job aids, and the capacity to provide services as satisfiers while lack of transportation, communication devices and financial incentives as dissatisfiers (Mpembeni et al., 2015).

A mixed-methods study of both qualitative and quantitative data conducted in Mwanza district of Malawi to identify factors that influence motivation and job satisfaction among HSAs in Mwanza district of Malawi identified team spirit and coordination, the type of work performed and work in a local environment as satisfiers (Kok & Muula, 2013). In the same study, low salary and position, poor access to training, heavy workload, extensive job description, inadequate recognition, lack of supervision, communication and transport were identified as dissatisfiers (Kok & Muula, 2013). This finding is consistent with the findings of other researchers in the literature who have reported dissatisfaction with the work itself, co-workers,

workload and promotion (Bempah, 2013; Jathanna, Melisha, Mary, & Latha, 2011; Kebriaei & Moteghedi, 2009; Peters, Chakraborty, Mahapatra, & Steinhardt, 2010).

Although HSAs in Malawi are well renowned for their great contribution towards health care delivery at the community level. Some literature evidence has reported great dissatisfaction among HSAs. The factors for lower job satisfaction among HSAs includes: low position, low salaries, inadequate extra financial benefits, lack of recognition and appreciation, lack of resources for their job, excessive workloads, inadequate opportunities for further training, inadequate supervision, and poor support from management as some of the contributing factors towards lower job satisfaction (Kadzandira & Chilowa, 2001; Kalaya, 2014; M. Kok & Muula, 2013, 2013).

A cross-sectional survey conducted by Kalaya, (2014) in Malawi in Nsanje district to assess the effect of job incentives provided to HSAs in Malawi on their job satisfaction is in agreement to this finding, where HSAs were demanding increased salaries and grades, adequate resources, increased opportunities for their training, allowances, decent accommodation, fair treatment from supervisors and regular supervision as some of the satisfiers in their job (Kalaya, 2014). To collect the data, the study used a self-administered and a semi-structured questionnaire. The sample size was 163 and the chi-square was used to establish relationships between job satisfaction and the demographic variables. Other literature evidence both international and local have identified the same satisfiers and dissatisfiers in their studies on CHWs (Battacharyya, Winch, LeBan, & Tien, 2001; Haq, Iqbal, & Rahman, 2008; Manongi & Marchant, 2006).

Summary

The literature review presented above has covered quite a number of HSAs aspects such as their roles, education and training, recruitment, and the relationships between role stressors and job satisfaction in other cadres. The HSAs in Malawi are performing many roles and that their roles are still being added. This has the potential to contribute towards the role stressors. However, the current situation is that the role stressors have not been fully studied among the HSAs. Evidence from the literature just mentions about the HSAs being overloaded with roles but does not go further to discuss the role stressors in detail. Studies about role stressors referred to in this literature review have been done elsewhere outside Malawi and in other cadres such as Banking personnel, teachers and nurses. In addition, at the moment there is no knowledge about the HSAs roles or tasks that have a contribution towards the role stressors. In terms of job satisfaction, further, there is inadequate information on role stressors levels and relationships existing between the role stressors and job satisfaction. This study will try to address these gaps in the literature to ensure policymakers are well informed on the role stressors of the HSAs.

Chapter 3

Methodology

Introduction

This chapter will discuss in detail the methodology followed in this study in order to explore role stressors and job satisfaction in HSAs. Issues such as population sample size and the selection of participants is discussed. In addition, the data collection procedures and data analysis are described.

Study Design

A cross-sectional study of the observational correlational design was chosen as the most appropriate for the study based on the fact that the researcher wanted to observe the cause and effect of the role stressors and job satisfaction at the same time and data was collected only once. It was observational because the causes and effects were observed on the participants during the study A setback to this methodology is that it does not support causal inference of the exposure and outcomes (Levin, 20:06).

Study Place

The study took place in the districts of Mangochi, Mzimba and Lilongwe (Fig 3) representing the southern, central and northern regions of the country. Additionally, Lilongwe

district represented the urban areas of the country. Many respondents (65%) were reported in Lilongwe district followed by Mangochi 22% and Mzimba 13% respectively (Fig 3). In total the number of health facilities visited was 28; 10 in Mangochi, 7 in Mzimba and 11 in Lilongwe. Three of the health facilities in Lilongwe Bwaila, Area 18 and Likuni were within the urban area.

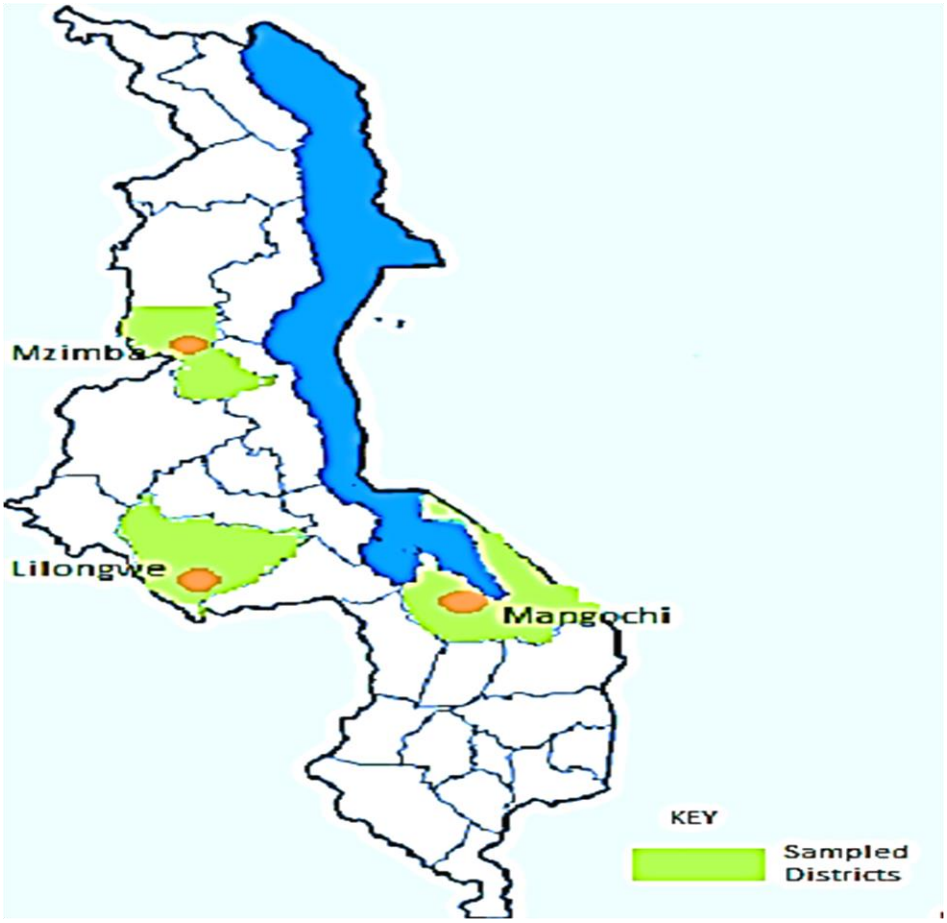

Figure 2: Map of Malawi showing sampled districts

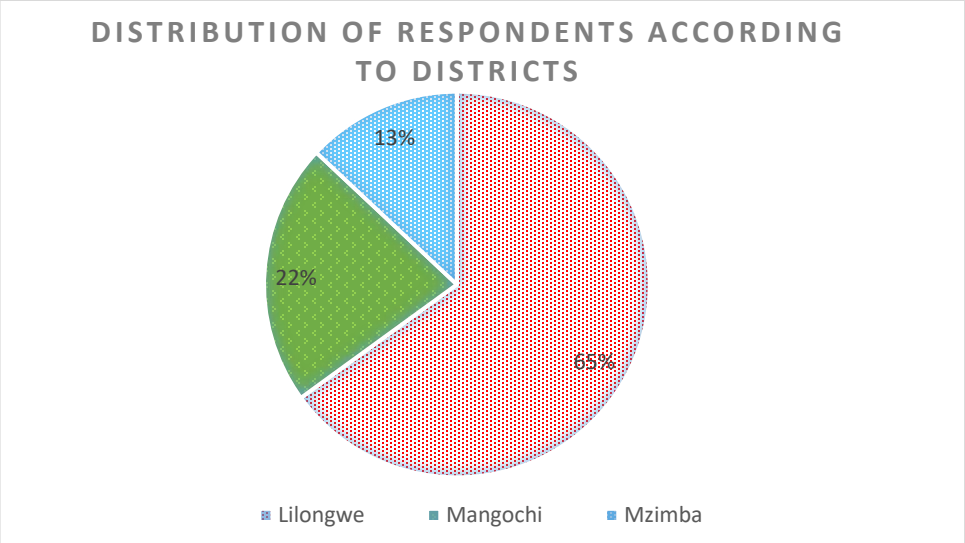

Figure 3:The distribution of respondents according to districts

Study Population

The study targeted serving and consenting HSAs as a study population in the selected districts. In Malawi, there is an estimated number of 11,000 HSAs deployed countrywide in both rural and urban areas. The expected HSA population ratio is 1:1000 but it is variant across districts with each HSA serving an average of 1,200 people (Kunkel, Van Itallie, & Wu, 2014). The Malawi MoH has the expectation that the primary role of an HSA is to provide essential health care at the community level to improve the health status of all Malawians, thus contributing towards productivity and economic growth of the country (MMOH, 2012). Further, the MMOH expects HSAs to perform three primary roles which are to: provide health promotion, disease prevention and curative care; promote community participation in health care activities; and provide surveillance of health problems at the community. The HSAs are deployed throughout the country in health facilities and health posts in the communities. They are the largest cadre in Malawi among health workers. The majority is trained, although their training period is considered to be short. In addition, all HSAs years of service at the current post

was above nine years. The mass recruitment of HSAs in districts which aligned HSA population ratio of 1:1000 was conducted by the Ministry of Health in 2007.

Study Period

The study was carried out from January 2017 to December 2017.

Sample Size

Studies to explore role conflict, role ambiguity, role overload and the job satisfaction of HSAs in Malawi are hitherto not available, hence, it was assumed that 50% of the HSAs were affected. Based on this assumption, the sample size for the study was calculated using (Lemeshow, Hosmer, Klar, & Lwanga, 1990) sample size calculation formula for the cross-sectional study, as follows:

$$n = \frac{\mathrm{Z}a\backslash^2 p(1-p)}{c^2}$$

where:

$Z = Z_{\alpha/2}$ is the Z value associated with a $100(1-\alpha)\%$ level of confidence obtained from normal distribution tables, which for a 95% confidence level, the value is 1.96.

p = proportion of HSAs estimated to have the problem of role conflict, role ambiguity, role overload and low job satisfaction. Since this is not provided in the literature, the prevalence proportion of 0.5 was used. This prevalence proportion has the capability to provide adequate observations, irrespective of the actual value of the true proportion.

c = the precision level or allowable error for the study or the margin of error for the study expressed as a decimal, and in this study, it was set at 5% i.e. c=0.05.

Putting values into the sample size formula gives

$n = \frac{1.96 \times 0.5 \times 0.5}{0.05^2}$ = 385 HSAs

Sampling

Multistage sampling was used to select the respondents. Malawi has three regions namely the Northern, Central and Southern regions. In the first stage, three districts were selected from the 29 health districts in Malawi using probability to proportional sampling (PPS) to ensure that all the three regions of the country were represented. In addition, the sampling also ensured that among the three districts selected there was a representation of both urban and rural settings.

At the district, a complete list of all health facilities in the selected districts was requested. This information was made available from the District Health Offices. Thereafter, PPS sampling was applied to select the visited health facilities. The populations and probabilities of selection for the selection of health facilities and respondents were determined through the use of a proportional formula f= n/N as illustrated in Annex I.

At a health facility, a list of HSAs was obtained and simple random sampling was used to select HSAs. Sampling was conducted from the health facilities such as health centre and district hospital. Those at the health post were captured at the health centre. Using the sampling methodology all HSAs based at either the district hospital, health centre and health post had an equal chance of selection.

Inclusion criteria.

The inclusion criteria were that all consenting HSAs working in the three selected districts, especially those working in government under the MoH were eligible to participate.

Exclusion criteria.

The exclusion criteria were that all HSAs who were working in other districts apart from the three selected districts were considered unsuitable to participate in this study. Similarly,

those working in other organizations, other than the MoH, were not eligible to participate in this study.

Recruitment process

At the DHO all names of the HSAs and health facilities were requested. PPS sampling was conducted and all health facilities with larger populations of HSAs were selected. At the health facility the respondents were randomly picked following simple randomization. The participants were given an introductory letter which requested their participation in the study. Additionally, the letter contained a consent form. After signing, they were left with the questionnaire and collection was done two or three days after delivery.

Data Collection

Data collection procedures

The study was carried out by a research team which, comprised three members, i.e., the researcher and two research assistants. The research assistants were responsible for the distribution and collection of questionnaires from the field and data entry. Prior to this, they were given a two-day training session which was facilitated by the Principal Investigator. Instead of distributing 385 questionnaires to respondents according to the sample size, a total of 462 questionnaires were distributed. This took into consideration the 20% cover for non-response rate. The Principal Investigator was the overseer of the research activities and was involved in all the steps of the research study. The questionnaire was self-administered and the responses were collected after two or three days.

Data collection tools.

A standardized face to face questionnaire having five sections was used to measure study variables. The first section collected socio-demographic data, while the subsequent

sections collected data on HSAs task prioritization (as taken from the HSAs job description), role conflict and role ambiguity, role overload and job satisfaction.

Socio-demographic data (Section A). This part of the questionnaire collected data on socio-demographic data such as age, gender and marital status.

Task questionnaire (B). The task inventory scale developed by (Burgel, Wallace, Kemerer, & Garbin, 1997) was adapted with modifications in this study to determine how HSAs prioritize their roles in terms of frequency and importance. The instrument has been used in many previous studies conducted. Mbambo (2003) used the instrument when conducting a job analysis of selected health workers in a district health system in KwaZulu-Natal for the South African Primary Health Care package of services (Uys, 2003). The instrument was modified and tasks not relevant to this study were removed and replaced with HSAs tasks contained in their job description to develop a final instrument. For each task, two options were required to tick in the most appropriate box whether the task applied to the setting and the frequency the task was carried out (less than once per week, 1-5 times per week, 6-10 times per week, more than ten times per week). The questionnaire was translated into the vernacular language, (Chichewa) and back translated into English for consistency of meaning. The translation process for the questionnaire from English to the vernacular language (Chichewa) followed a method as illustrated by WHO, Undated and involved both forward and back translation to ensure there was the consistency of meaning.

Role conflict and ambiguity scale (Section C). This part of the questionnaire collected data on the perceptions of HSAs on role conflict and role ambiguity. This was achieved through the use of the RCA Scale adapted from (Harris, 1991). Originally the scale developed by Rizzo et al. (1970), had 30 items where the odd numbers represented role conflict items and the even

numbers represented the role ambiguity items. In this study, 15-items were used (8 items for role ambiguity and 7 items for role ambiguity). The selected items from the 30 items were role ambiguity: items number 2, 4, 6,10, 12, 20, 24 and 26. For role conflict: item numbers used were 1,5, 9, 11, 13, 21, and 29. In contrast, other researches have used 6 items for role ambiguity and 8 items for role conflict. However, in this study 8 items were adapted for role ambiguity and 7 items for role conflict to ensure the two constructs role ambiguity and role conflict are fully covered in this study for HSAs.

The scale was chosen for use in this study because previous researchers have reported good psychometric properties of this scale, with a Cronbach's coefficient alpha for internal reliability value of 0.83 for role conflict and 0.72 for role ambiguity, with mean factor loading up to 0.80 for both items of role conflict and ambiguity (Conley & Woosley, 2000a; Schuler, Aldag & Brief, 1977; Smith, Tisak & Schmeider, 1993; Van Sell, Brief & Schuler, 1981). In addition, Day & Chamberlain (2006) have reported mean Cronbach's alpha value up to 0.85 for RCA scales. Further, evidence from the literature suggests the (Rizzo et al., 1970) RCA scale possesses a good model fit and that their two factor and three factor models demonstrate a better fit for RCA scales (Kelloway & Barling, 1990; Netemeyer, Johnston, & Burton, 1990). Even the most recent researchers, such as Moss (2015), have shown support for the psychometric integrity of the two scales. Furthermore, the scale has been widely used by many researchers studying role stress (role ambiguity, role conflict, and role overload) and it is also the most widely debated (Idris, 2011; Karimi et al., 2014).

The scale is treated as one tool, however, during analysis, role conflict and role ambiguity have been reported separately. The scale has been proved that it is a satisfactory measure for each one of these two independent and factorial identifiable variables. It has

fourteen items of which eight measure the strength of the role conflict variable and the rest measures the strength of the role ambiguity variable.

Role overload scale (Section D). This part of the questionnaire measured the perceptions of HSAs on role overload. The role overload scale (ROS) was used to measure the strength of role overload (Reilly, 1982). The ROS is based on an earlier measure of role conflict and role ambiguity designed by (House & Rizzo, 1972). The ROS is a 13-item questionnaire with a 5-point Likert–type response format. In this study, only 9 items of the ROS were adapted for use. The instrument was chosen because it has a Cronbach's alpha of 0.88 (Reilly, 1982). In addition, it has been used in previous studies where higher Cronbach's alpha values ranging from 0.89 to 0.94 have been reported (Pearson, 2008; Perry-Jenkins, Seery, & Crouter, 1992).

Job satisfaction scale (Section E). To measure the job satisfaction variable, the Minnesota Satisfaction Questionnaire (MSQ), of the short version form, originally developed by (Weiss et al., 1967), was used. It is a 20-item scale. The items are rated on a 5-point Likert–type response format (from 1=very dissatisfied to 5= very satisfied). For example, a sample item like this: "On my present job, this is how I feel about my chances for advancement", on my present job this is what I feel about the praise I get for doing a good job". The internal consistency of the 20-item scale is provided with an alpha value of 0.90. This is relatively high and supports the internal consistency of the measurement (Sekaran, 2013). A Cronbach alpha coefficient of 0.7 and above is desirable in social science research (Pallant, 2013). Other researchers accept 0.5 as a minimal or acceptable requirement for an instrument to be reliable (Bowling et al., 2017; Chakrapani, 2002; Streiner, Norman, & Cairney, 2015).

For measuring the strength of each one of these indicators a mixed scale was used which is a combination of a Likert–type response format composed of five value levels, with the semantic limits of complete disagreement and complete agreement.

Adaptation process. To adapt some items for the questionnaires, permission was sought from the American Psychological Association (APA), the University of Minnesota Vocational Psychology Research through the Rights Link of the Copyright Clearance Centre.

Pretesting

The data collection tools were first pre-tested before distribution to respondents. The pre-test was done among HSAs in Nkhotakota a different district from the sampled districts. The pre-test was conducted with the intention to identify items in the questionnaire which were not clearly drafted and might not be clear in the reader's view. The identified items were corrected and once the corrections were made, the questionnaire was ready for distribution to the respondents. The pre-test findings were not incorporated into the main study.

Reliability Analysis

Internal consistency was used to assess the reliability of the scales and subscales. This was carried out during pretesting to find out if there was consistency in the way the respondents were responding to the items on the questionnaire. The Cronbach's alpha (α) was used for this purpose.

According to (Table 1) all scales except the role conflict subscale and the MSQ had an alpha of 0.70 or higher. An alpha value of ≥ 0.70 is desirable, although values that are slightly below 0.70 are usually considered acceptable (Adams & Lawrence, 2014). This shows that the scales used for the role stressors and job satisfaction variables were reliable and affirmed accurate results.

Table 1: Showing the reliability of the scales used

	Cronbach reliability for this study	Cronbach reliability in other studies	No of items
Role Ambiguity	0.76	.81	8
Role Conflict	0.63	.62	7
Role Overload	0.79	.78	9
Job Satisfaction	0.61	.66	20

Validity

The instrument had some sections with adapted questionnaires, hence content validity ensured that it captured relevant information and it measured role stressors and job satisfaction in all HSAs in a similar manner to avoid bias (Polit & Beck, 2014). Experts in the field were given the questionnaire to look at the items to determine whether the items in the scale accurately reflected the constructs of role stressors and job satisfaction and the HSAs tasks. Additionally, validity was achieved by bias control through multistage sampling that ensured all the three regions, districts, health facilities and the HSAs in the sampled districts had an equal chance of selection. Further, the researcher ensured that all questionnaire items of the study were based on the objectives of the study (Joubert & Erhlich, 2007)**.** Furthermore, the survey instrument was subjected to criterion validity which assessed if there was a positive correlation between scale scores and a behavioural measure (Adams & Lawrence, 2014).

Data Management and Analysis

Good data management principles were followed immediately the questionnaires arrived. Questionnaires were entered on a log immediately upon their arrival from the field. Additionally, the questionnaires were assigned identification numbers and filed. Further, special interest was given to the security of the questionnaires and an effort was put to ensure no single questionnaire was lost in the process.

The data was collected, sorted, coded serially and entered into the computer for analysis with the aid of the statistical software package SPSS version 23 using analytical techniques of descriptive and multivariate statistics. The choice of variables for analysis was guided by the objectives of the study and the principal component analysis (PCA) which extracted factors for multiple regression analysis. Additionally, some variables were selected because they were significant after running the ANOVA.

Demographic variables.

A profile of HSAs was created from the data and the demographic information such as; age, sex, level of education, and years of service at the current post were reported. Descriptive statistics such as mean, corresponding standard deviations, and percentages formed some of the summary statistics.

HSAs task prioritization.

The tasks performed by HSAs were analyzed based on the calculation of frequency and importance rating of each task. In addition, an index of frequency was calculated for each item. Frequencies were calculated based on the following criteria:

Very frequent. This includes all tasks performed by HSAs at least six times or more per week as indicated by 70% or more of the respondents during the study

Frequent. This includes all tasks performed by HSAs, at least one to five times in a week as indicated by 70% of respondents during the survey

Rarely performed tasks. This includes all tasks that are performed by HSAs less than once per week by 50% or more of respondents during the survey

Very rarely performed. This includes all tasks performed less than once per week by 80% or more of respondents

This methodology to calculate the frequency-importance index was done after Burgel, Wallace, Kemerer, & Garbin, (1997) in an article "Certified Occupational Health Nursing-Job Analysis in the United States of America". This methodology enables one to compare both the frequency and the importance of a task, giving more weight to the latter. This methodology is commonly used in job analysis studies for the health professions, as the less frequent tasks are often the most important tasks, e.g., administering cardiopulmonary resuscitation (Burgel et al., 1997).

Role Stressors and Job Satisfaction

All the role stressors (role ambiguity, role conflict and role overload) scores for the sample were calculated to get a mean with its standard deviation and range. The possible range of scores with the tools used was 1.00 to 5.00. A higher number denoted the higher the rate of the role stressor.

Job satisfaction scores for the sample were calculated to get a mean with its standard deviation and range. The possible range of job satisfaction scores with the scale used was 1.00 to 5.00, with the higher score denoting a higher rate of job satisfaction. The possible range of job satisfaction scores using the scale was 1.00 to 5.00.

The relationship between role stressors and job satisfaction.

To ascertain if there were relationships between role stressors and job satisfaction a Pearson product-moment coefficient *r* was used. The possible range of correlation coefficients was -1 and +1. A significant positive coefficient indicated that the two variables were positively correlated while a significant negative coefficient indicated a negative relationship between the study variables.

The relationship between demographic variables, role stressors and job satisfaction.

Analysis of Variance (ANOVA) was used to determine if there were statistically significant associations in the means of demographic variables such as age, education, number of years at service post of the HSAs and role stressors or job satisfaction. Where ANOVA showed significant associations, Tukey's HSD post-hoc test was used to separate the significantly different pairs of means of the variables under study.

Predictors of the role stressors and job satisfaction.

A PCA was conducted on the items of all role stressors and job satisfaction instruments. The approach employed maximum likelihood extraction and varimax rotation with Kaiser Normalization to ascertain the dimensions underlying the research constructs. The Kaiser Rule and scree test were used to examine the importance of the items. The Kaiser-Meyer-Olkin (KMO) was used to measure sampling adequacy and the decision was based on whether the sampling adequacy was greater or equal to 0.6 which is recommended in social sciences (Pallant, 2013). The Bartlett's test of sphericity was conducted to ensure it had a statistically significant probability level of ($P < 0.001$).

Subsequent rotations were done to show whether there were interrelationships between factors and this was done by loading the factors on the items. The loaded factors were reflected with an eigenvalue to determine their total variance. All the factors, their eigenvalues and their variances were explained in relation to their total variances.

Subsequently, the factors that were identified were further analyzed by using multiple regression data to assess the main items of the role stressors and job satisfaction. Further, statistical analyses using the correlation coefficients examined the predictive effects of the main items.

Results Presentation

Study results were presented in tables, graphs, and diagrams and their use supported the argument that appeared in the text or where it was necessary to illustrate the data.

Ethical Clearance

Ethical clearance was obtained from the College of Medicine Research Ethics Committee (COMREC). The three broad principles relevant to research involving humans such as respect for persons, beneficence, and justice were adhered to in this study. Respect for persons was achieved by obtaining written or oral consents from the study participants immediately after explaining the objectives of the study. In addition, they were informed about their freedom to leave the study at any time even before the questionnaire was completed if they felt to do so. Beneficence was achieved by assuring the study participants that no harm would be done to them and that the study results would be beneficial to their work as it would suggest some improvements to their work for the Ministry of Health to consider. Justice was assured by ensuring that there was an equal opportunity given in the recruitment of study participants. Since all the HSAs were literate, a written consent was obtained from them.

Chapter 4

Results

Introduction

This chapter presents the results of the study as outlined in the methodology chapter. The results are in narrative form and tables and graphs have been used to summarize some information. The data analysis was informed by the research objectives of the study. The sample size was 385 and the questionnaire was distributed to 462 respondents taking into consideration a none-response rate of 20%. However, a total of 432 questionnaires were completed but two were discarded because of incompleteness (Table 2).

Table 2: Distribution of questionnaires

	Questionnaires		
	Distributed	**Responded to**	**Response Rate**
Mangochi	105	95	90.5
Lilongwe	287	280	97.6
Mzimba South	70	57	81.4
Total	**462**	**432**	**93.5**

Demographic Characteristic*s*

Age.

The majority of the respondents were in the age range between 36-45 years, followed by the age range of 26-35 years (Table 3).

Gender.

According to the gender of the respondents males (50.2%) were slightly higher than females (49.8%) (See Table 3).

Marital status.

The majority of the respondents (85.1%) were married (Table 3).

Education level.

In terms of educational qualifications, many participants had the Malawi School Certificate of Education (MSCE) followed by the Malawi Junior Certificate of Education (JCE) (Table 3).

Job specialization in HSAs

Generally, CHWs are classified into two: generalists and specialists. Similarly, with HSAs, the generalists are engaged in general service provision such as the performance of the traditional roles such as WASH while specialists are engaged in specialized activities that are mainly targeted towards diseases prevention and control such as integrated childhood case management (iCCM and HIV Testing Service (HTS). Therefore, the majority of the respondents 81.6% indicated they were performing specialized tasks (iCCM=24.7%, Tuberculosis (TB) services 17.7%, HTS= 22.2% and cold chain (1.9%) (Table 3).

Other HSAs tasks mentioned under others.

Other HSAs tasks mentioned under others (33.5%) included general tasks such as community based maternal and neonatal health (CBMNH), community based nutrition supplementary programme (CBNSP), water, sanitation and hygiene (WASH), drug store custodian, immunizations, family planning, information education and communication (IEC), microscopy, mental health, malaria rapid diagnosis and testing (MRDT), sexual transmitted infections (STI), nutrition, research assistant and SHSA.

Intention to quit the job.

The findings of this study indicate very few respondents (2.1%) had the intention to quit their job (Table 3).

Location

According to the findings of this study, the majority of the HSAs were based within the health centre catchment area (76.7%) and not the district hospital catchment area (23.3%) (Table 3).

District of work

The majority of the respondents were from Lilongwe district (64.7%) while Mangochi had 22.1% and Mzimba 13.3%.

Years at the service level

The majority of the HSAs had less than 10 years at service post while those above 20 years were few (2.4%).

Table 3: Demographic characteristics of the respondents

Variable	n	%
Age		
26-35	154	35.8
36-45	221	51.4
46-55	52	12.1
56-60	3	0.7
Gender		
Male	216	50.2
Female	214	49.8
Marital Status		
Married	365	85.1
Unmarried	53	12.4
Divorced	8	1.9
Widowed	3	0.7
Education		
PSLCE	8	1.9
JCE	193	44.9
MSCE	217	50.7
Diploma	12	2.8
Specialization		
Yes	350	81.6
No	79	18.4
Speciality Type		
Cold Chain	7	1.9
TB	64	17.7
HTS	80	22.2
iCCM	89	24.7
Others, specify...	121	33.5

Variable	n	%
Intention to Quit		
Yes	9	2.1
No	42	97.9
Location		
H/Centre	330	76.7
D/Hospital	100	23.3
District of Work		
Mangochi	95	22.1
Lilongwe	278	64.7
Mzimba	57	13.3
Years at Service Post		
<10	300	80.6
11-20	63	16.9
>20	9	2.4

Job title.

Respondents were asked to write what their job title was considering that other HSAs were carrying out specialized tasks that were outside their jurisdiction such as cold chain, TB and many others. The finding in this study is that 99.5% of the respondents indicated their job title was a Health Surveillance Assistant regardless of the fact that they were engaged in many different tasks. Only one respondent mentioned the title of Senior Health Surveillance Assistant (SHSA).

Perceptions of HSAs on Role stressors and Job Satisfaction

To get the perceptions of the HSAs on role stressors and job satisfaction, the role conflict and ambiguity (RCA) scale adapted from (Harris, 1991), the role overload scale (ROS) adapted from Reilly (1982), and the Minnesota Short Version Questionnaire (MSQ20) developed by (Weiss et al., 1967) were used to elicit the data. Since there were no global questions addressing the attributes the mean scores, standard deviations and percentiles were calculated. The interpretation of the mean scores was based on the interpretations by Oxford & Burry-Stock (1995). According to Oxford classification, the range of 1.0 to 2.4 (mean score) is thought to reflect low level, a mean of all respondents in the range of 2.5 to 3.4 is thought to reflect a moderate level while a mean of all respondents in the range of 3.5 to 5.0 is thought to reflect high level (Oxford & Burry-Stock, 1995).

Role ambiguity.

The observed mean role ambiguity scores ± 1SD for the HSAs in this study was 1.76 ± 0.74 (range 0.86 - 4.88). The expected or standard range of role ambiguity scores with the tool used was 1.00 - 5.00. The observed range in this study is lower than the expected; hence the study participants had lower levels of role ambiguity.

Role conflict.

The observed mean ± 1SD role conflict scores was 3.40 ± 0.89, with a range of 1.29 - 5.00. When these figures are compared to the standard or expected range of role conflict scores of 1.00 - 5.00, the results show that the HSAs in this study had moderate levels of role conflict.

Role overload.

The mean ± 1SD role overload scores in this study was 3.18 ± 0.94 with a range of 1.00 - 5.00. The observed range in this study was also the expected or standard range for role overload, hence, the HSAs in this study demonstrated moderate levels of role overload.

Job satisfaction.

The mean ± 1SD job satisfaction scores calculated for the HSAs in this study was 3.80 ± 0.47 with a range of 1.6 - 4.75. The observed range in this study fell within the expected or standard range of 1 - 5.00. Hence the HSAs in this study were highly satisfied with their job.

Percentile Scores

The results for 75th percentile (%tile) of the HSAs are shown in Table 4. In interpreting %tile scores, values on the 25th %tile or lower are considered to be "low" while those on the 75th %tile and above are considered to be "high" (Weiss et al., 1967). Scores in between the 26th to the 74th %tile are considered "average or moderate".

The respondents had highest percentile score for job satisfaction (83%tile) and the least score for role ambiguity (16%tile) while average scores were obtained for role conflict (28%tile) and role overload (32%tile). This means that respondents had higher perception levels for job satisfaction and lower perception levels of role ambiguity while they had moderate levels of role conflict and role overload (Table 4).

Table 4. Percentile Scores for role stressors and job satisfaction

Variable	5th	15th	25th	50th	75th
Role Ambiguity	8	9	10	12	16
Role Conflict	25	24	32	27	28
Role Overload	32	35	30	25	32
Job Satisfaction	65	76	69	76	83

Relationships between Demographic Variables and the Role Stressors and Job Satisfaction

Age.

There was a high significant relationship between age and job satisfaction ($\chi 2$= 319.31, *df* = 186, *p*< 0.001) while insignificant relationships were obtained with role ambiguity ($\chi 2$= 78.20, *df* = 96, *p*< 0.907), role conflict ($\chi 2$= 87.15, *df* = 81, *p*< 0.300) and role overload ($\chi 2$= 129.35, *df* = 114, *p*< 0.154). The job satisfaction level was high in those aged between 36-45 years compared to the other age groups (Figure 4).

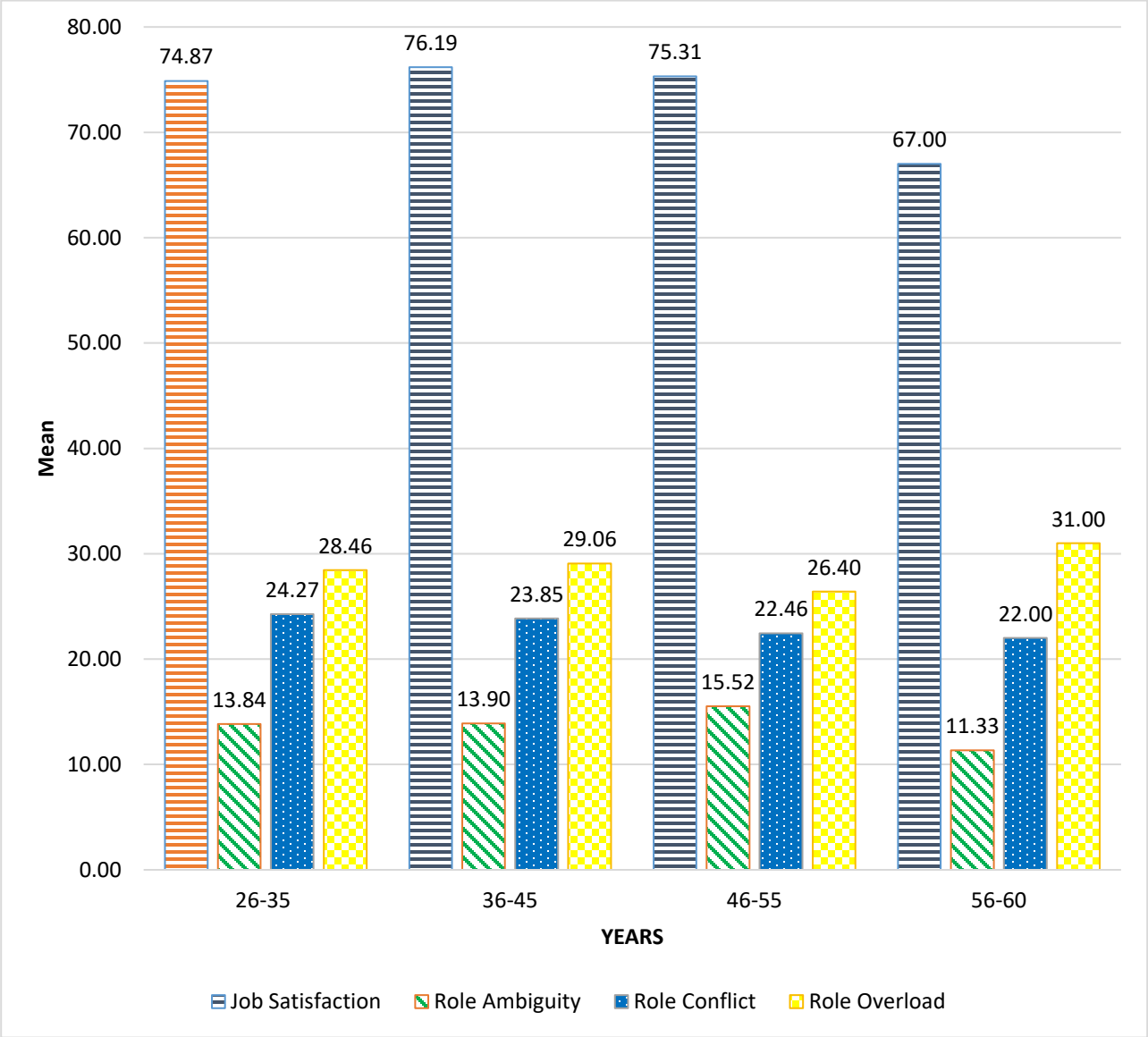

Figure 4: Mean of age and job satisfaction and role stressors

Gender.

In terms of gender, there were significant relationships between gender and job satisfaction ($\chi 2$= 84.41, *df* = 62, *p* = 0.031), role ambiguity ($\chi 2$= 51.52, *df* = 32, *p* < 0.016) and role conflict ($\chi 2$= 50.17, *df* = 27, *p* = 0.004). However insignificant associations were observed between gender and role overload ($\chi 2$= 48.02, *df* = 38, *p* = 0.128). The mean scores are presented in Figure 5.

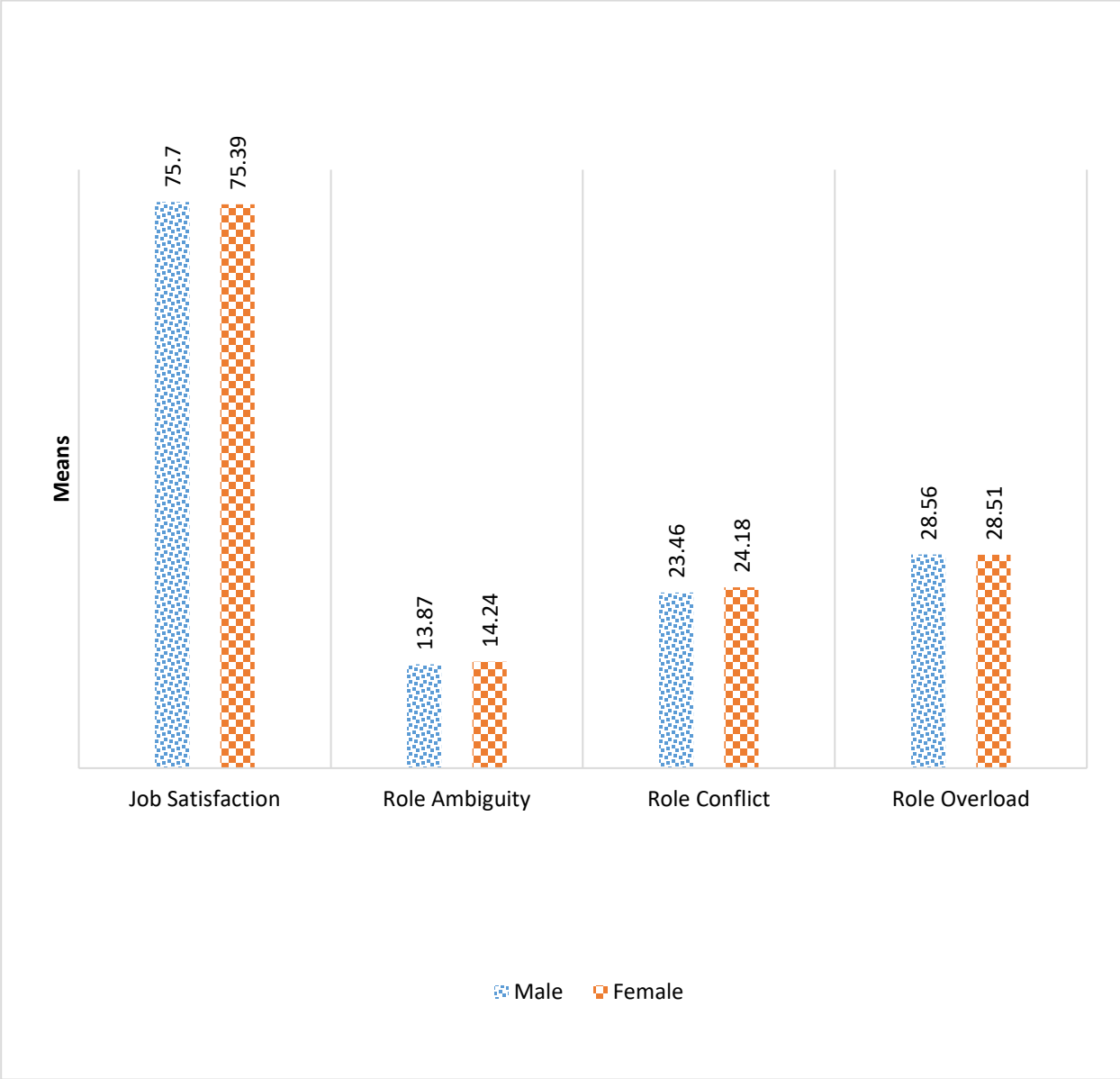

Figure 5: Mean of gender and job satisfaction and role stressors

Marital status.

In terms of marital status, there were significant relationships with role overload ($\chi 2$= 167.13, *df* = 114, *p* < 0.001). Insignificant relationships were found with role ambiguity ($\chi 2$= 105.30, *df* = 96, *p* =0.242), role conflict ($\chi 2$= 67.19, *df* = 81, *p* < 0.864) and job satisfaction ($\chi 2$= 205.87, *df* = 186, *p* < 0.151). The results indicate that role overload was high among divorced women (Figure 6).

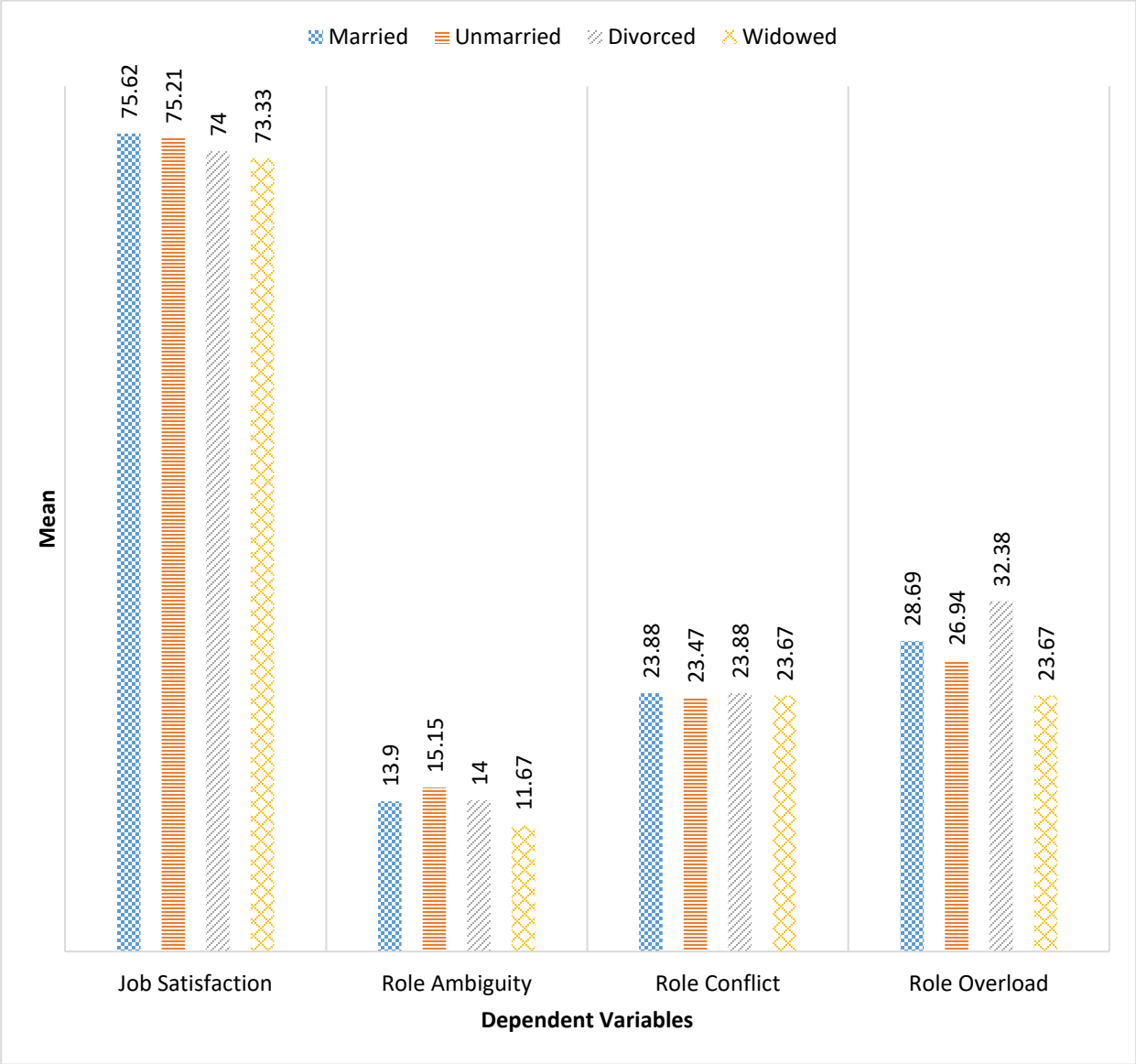

Figure 6: Mean of marital status and job satisfaction and role stressors

Education.

There were significant associations between education level and the following variables; role conflict ($\chi 2$= 124.78, *df* = 81, $p < 0.001$), role overload ($\chi 2$= 189.03, *df* = 114, $p < 0.001$) and job satisfaction ($\chi 2$= 248.71, *df* = 186, $p < 0.001$). Findings for role ambiguity were however not significant ($\chi 2$= 116.79, *df* = 96, $p = 0.073$). High job satisfaction levels (*M*= 75.83, SD= 9.85), existed among respondents who had a JCE compared to other respondents who had an MSCE or a PSLCE. High role conflict levels were observed among the respondents with a PSLCE (*M*= 24.88, SD= 5.11) (Figure 7).

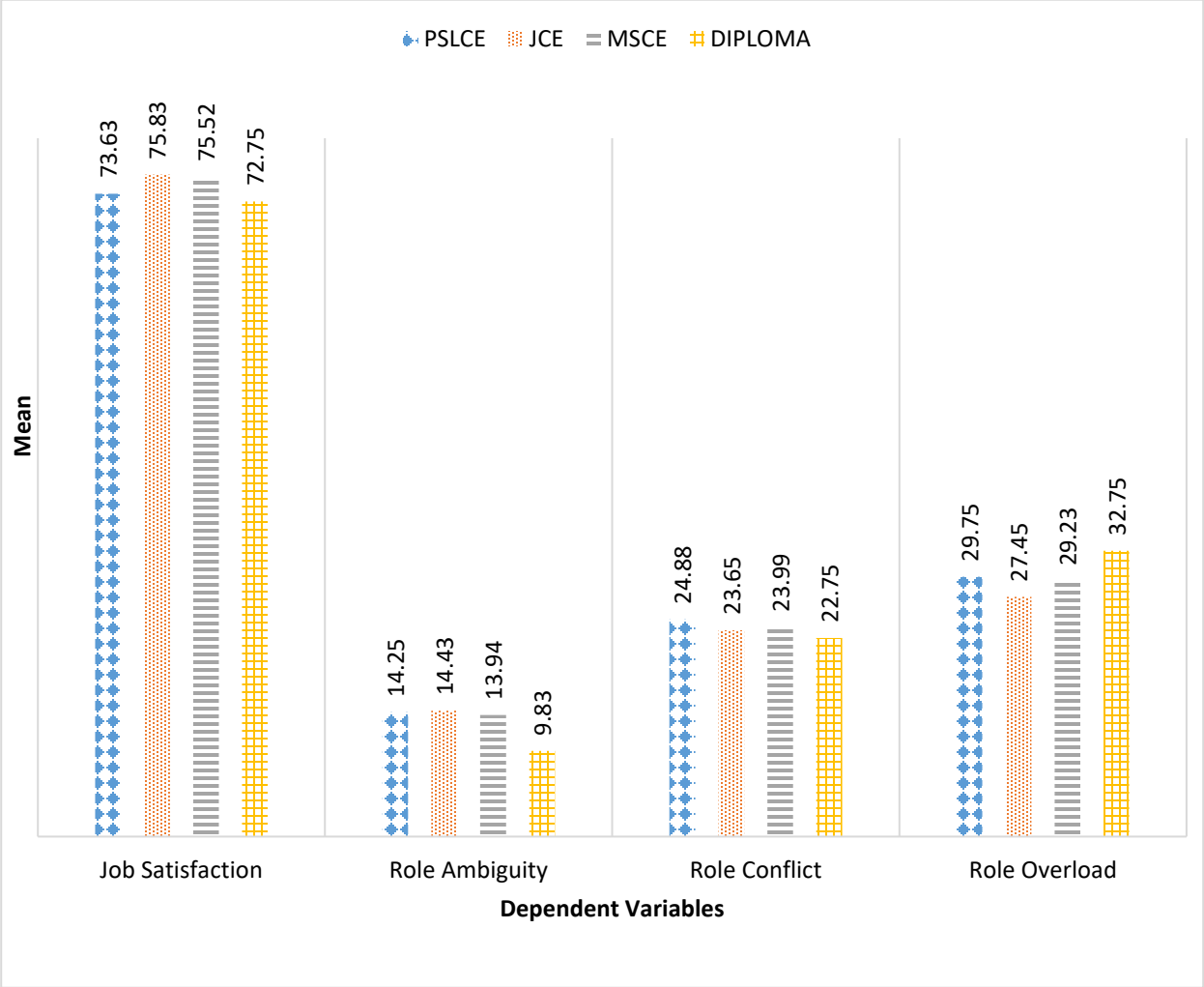

Figure 7: Mean of education level and job satisfaction and role stressors

Specialization.

Statistically significant relationships were obtained between job specialization and role ambiguity ($\chi 2$= 52.59, *df* = 32, *p* = 0.012), role conflict ($\chi 2$= 53.27, *df* = 27, *p* = 0.002), role overload ($\chi 2$= 82.32, *df* = 38, *p*< 0.001) and job satisfaction ($\chi 2$= 105.63, *df* = 62, *p* < 0.001). HSAs specialized in certain tasks had higher role ambiguity (*M*= 14.21, *SD*= 6.11) and job satisfaction (*M*= 75.75, *SD*= 9.91) than those who were unspecialized (Figure 8).

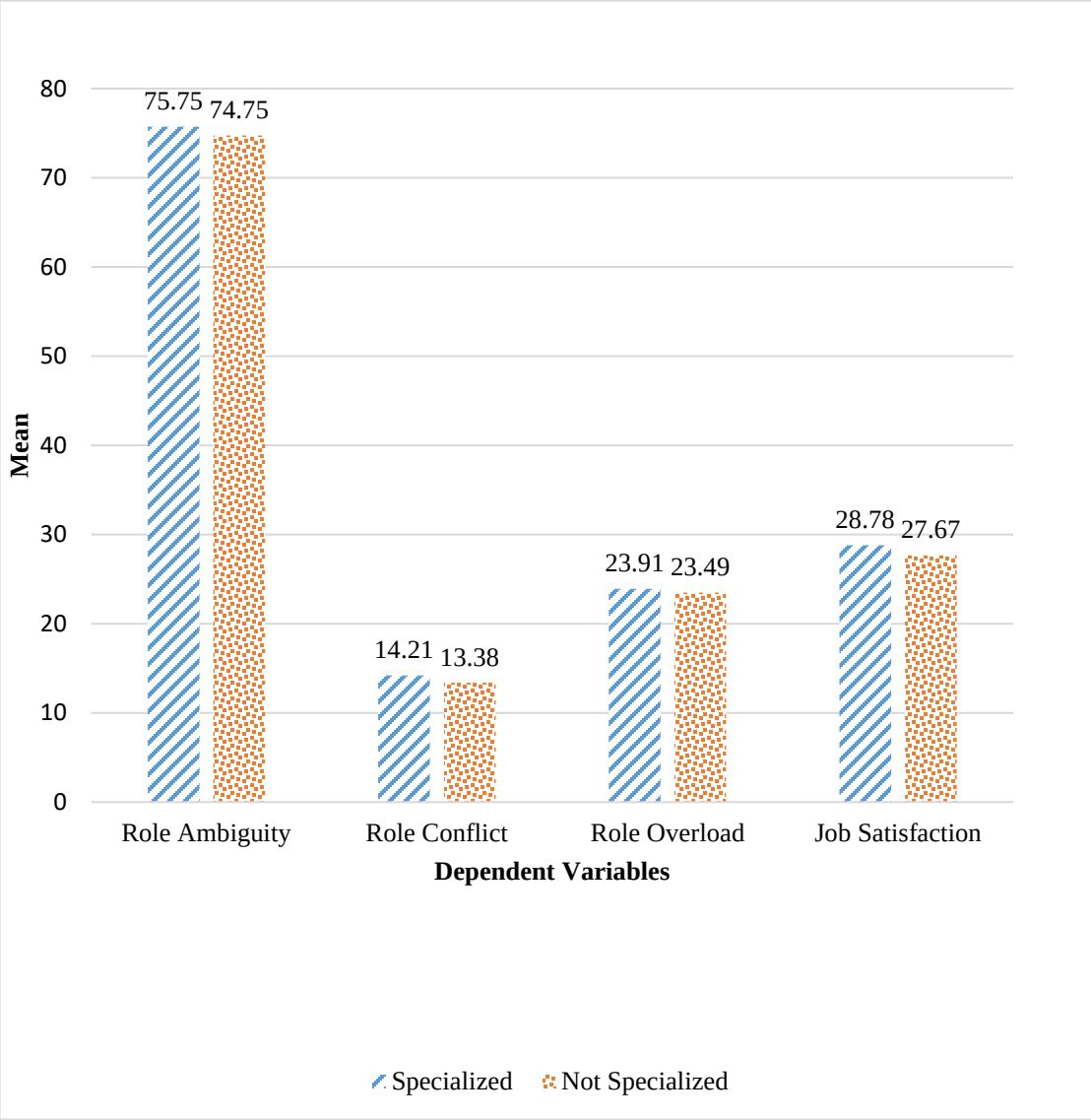

Figure 8: Mean of job specialization and job satisfaction and role stressors

Intention to quit.

Statistically significant results were obtained with role conflict ($\chi 2$= 57.043, *df* = 27, *p* < 0.001) and job satisfaction ($\chi 2$= 122.166, *df* = 62, *p*< 0.001), while insignificant results were obtained with role ambiguity ($\chi 2$= 16.130, *df* = 32, *p* = 0.991) and role overload ($\chi 2$= 32.606, *df* = 38, *p*=0.717). Respondents who had no intention to quit their job had higher levels of role ambiguity (*M*= 14.11, *SD*= 5.99), role conflict (*M*= 23.85, *SD*= 6.25) and job satisfaction (*M*= 75.61, *SD*= 9.60) than those who had the intention to quit. Role overload was high among those that had the intention to quit (*M*= 31.11, *SD*= 7.49) (Fig 9).

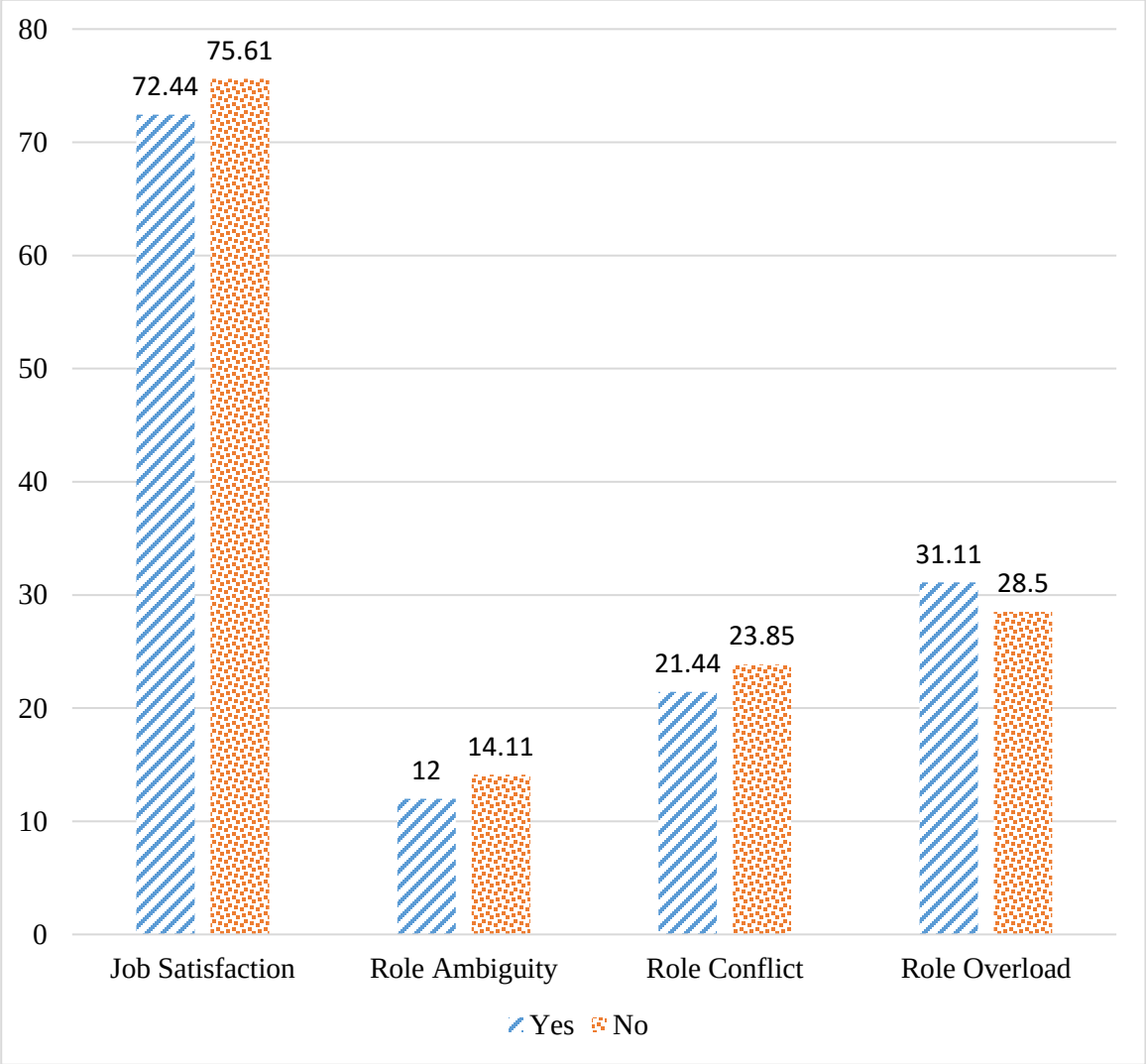

Figure 9: Mean for intention to quit the job and job satisfaction and role stressors

District of work.

In Figure 10 the specific mean scores and standard deviations for the three districts of Mzimba, Mangochi and Lilongwe are presented. However, there were no significant relationships that were observed across the role stressors and job satisfaction, and the district of work. The cross-tab findings were: role ambiguity ($\chi 2$= 71.39, df = 64, p = 0.246), role conflict ($\chi 2$= 29.92, df = 54, p = 0.997), role overload ($\chi 2$= 64.73, df = 76, p = 0.818) and job satisfaction ($\chi 2$= 110.62, df = 124, p = 0.799).

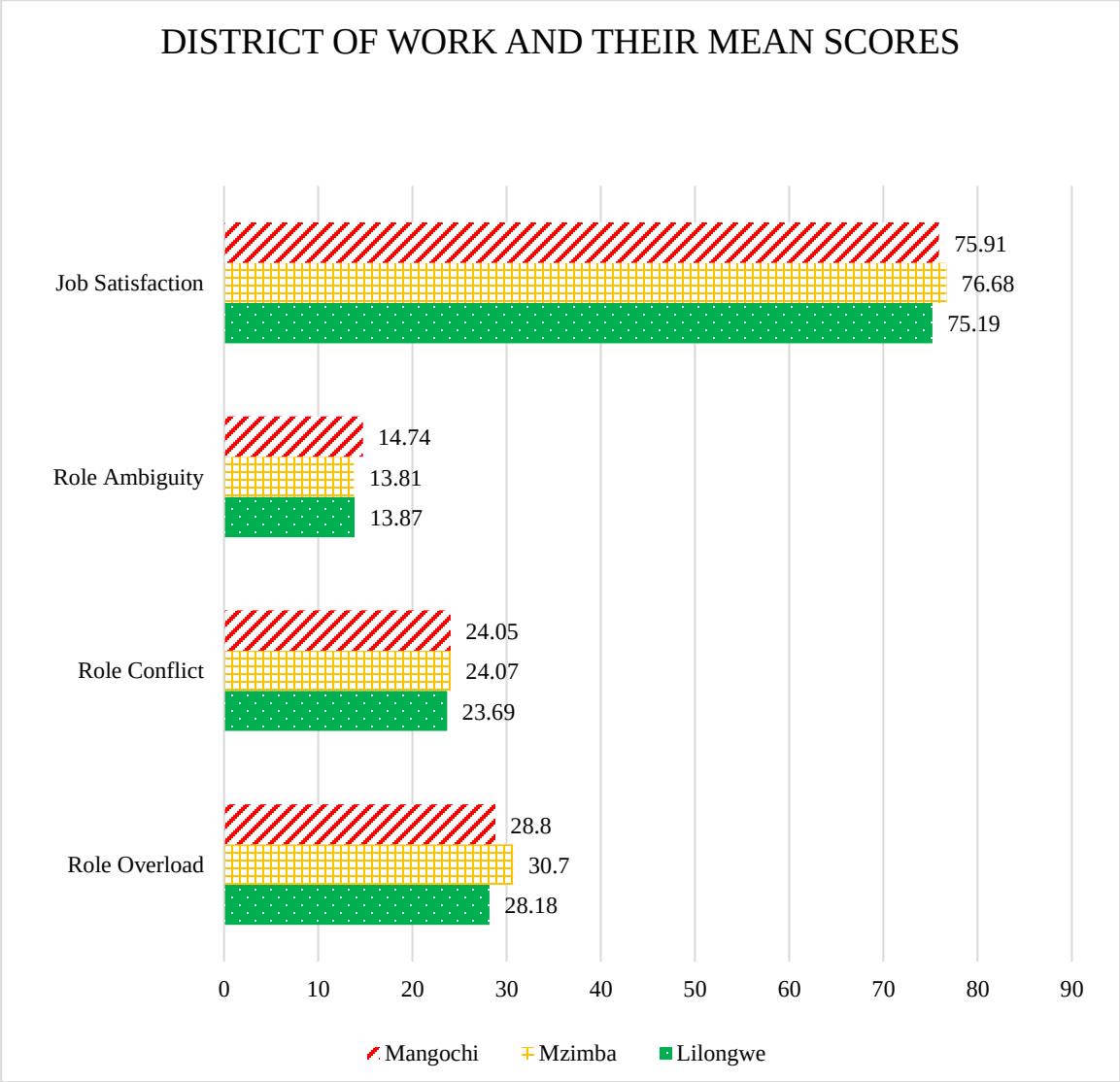

Figure 10: Mean of the district of work and job satisfaction and role stressors

Working at the health centre and the district hospital.

Highly significant findings were found between health facility type and the dependent variables: role ambiguity ($\chi 2$= 77.55, *df* = 32, *p*< 0.001), role conflict ($\chi 2$= 66.44, *df* = 27, *p*< 0.001), role overload ($\chi 2$= 82.97, *df* = 38, *p*< 0.001) and job satisfaction ($\chi 2$= 134.96, *df* = 62, *p*< 0.001). Hence, respondents who were working at the Health Centre had high role ambiguity (M= 14.27, SD= 5.90) and job satisfaction (M=75.80, SD= 10.09) levels, when compared to respondents who were working at a District Hospital: role ambiguity (M= 13.34, SD= 6.05), and job satisfaction (M= 74.70, SD= 7.61). However, high role conflict level (M= 25.37, SD= 6.08) and role overload (M= 28.85, SD=7.39) were realized at the District Hospital (Figure 11).

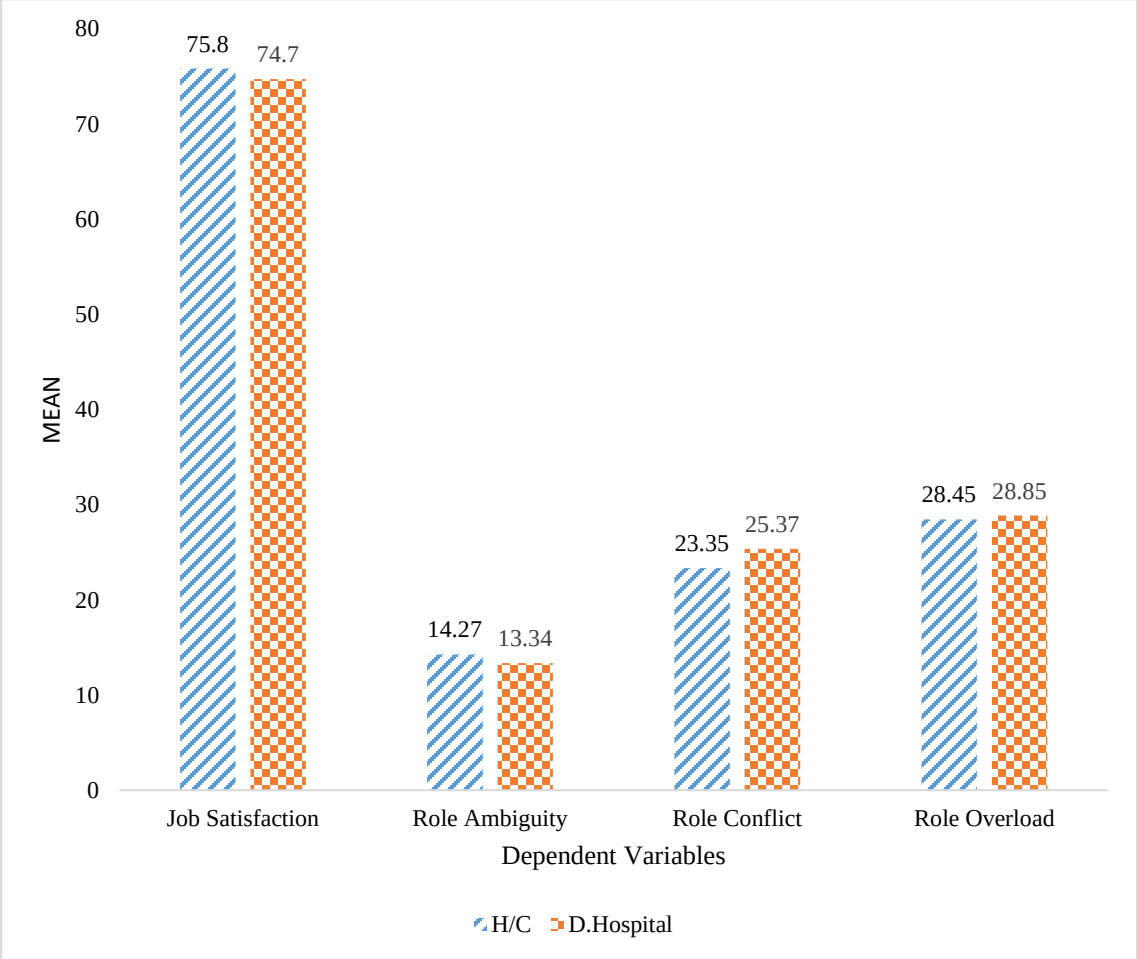

Figure 11: Mean of H/Centre/District Hospital and job satisfaction and role stressors

Rural areas versus urban areas.

There were significant relationships between location of a health facility and role ambiguity ($\chi 2$= 105.63, *df* = 32, *p*< 0.001), role conflict ($\chi 2$= 76.75, *df* = 27, *p*< 0.001), role overload ($\chi 2$= 82.97, *df* = 38, *p*< 0.001) and job satisfaction ($\chi 2$= 191.50, *df* = 62, *p*< 0.001). Study results indicate that respondents in health facilities based in rural areas had high role ambiguity (*M*= 14.12, *SD*= 5.72), role overload (*M*= 28.74, *SD*= 8.63) and job satisfaction (*M*=76.22, SD= 9.50) compared to those in the cities (Figure 6). However, respondents in health facilities based in the urban area had high perception of role conflict (*M*= 24.82, *SD*= 6.35) compared to those in the rural area (*M*= 23.56, SD= 6.16) (Figure 12).

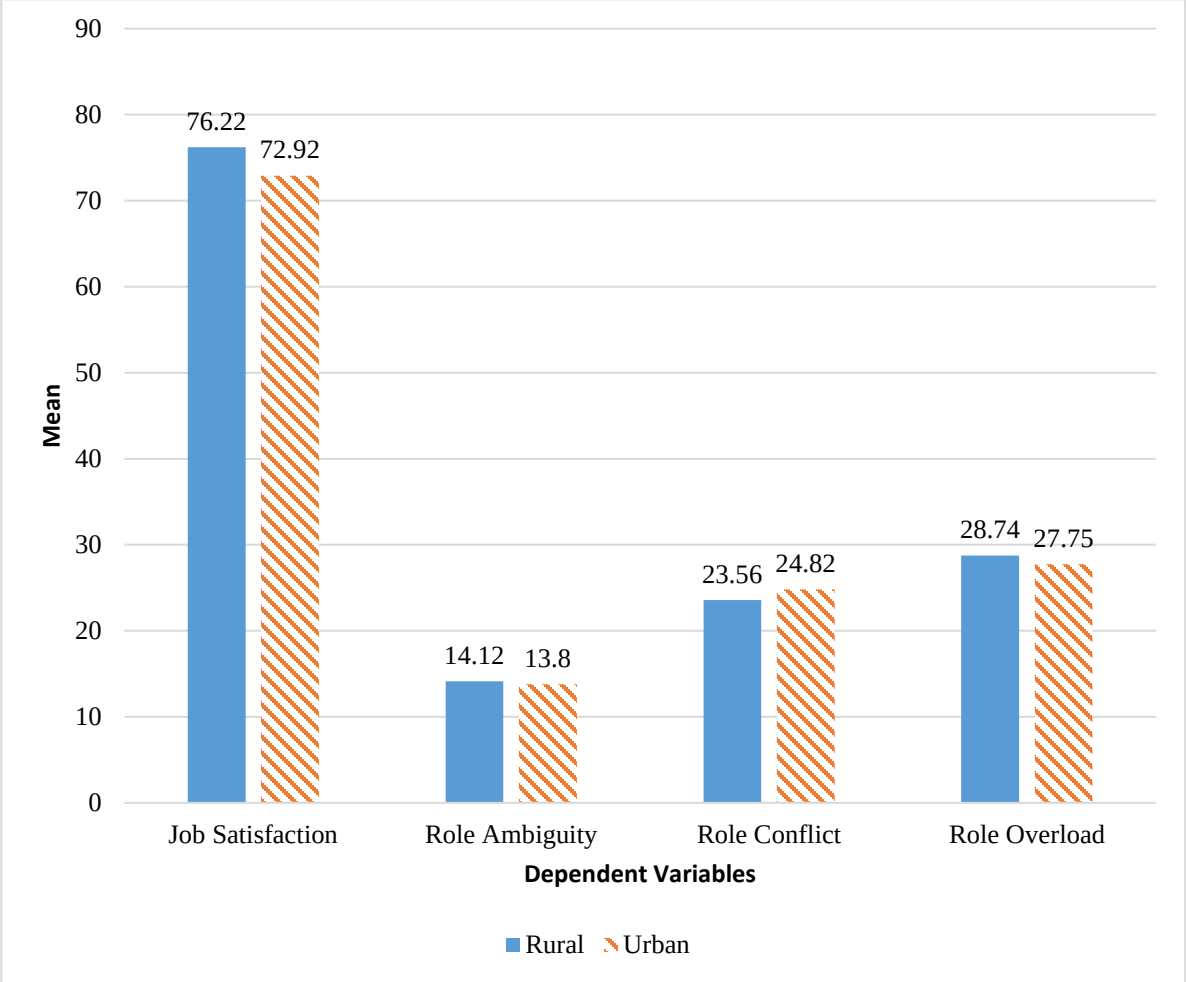

Figure 12: Mean of rural/urban location and job satisfaction and role stressors

Years at a service post.

There were significant relationships between years at service post with role ambiguity ($\chi 2$= 52.91, *df* = 32, *p* =0.011) and role conflict ($\chi 2$= 48.83, *df* = 27, *p* <0.006). HSAs who had served for a period of fewer than 20 years had high role conflict (*M*= 24.13, SD= 6.43) compared to those with a service of greater than 20 years (Figure 13).

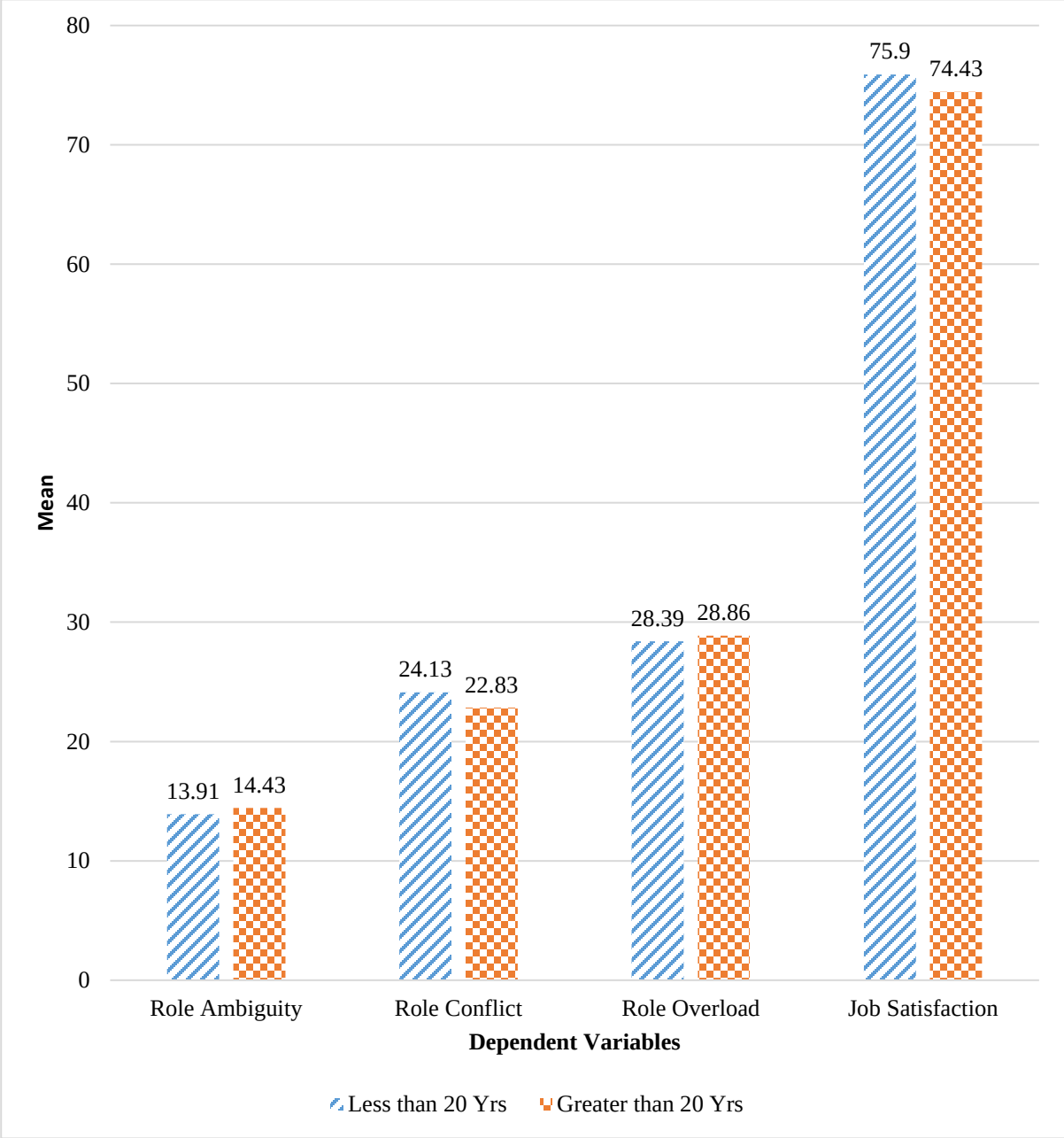

Figure 13: Mean of years at service post and job satisfaction and role stressors

Associations across HSAs groups with Role Stressors and Job Satisfaction

After establishing the existence of relationships between demographic variables and the role stressors and job satisfaction, the ANOVA test was carried out to find out if there were associations among the groups of HSAs. The results suggest significant associations were observed among the specialized groups of HSAs and role conflict while the location was significant for both role conflict and job satisfaction (Table 5).

Job specialization groups and role conflict.

The purpose of this section was to establish if there was an association between the sociodemographic variables and the role stressors and job satisfaction. The ANOVA findings revealed an association between job specialization and role conflict.

The test of homogeneity for variances was carried out as presented in Table 5. The results indicated that the assumption of homogeneity of variance was not met since the Levene's Test was significant; *(*$F_{4,356}$=5.291 $P < 0\ .001$) at the 1% level of significance. To confirm the Levene's Test findings the Robust Tests of Equality of Means was conducted as illustrated in Table 5. The finding supported the assumption that one or more of the groups were different since the findings were significant; *(*$F_{4,310.59}$=4.602 $P < 0\ .001$) at the 1% level of significance. This finding suggests there were associations among different groups of HSAs in the way they were experiencing role conflict.

Thereafter an analysis was carried out to identify among the specialized HSAs who were the most affected group with role conflict. Within the specialized group, there were HSAs in cold chain, HIV Testing Service (HTS), integrated community case management (iCCM), tuberculosis (TB) and others in general duties.

Following the finding that there were significant associations between groups in Table 5, the Post-hoc analysis was conducted to identify where exactly the associations in means occurred as illustrated in Table 6. Since the assumption of homogeneity of variances was not met as stated earlier in Table 5, the Tukey method was not used instead, the Games Howell method was used. The effect size calculated using eta squared was 0.04. According to Cohen (1988), an eta value below 0.06 is considered small. Post-hoc comparisons using the Games Howell test with mean scores for Cold Chain (*M*=2.71, *SD*= 0.30), HTS Counsellors (*M*= 3.30, *SD*= 0.72), TB (*M*= 3.72, *SD*= 0.87), iCCM (*M*= 3.37, *SD*= 0.87), and others (*M*= 3.40, *SD*= 0.86) was carried out. There were significant associations in the mean scores between the Cold Chain and all the other groups as illustrated in (Table 6). This result suggests the Cold Chain group was less affected with role conflict, while the HTS and TB groups were most affected with role conflict.

Location and job satisfaction

The term rural referred to HSAs working in rural health facilities including the 'district hospital', while the term 'urban' referred to health facilities within Lilongwe City. A one–way ANOVA conducted showed that there was an association between location (work in rural and urban areas) and job satisfaction (*P*= 0.01).The mean ± 1SD job satisfaction scores calculated for the HSAs in the rural area in this study was 3.83 ± 0.46 with a range of 2.25 – 4.60 and in an urban area it was 3.68 ± 0.47 with a range of 1.60-4.75 (Table 5). The results indicated that the assumption of homogeneity of variances was not violated as the Levene's Test was not significant; ($F_{1,428}$=.908 *P*= 0 .34) (Table 5). This test confirmed the assumption of homogeneity. Further analysis following the insignificant results above, the F Test carried out

revealed significant findings ($F_{1,428}$=6.51, P =0.01) (Table 5). This finding suggests HSAs in rural areas were experiencing high job satisfaction than their colleagues in the urban area.

Location and role conflict

Working at the health centre implied HSAs working at either the health centre or within its catchment area while working at the district hospital implied working within the hospital or its catchment area. The mean ± 1SD for role conflict scores calculated for the HSAs at the health centre (3.34 ± 0.88, range 1.29 – 5.00) and at the district hospital (3.62 ± 0.87, range 1.29-5.00) (Table 5).

A Levene's test carried out to explore if there were significant associations in the mean scores for role conflict in HSAs working at either the health centre or district hospital. The results showed that there were no significant associations ($F_{1,428}$=*0*.28, P = 0.60 (Table 5). However, significant findings were obtained after conducting an ANOVA test ($F_{1,428}$=8.15, P = 0 .01) (Table 5). The test results carried out confirmed the existence of associations in the role conflict means suggesting that workers at the district hospital had higher levels of role conflict than their colleagues at the health centre.

Table 5: Summary Table of Means, standard deviations and test results carried out

						Levene's test for equality of variances		Robust Test for equality		T-test of equality of Means	
Variable			N	Mean	*SD*	*F*	*p*	*F*	*p*	*t*	*p*
Role conflict	Job specialization	Cold chain	7	2.71	0.3	5.29	0.000	4.6	0	10.53	0.01
		HTSC	80	3.3	0.71						
		TB	64	3.72	0.87						
		iCCM	89	3.37	0.98						
		G/tasks	121	3.4	0.86						
		Total	361	3.41	0.87						
Role conflict	Location	HC	330	3.34	0.88	0.28	0.60			8.15	0.01
		DH	100	3.62	0.87						
		Total	430	3.4	0.89						
Job satisfaction	Location	Rural	342	3.83	0.46	0.91	0.34			6.51	0.01
		Urban	88	3.68	0.47						
		Total	430	3.8	0.47						

Note: HTSC= HIV Testing Counselor; F= F statistic; p= p value; t= t statistic; HC=Health Centre; DH= District Hospital; G/tasks= General tasks

Table 6: Games-Howell multiple comparisons for role conflict across job specializations

Speciality Area	Speciality Area	Mean Difference	Std Error	Sig
Cold Chain	HTS Counselor	-.582*	.13791	.007
	TB	-1.004*	.15642	.000
	iCCM	-.652*	.15316	.003
	General tasks	-.684*	.13702	.002
HTS Counselor	Cold Chain	.582*	.13791	.007
	TB	-.422*	.13498	.018
	iCCM	-.070	.13119	.984
	General tasks	-.102	.11192	.893
TB	Cold Chain	1.004*	.15642	.000
	HTS Counselor	.422*	.13498	.018
	iCCM	.353	.15052	.137
	General tasks	.321	.13406	.124
iCCM	Cold Chain	.652*	.15316	.003
	HTS Counselor	.070	.13119	.984
	TB	-.353	.15052	.137
	General tasks	-.032	.13024	.999
General tasks	Cold Chain	.684*	.13702	.002
	HTS Counselor	.102	.11192	.893
	TB	-.321	.13406	.124
	iCCM	.032	.13024	.999

*The Mean significant associations were at 0.05 level

Factors for Role Stressors and Job Satisfaction

The main objective of this section was to identify the main factors for role stressors and job satisfaction and determine the relationships that exist between the factors and the dependent variables (role stressors and job satisfaction). PCA analysis and regression were used to determine the factors. The KMO results were: role ambiguity (0.755), role conflict (0.647), role overload (0.776), and job satisfaction (0.743). The Bartlett's test of sphericity for all dependent variables in this study indicated significant results as follows: role ambiguity ($\chi 2$= 1380.10, *df* = 28, $p < 0.001$), role conflict ($\chi 2$= 515.11, *df* = 21, $p < 0.001$), role overload (χ^2= 967.19, *df*= 36, $p < 0.001$) and job satisfaction (χ^2 = 2147.41, *df* =190, $p < 0.001$) all at 1% level of significance.

Factors extracted and total variance explained.

Role ambiguity.

Three factors contributing to role ambiguity were extracted. The first factor explained 45.26% of the total variance while all the three components explained 73.63% of the total variance (Table 7). This is within the acceptable range in the social sciences (Hair, Black, Babin, Anderson, & Tatham, 1998).

Rotation revealed the presence of some cross-loadings which made analysis to be complex. The presence of cross loading made some variables complex and was managed by applying Jollife's criterion which recommends retaining factors above 0.70 (Joliffe, 1986). The extraction was done with a loading factor value of 0.7 where Component 1 loaded on three items which reflected on the 'Supervisor' with an eigenvalue of 3.62, and Component 2 loaded on three items which reflected on 'role clarity' with an eigenvalue of 1.27, Component 3 loaded on one item which reflected on 'work guidelines' with an eigenvalue of 1.00 (Table 7).

Role conflict.

Two factors contributing to role conflict were extracted after conducting the PCA analysis. The first factor explained 33.19% of the total variance while all the two factors combined explained 54.64% of the total variance (Table 7). The extraction was carried out with a factor loading value of 0.7 and loaded three items on Component 1 with an eigenvalue of 2.32 which reflected on 'incompatibility', two items on Component 2 with an eigenvalue of 1.50 which reflected on 'time & person values' (Table 7).

Role overload.

Three factors contributing to role overload were extracted after conducting the PCA analysis. The first factor explained 37.39% of the total variance while all the three factors when combined explained 63.04% of the total variance. The extraction was carried out with a factor loading value of 0.7 and this meant that items with a factor loading of ≥ .07 on any factor were reported, and were sorted by dimension and strength of factor loading within a dimension. In this analysis, Component 1 loaded 2 items and Component 2 loaded 2 items and Component 3 loaded 1 item. The Component 1 items reflected issues of 'time pressure' with an eigenvalue of 3.37 while, Component 2 reflected on the issue of 'task overload' with an eigenvalue of 1.20 and Component 3 reflected on issues of 'work prioritization' with an eigenvalue of 1.11 (Table 7).

Job satisfaction.

The identification of the important components to retain was based on fixing a specific number of factors to extract and in this case, six factors were requested. The Kaiser's criterion when earlier requested isolated seven factors. Hence the decision to have six factors only for easy analysis. The first factor explained 23.31% of the total variance while all the six factors

explained 58.84% of the total variance (Table 7) which is within an acceptable range in the social sciences (Hair et al., 1998).

Multiple Regression

Role ambiguity.

There was a highly significant correlation (r=0.99, P<0.001) at the 1% significant level between the predicted scores and the actual scores. The R^2 indicates that nearly 99.8% of the variance in scores on role ambiguity can be explained by the variation in scores on the three predictor variables which are the supervisor, role clarity and work guidelines. According to the Adjusted R^2 we expect approximately 99.8% of the variance in role ambiguity to be explained by the three predictor variables (Table 7).

Two factors identified through PCA analysis were significant (P<0.001) (Table 8). The enter method was used and a highly significant model emerged (*F3,* 417= 5599.39, *P*< 0 .001) at 1% significance level. Adjusted R^2 = .998. This shows that there is a combined effect of the predictor variables on the criterion variable (role ambiguity).

In order to know the individual effects of the predictor variables on the criterion variable, the coefficient table (Table 7) was used. The regression equation shows that there is a relationship among the three factors and role ambiguity as follows: Predicted frequency of role ambiguity= 4.43 x Supervisor) + (3.31 x Role Clarity) + (2.23 x Work Guidelines) + 14.08. The regression model shows that the three factors affecting role ambiguity include: the supervisor, role clarity and work guidelines. However, the supervisor factor was the most important predictor of role ambiguity and had a beta weight of 0.74.

Role conflict.

Multiple regression used the enter method. The predictors used in the regression were 'incompatibility' and 'time and person values' which were obtained from the PCA analysis. Table 7 indicates there is a very high correlation between the two factors and role conflict. The R which is 0.996 shows there is almost a perfect relationship between the two factors and role conflict. The R^2 of 0.992 indicates that nearly 99.2% of the variance in scores on role conflict can be explained by the variation in scores on the two predictor variables which are 'incompatibility' and 'time & personal values'. According to the Adjusted R^2 it is approximately expected that 99.2% of the variance in role conflict can be explained by the two factors.

The regression model is significant (P<0.001) (Table 7). These results are consistent with those obtained with our Pearson's correlation. In addition, results show the predictors of role conflict and the predicted variable in this case role conflict. The regression used the enter method and a significant model emerged ($F_{2,425}$=25709.24, p < 0.001).

In order to know the individual effects of the predictor variables on role conflict, the coefficient table (Table 7) was used. The regression equation shows there is a relationship between the two factors and role conflict as follows: Predicted frequency of role conflict = (5.38 x incompatibility) + (3.03 x Time & Person Values) + 23.86. The regression equation shows that the two factors affecting role conflict are incompatibility and Time and Personal Values. However, incompatibility is the most important predictor of role conflict.

Using information from the coefficient (Table 7) it shows role conflict increased 5.38 units for each unit that incompatibility increased and that the standard error of the estimate for predicted role conflict was 0.03. Time and Personal value increased 2.83 units for each unit that

Time and Personal value increased and that the standard error of the estimate for predicted role conflict was still 0.03. This confirms the observation that incompatibility is the most important predictor of role conflict.

Role overload.

Multiple regression using the enter method revealed that all the three factors identified through PCA analysis contributed significantly to the total variance. The regression was computed using time pressure, task overload and work prioritization factors that were isolated from the PCA analysis. The Model Summary (Table 7) indicates a high correlation of 0.999 (almost a perfect relationship) between the three factors. The R^2 indicates that 99.9% of the variance in scores on role overload can be explained by the variation in scores on the three predictor variables which are time pressure, task overload and work prioritization. According to the Adjusted R^2 it is expected that 99.9% of the variance in role overload can be explained by the three predictors.

The ANOVA results presented in Table 7 confirm that the regression is significant and that the significance is similar to our Pearson's correlation. In addition, it has reminded us about the predictors of role overload and the predicted variable in this case role overload. The enter method was used and a significant model emerged ($F_{3,420}$ = 100651.62, $P < 0.001$) with adjusted R^2 = 0.999. Results show that there is a combined effect of the predictor variables on role overload.

The results (Table 8) present the regression equations that can be written as follows: Predicted frequency of role overload = (5.97 x Time Pressure) + (5.09 x Task Overload) + (3.18 x Prioritization) + 28.63. The regression model shows the three factors affecting role overload,

which are: Time Pressure, Task Overload and Work Prioritization. However, time Pressure is the most important predictor of role overload.

Job satisfaction.

Multiple regression using the enter method was used. The regression was computed using the six extracted factors from PCA. A significant model emerged ($F_{6,390}$= 617.09, P < 0 .001). The Adjusted $R2$ = 0.90 means that the model accounted for 90% of the variance in the job satisfaction scores (Table 7).

In order to test the fitness of the regression model, the F test was conducted and its fitness was significant with a (P < 0 .001) at the 1% level of significance. This shows that a multiple regression model was appropriate and suitable for use in this study (Table 7).

Using these results (Table 7) the regression equation is written as follows: Predicted frequency of Job Satisfaction = (4.74 x Advancement) + (2.30 Work Conditions) + (3.46 x Supervision) + (3.30 x Ability Utilization) + (3.35 x Social Service) + (4.23 x Activity) + 76.22. The regression model shows the six factors affecting job satisfaction include: advancement, work conditions, supervision, ability utilization, social service, and activity. This finding suggests HSAs were affected by both intrinsic and extrinsic factors as illustrated in the Hygiene Theory (Herzberg, 2005).

Regression of the role stressors as independent variables and job satisfaction as a dependent variable

Multiple regression in this study was conducted with job satisfaction as a dependent variable while, role ambiguity, role conflict, and role overload were the independent variables. The outcome of the analysis identified role ambiguity and role overload as significant predictors

of job satisfaction in HSAs (Table 7). About 8.3% (Adjusted R2) of the variation in job satisfaction was explained by role overload, role ambiguity, and role conflict.

The regression analysis conducted was statistically significant ($F_{3,396}$ = 12.91, p<0.001 at the 1% level of significance) (Table 7). The predicted frequency of job satisfaction = -0.34 (role ambiguity) + -0.02 (role conflict) + -.189 (role overload) +1.27. The regression model shows role ambiguity as the most important predictor of job satisfaction while, role conflict was not-significant hence cannot be used as a predictor of job satisfaction.

Table 7: Summary statistics for principal analysis and regression analysis

Variable	Eigenvalue	% of Variance	Cum. Total	Unstandardized coefficients *B*	Unstandardized coefficients SEB	Standardized coefficients β	*t*	*p*	*F*	Adjusted R Square	*R*
Role ambiguity											
(Constant)				14.08	0.01		969.14	0.000	55991.39	0.998	0.999
Supervisor	3.62	45.26	45.26	4.43	0.01	0.74	304.43	0.000			
Role clarity	1.27	15.84	61.10	3.31	0.01	0.56	227.81	0.000			
Guidelines	1	12.53	73.63	2.23	0.01	0.37	152.97	0.000			
Role conflict											
Constant				23.86	0.03		877.12	0.000	25709.24	0.992	0.996
Incompatibility	2.32	33.19	33.19	5.38	0.03	0.87	197.56	0.000			
Time & personal values	1.5	21.45	54.64	3.03	0.03	0.49	111.31	0.000			
Role Overload											
(Constant)				28.63	0.02		1861.77		100651.6	0.999	0.999
Time pressure	3.37	37.39	37.39	5.97	0.02	0.71	387.43	0.000			
Task overload	1.2	13.30	50.70	5.09	0.02	0.6	330.55	0.000			
Prioritization	1.11	12.35	63.04	3.18	0.02	0.38	206.37	0.000			
Job satisfaction											
(Constant)				76.22	0.15		519.83	0.000	617.09	0.9	0.951
Advancement	4.66	23.31	23.31	4.74	0.15	0.5	32.26	0.000			
Work conditions	1.88	9.41	32.72	2.3	0.15	0.24	15.67	0.000			
Supervision	1.64	8.20	40.92	3.46	0.15	0.37	23.6	0.000			
Ability Utilization	1.42	7.10	48.03	3.3	0.15	0.35	22.48	0.000			
Social service	1.09	5.43	53.45	3.35	0.15	0.36	22.85	0.000			
Activity	1.08	5.39	58.84	4.23	0.15	0.45	28.84	0.000			
Job Satisfaction											
(Constant)				1.27			4.53	0.000	12.906	0.083	0.299
Role Ambiguity				-0.34		-0.254	-5.05	0.000			
Role Conflict				-0.02		-0.017	-0.33	0.742			
Role Overload				-0.19		-0.175	-3.45	0.001			

Note: The unstandardized beta (B), the standardized error for the unstandardized beta (SEB), the standardized beta (B), the t-test statistic (t), the probability value (p), the F statistic (F)

The relationship between Role Conflict, Role Ambiguity, Role Overload and Job Satisfaction

All the interpretations regarding *r* were based on the interpretation by (Adams & Lawrence, 2014). To calculate the correlations, the overall mean scores for role ambiguity, role conflict and role overload were used. For job satisfaction, the first factor after carrying out the PCA analysis was used as the overall score.

It is evident from the results that a significant relationship existed between role ambiguity and job satisfaction (r= -0.238, P<0.001) at the 1% significance level. Additionally, the study findings have revealed that there was a negative and significant association between role ambiguity and role conflict (r= -0.247, P<0.001) at the 1% significance level. However, there was a weak or little significant, negative relationship between role ambiguity and role overload (r= -0.097, P<0.022) at 5% significance level.

Further analysis carried out found a weak, negative and non-significant association between role conflict and job satisfaction (r= -0.004, p= 0.472 at the 5% level of significance). However, a significant association was found between role conflict and role overload (r=0.307, at the 5% level of significance); and a negative and significant association between role overload and job satisfaction (r= -0.159, p=0.001) at the 1% level of significance). This finding suggests the negative associations found between role ambiguity and job satisfaction and role overload and job satisfaction have the potential to affect the job satisfaction and the work performance of the HSAs (Table 8).

Table 8: Correlation of the dependent variables

	Role Ambiguity	Role Conflict	Role Overload	Job Satisfaction
Role Ambiguity (r)	1			
Sig. (1-tailed)				
Role Conflict (r)	-.247**	1		
Sig. (1-tailed)	0.001			
Role Overload (r)	-.097*	-.307**	1	
Sig. (1-tailed)	0.022	0.001		
Job Satisfaction (r)	-.238**	-0.004	-.159**	1
Sig. (1-tailed)	0.001	0.472	0.001	

** Correlation is significant at the 0.01 level (1 tailed); * Correlation is significant at the 0.05 level (1 tailed)

Correlation between the factors of job satisfaction and the dependent variables

Compensation and Advancement.

There was a positive and significant association between 'compensation and advancement' and job satisfaction (Table 9). However, this was significantly negatively related to role ambiguity and role overload. About 62% of the respondents were dissatisfied with compensation and advancement (Table 10). The finding suggests the respondents were dissatisfied with compensation and advancement.

Work Conditions and Organization Policies and Practices.

There was a significant and positive association between work conditions, organization policies and practices with job satisfaction but there was an inverse relationship between work conditions and role overload (Table 9). Slightly above 52% of the respondents were satisfied with the work conditions (Table 10). The finding suggests work conditions, organization policies and practices have a contribution towards the job satisfaction of HSAs and may contribute towards the reduction of role overload among HSAs.

Supervisor and Supervision of HSAs.

In this study, the supervisor was related to job satisfaction and role ambiguity (Table 9). Similarly, HSAs supervision was related to job satisfaction and role ambiguity. About 65% of the respondents were satisfied with their supervisor and supervision (Table 10). The finding suggests the supervisor and supervision have both an association with job satisfaction and role ambiguity in HSAs.

Ability Utilization.

This variable job satisfaction dimension was significantly positively related to job satisfaction but inversely related to role overload (Table 9). Nearly 93% of the respondents indicated they were satisfied with their 'ability utilization' (Table 10). This finding suggests the respondents were highly satisfied with their 'ability utilization' and that it could contribute towards the reduction of role overload among HSAs.

Activity.

This was significantly positively related to the job satisfaction as well as the role conflict and role overload of the HSAs (Table 9). The HSAs that were satisfied with 'Activity' were 55% (Table 10). The finding suggests 'Activity' has a contribution towards role overload and role conflict of the HSAs.

Table 9: Correlation between job satisfaction factors and the dependent variables

	Advancement	Work Conditions	Ability Utilization	Social Service	Activity	Supervisor	Supervision
Job Satisfaction	.504**	.245**	.369**	.357**	.451**	-0.201	.369**
Role Ambiguity	-.239**	-0.076	-.281**	-.125*	-0.011	0.742	-.281**
Role Conflict	-0.001	-0.76	0.09	0.003	.169**	0.015	0.085
Role Overload	-.166**	-0.15	-0.074	-0.037	.359**	0.075	0.172

** Correlation is significant at the 0.01 level (2 tailed); * Correlation is significant at the 0.05 level (2 tailed)

Table 10: Showing Job Satisfaction dimensions and their frequencies in percentage

Job Satisfaction Dimension	Satisfied	Neutral	Dissatisfied	Total
Advancement and Compensation	28.65	9.25	62.10	100
Work Conditions	52.40	17.00	30.6	100
Supervision	65.30	9.85	24.85	100
Ability utilization	92.10	1.80	6.10	100
Social Service	92.0	1.80	6.20	100
Activity	55.0	5.90	39.10	100

Task Prioritization by HSAs

In order to determine how HSAs prioritized their work three steps were taken as follows: a comprehensive list of the important tasks performed by HSAs in Malawi was obtained from the HSAs Guidelines for the Management of Task Shifting to HSAs (MoH, 2014) and their job description guide (MoH, 2014). The tasks were organized into a questionnaire which was administered to HSAs who are involved in the performance of such tasks. Finally, data were collected among the respondents in the selected districts of Mangochi, Lilongwe and Mzimba districts to obtain the relative frequencies of the different tasks performed by HSAs. The tool at the beginning had many tasks, nearly 200. With the aid of some experts in the field, the list was condensed to 17 task statements which comprised activities commonly performed by HSAs and are contained in their work guidelines.

The task questionnaire had two parts; task applicability to setting and task frequency. Respondents were asked to state whether the task was applicable to their setting. Again, the study aimed at knowing the time the HSAs spent on each one of the 17 tasks. The data was analyzed to yield the relative frequencies and the importance of the different tasks listed that were performed by HSAs.

Task Performance

The study findings have revealed that there is a general agreement among all HSAs (100%) in performing tasks such as vaccination, health education, hygiene and sanitation and water chlorination. Other tasks which were reported by over 90% of the respondents included Antenatal Care (ANC) and Postnatal care (PNC) visits, salt testing for iodine, growth monitoring, VHC meetings, home-based care and nutrition. The least performed task out of the 17 tasks was sputum collection and examination (23%) (Figure 14).

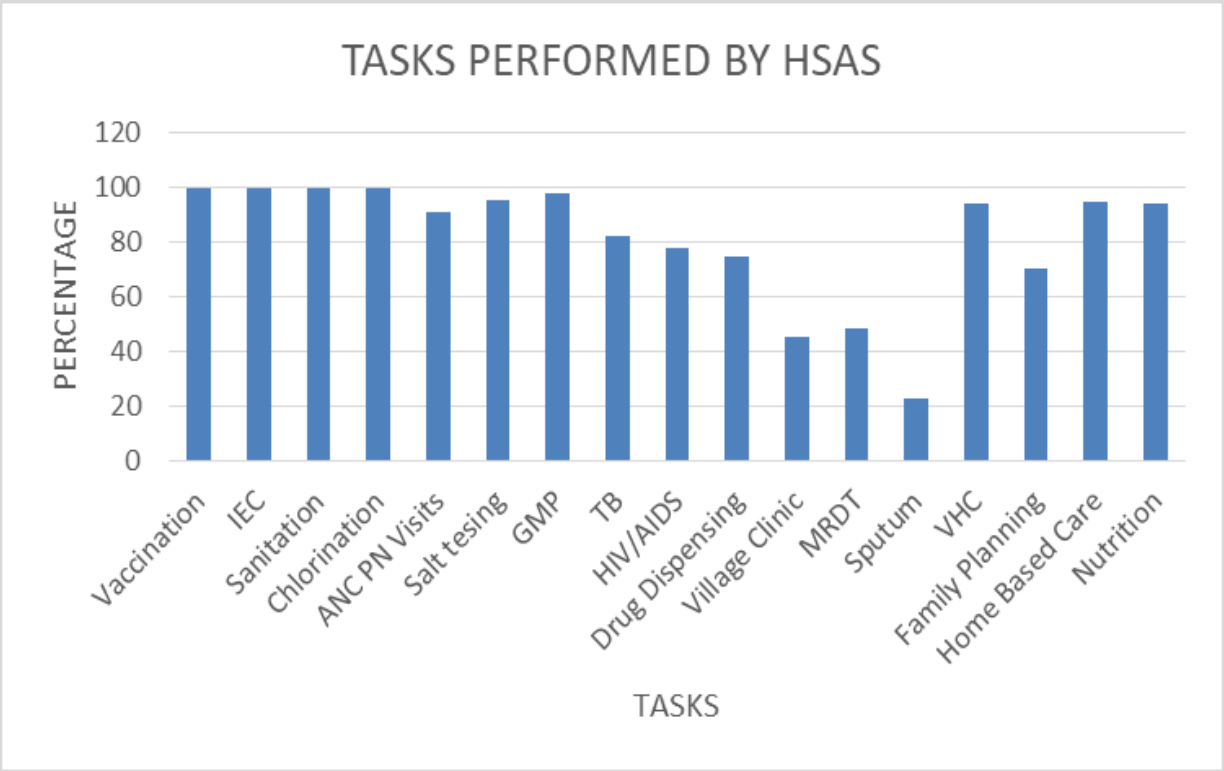

Figure 14: A list of tasks performed by HSAs

Task Frequency

To ease analysis, tasks that were performed 6 to 10 times a week were referred to as very frequent when mentioned by over 70% of the respondents. In this study, no task among the 17 tasks scored 70%. This finding suggests there was no task that could be referred to as very

frequently done. Tasks that were performed 1-5 times per week were referred to as frequent when mentioned by over 70% of the respondents. In this study, vaccination (77.3%) and growth monitoring promotion (73.7%) came out clearly as frequently carried out tasks by the respondents. Tasks that were performed less than once per week were referred to as rarely performed when mentioned by over 50% of the respondents. In this study, salt testing for iodine and sputum collection and examination were rarely performed (60% and 62%) respectively (Figure 15).

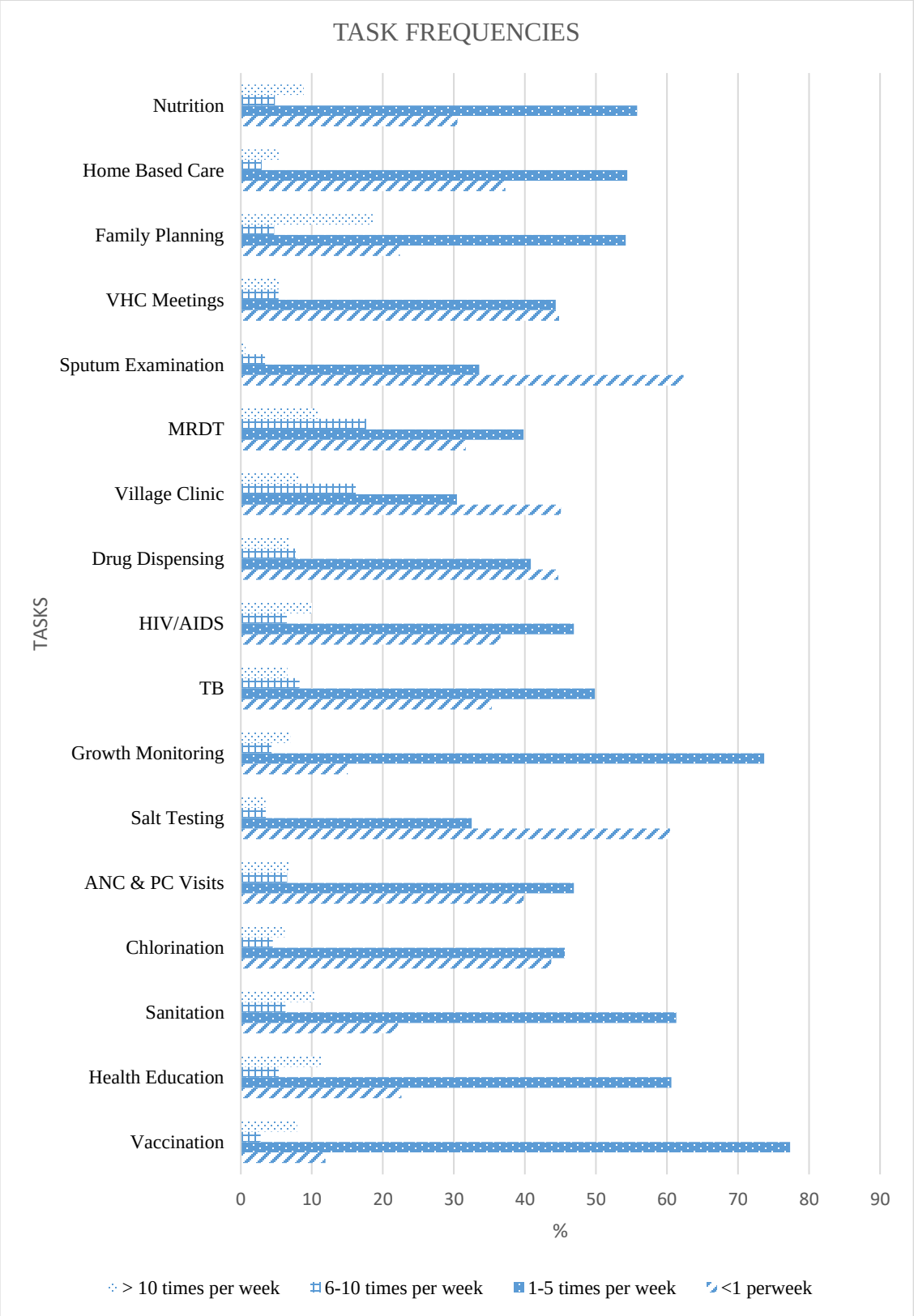

Figure 15: Task frequencies performed by HSAs in Mzimba, Lilongwe and Mangochi

Relationship Between HSAs Tasks and the Dependent Variables

A correlation analysis using Pearson *r* was carried out to find out if there existed any relationships between the HSAs job tasks and the dependent variables (role ambiguity, role conflict, role overload and job satisfaction). Out of the 17 HSAs tasks 9 had significant relationships with the dependent variables, while 4 had insignificant relationships and four tasks their correlation failed to complete due to the presence of constants. The relationships were as follows:

HSAs tasks and role ambiguity.

Antenatal care (ANC) and postnatal care (PNC) visits and family planning, had a significant negative relationship with role ambiguity (r= -0.107, p= 0.016) at the 5% level of significance (Table 10) while salt testing for iodine had a positive significant relationship with role ambiguity (r= 0.110, p= 0.012) at the 5% level of significance. Drug dispensing and nutrition were negatively correlated with role ambiguity (r= -0.123, p= 0.006) at the 1% level of significance while growth monitoring promotion (GMP) was positively correlated with role ambiguity (r= 0.185, p= 0.001 at the 1% level of significance (Table: 11).

HSAs tasks and role conflict.

Salt testing was negatively correlated with role conflict (r= -0.137, p= .003) at the 1% level of significance. GMP and home based care (HBC) were positively correlated with role conflict (r= 0.159, p= 0.001) at the 1% level of significance while drug dispensing (r= 0.109, p= 0.013), HIV Testing Service (HTS) (r= 0.111, p= 0.012), malaria rapid diagnosis testing (MRDT) (r= 0.096, p= 0.026) and nutrition (r= 0.086, p= 0.041) had positive significant correlation with role conflict at the 5% level of significance (Table: 11).

HSAs tasks and role overload.

GMP (r= 0.137, p= 0.001) and VHC meetings (r= 0.136, p= 0.003) were positively significantly related to role overload at 1% level of significance. On the other hand, HTS (r= 0.088, p= 0.036) was positively significantly related to role overload at the 5% level of significance (Table: 11).

HSAs tasks and job satisfaction.

Sputum collection and examination was positively significantly correlated with job satisfaction (r=- 0.131, p= 0.004) at the 1% level of significance. Village Health Committee (VHC) meetings (r=- 0.103, p= 0.017) and family planning (r= -0.105, p= 0.018) had positive significant relationship with job satisfaction at the 5% level of significance (Table: 11).

Table 11: Relationships between HSA TASKS and the dependent variables

		Role Ambiguity	Role Conflict	Role Overload	Job Satisfaction
Water Chlorination	*r*	.006	-.022	.040	-.029
	Sig. (1-tailed)	.453	.324	.203	.278
ANC &PNC	*r*	-.107*	.065	.079	.046
	Sig. (1-tailed)	.016	.096	.056	.180
Salt testing	*r*	.110*	-.137**	-.075	-.068
	Sig. (1-tailed)	.012	.003	.064	.082
GMP	*r*	.185**	.159**	.137**	-.071
	Sig. (1-tailed)	.000	.001	.002	.072
TB	*r*	-.045	-.030	.009	-.079
	Sig. (1-tailed)	.182	.272	.431	.057
HTS	*r*	-.030	.111*	.088*	.033
	Sig. (1-tailed)	.273	.012	.036	.254
Drug Custodian	*r*	-.123**	.109*	.046	.076
	Sig. (1-tailed)	.006	.013	.174	.061
iCCM	*r*	.000	.070	.073	-.043
	Sig. (1-tailed)	.497	.077	.071	.195
MRDT	*r*	-.009	.096*	.031	-.038
	Sig. (1-tailed)	.425	.026	.268	.222
Sputum Examination	*r*	-.037	.079	.066	-.131**
	Sig. (1-tailed)	.232	.056	.092	.004
VHC Meetings	*r*	.040	-.017	.136**	-.103*
	Sig. (1-tailed)	.206	.367	.003	.017
FP	*r*	-.091*	-.078	-.068	-.105*
	Sig. (1-tailed)	.034	.059	.088	.018
HBC	*r*	-.068	.141**	.006	-.035
	Sig. (1-tailed)	.087	.002	.456	.240
Nutrition	*r*	-.120**	.086*	.068	.036
	Sig. (1-tailed)	.007	.041	.083	.231

Note **. Correlation is significant at the 0.01 level; * Correlation is significant at the 0.05 level

Role Stressors and the Clinical and Preventive Tasks of HSAs

In this analysis, the 17 HSAs tasks were grouped into preventive and curative tasks as depicted in Table 12.

Table 12: Preventive and curative tasks of HSAs

Preventive Tasks	Curative Tasks
Immunizations	HTS
Health Education	Drug Management
WASH	iCCM
Water Chlorination	MRDT
Antenatal and Post-Natal visits	Family Planning
Salt Iodine testing	HBC
GMP	Nutrition
VHC	TB
	Sputum Collection and Microscopy

Referring to (Table 13) HSAs curative tasks were negatively correlated to role ambiguity (r= -.108, p= 0.13). In addition, they were positively correlated to role conflict (r= 0.118, p=0.008) and role overload (r= .105, p= 0.015) all at 5% level of significance while, the preventive tasks were correlated to role overload (r= .129, p= 0.004) at 1% level of significance. The study finding suggests HSAs curative tasks are both a contributor to role conflict and role overload while their preventive tasks are a contributor to role overload.

Table 13: Correlation between curative and preventive tasks of HSAs and Role Stressors

		Correlations		
		Role Ambiguity	**Role Conflict**	**Role Overload**
Curative Tasks	Pearson Correlation	-.108*	.118*	.105*
	Sig. (single-tailed)	.013	.008	.015
	N	430	430	430
Preventive Tasks	Pearson Correlation	.059	.016	.129**
	Sig. (single-tailed)	.109	.373	.004
	N	430	430	430

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Key Findings of the Study

The key findings of this study are as follows:

1. The HSAs in Malawi had high job satisfaction (83rd %tile); lower role ambiguity (16th %tile); moderate role conflict (28 %tile); and moderate role overload (32nd %tile).

2. Both role ambiguity (r= -.247, p<0.001) and role overload (r= -.097, p<0.001) were negatively related to job satisfaction while role conflict was insignificantly related to job satisfaction (r= -.004, P=0.472).

3. The HSAs curative tasks were positively correlated with role conflict (r= 0.118, P=0.008) and negatively correlated with role ambiguity (r= -.108, P= 0.13). While both the preventive (r= .129, p= 0.004) and curative tasks (r= .105, p= 0.015) were positively correlated with role overload.

4. EPI vaccinations (77.3%) and growth monitoring promotion (73.7%) were the most frequently carried out tasks by HSAs.

5. HSAs job satisfaction is affected by location: HSAs in rural areas had high job satisfaction levels compared to their colleagues in urban areas (Rural Mean= 3.83, Urban Mean= 3.68).

6. Among the three role stressors role ambiguity was the most important predictor (r= -0.34 and P=.01) of job satisfaction while advancement was the most important factor for job satisfaction (R=.951 and P= .01).

Chapter 5

Discussion

Introduction

This chapter discusses the findings of the study on role stressors and job satisfaction of the HSAs in Malawi. The discussion focuses on important findings that were made during the study. The overall objective of the study was to explore the role stressors and job satisfaction among HSAs in Malawi. In addition, the discussion will cover the study implications, limitations, recommendations and conclusion.

The major finding of this study is that role ambiguity and role overload was negatively associated with job satisfaction. Similar, to other studies findings, role ambiguity and role overload were significantly negatively related to job satisfaction (Kahn et al., 1964; Keller, 1975; Rizzo et al., 1970; Tarrant & Sabo, 2010; Tosi & Tosi, 1970; Tosi, 1971), while role conflict was not significantly related to job satisfaction. This study result affirm the assertion that HSAs in Malawi are really experiencing role overload and role ambiguity. The job satisfaction predictors included role ambiguity and role overload while role conflict, in this study, was not a significant predictor of job satisfaction. Among the dimensions of job satisfaction, the most important predictor of job satisfaction was compensation and advancement while, the supervisor was the most important predictor for role ambiguity, and time pressure for role overload (r= 5.97, P= 0.01). In terms of task frequency immunizations (77.3%) and growth monitoring (73.7%) were the most frequently carried out tasks by HSAs. The study has also revealed HSAs clinical roles as a contributor to both role ambiguity (r= -.108, P= 0.013) and role overload (r= .105, p= 0.015) while preventive health tasks (r= .129, p= 0.004) were a contributor to role overload.

Role conflict and role ambiguity were measured using the scores from the role conflict and role ambiguity scale developed by Rizzo et al (1970). Role overload was measured using the scores from the ROS developed by Reilly (1982) to measure role overload among HSAs. Job satisfaction was measured using scores from the MSQ of the short version form, originally developed by Weiss et al. (1967) to measure job satisfaction in HSAs. The analysis was based on responses from the 430 respondents who took part in the study.

According to the role episode model, every role an individual holds in society has its own expectations, responsibilities and obligations (Katz & Kahn, 1978). For example, the HSAs as role recipients are expected by their supervisors and the general public (role senders) to deliver high quality and equitable health care services at the community level and any sign of failure by the HSAs to meet this role demand is likely to cause role conflict and role ambiguity among themselves and their supervisors and their clients. While this is the case, HSAs have multiple roles to perform which very likely might contribute to role stressors and low job satisfaction. With these multiple roles HSAs are many times exposed to dual authority, where they have to report to two or more supervisors at a time (Ebbers & Wijnberg, 2017; Reid & Karambayya, 2016). A situation like this may pose a greater challenge in the management of the HSAs, and if not properly coordinated role conflict, role ambiguity and role overload are very likely to occur.

Although the job satisfaction levels were high among the respondents; role ambiguity and role overload, were negatively significantly associated with job satisfaction while the relationship with role conflict and job satisfaction were not significant. However, it is argued in the literature that role conflict at optimum levels is not bad as it generates high energy, motivation and high performance among workers; and is necessary for the growth of an

organization (Jones et al., 2007). It is argued in the literature that role conflict at optimum levels has the propensity to generate growth in an organization. However, it is noted by the same authors that beyond a certain point, role conflict is undesirable and can result in poor work performance and lower job satisfaction (Al-Kahtani & Allam, 2016). In the case of the HSAs if the role stressors are not controlled, they may eventually blow out of proportion and contribute towards lower job satisfaction.

Despite the lower role ambiguity and moderate role conflict and role overload levels in HSAs in this study, it is still a cause of concern among all stakeholders involved in HSAs work in Malawi. According to the role episode model, the HSAs job has a very high likelihood for the occurrence of role conflict, role ambiguity and role overload as it involves the interaction of HSAs with different stakeholders such as co-workers, clients and community members. In addition, the HSAs are exposed to multiple tasks which can increase their chances for role conflict, role ambiguity and role overload. If the situation is not put under control, to check these moderate levels, the HSAs are likely to be stressed as these variables are likely to cause stress conditions in HSAs such as depression, dissatisfaction, anxiety, tension and low performance (Duxbury et al., 2017). Therefore, there is an urgent need by the authorities and partners to join hands to address these role stressors for the HSAs to continue enjoying high job satisfaction and good performance at work.

Role Prioritization in HSAs

Evidence from the literature suggests task prioritization as one of the responsive mechanisms towards addressing role overload among the employees in an organization when they experience work overload (Gutzwiller & Sitzman, 2017). Employees tend to perform tasks, which they feel are more important to them than others. Others tend to work overtime in order to

address role overload (Fontinha, Easton, & Van Laar, 2017; Majoni, 2017). However, literature evidence from other professions suggests that task prioritization is dependent on factors such as the difficultness of the task, the interest, the priority and the prominence of the task (Gutzwiller & Sitzman, 2017). Others suggest that prioritization should be based on the existence of priority informing information, which provides information on the urgency, importance, duration and interruption cost (Barg-Walkow & Rogers, 2017; Freed, 2000; Gutzwiller & Sitzman, 2017). The study findings suggest immunizations and growth monitoring as the most frequently prioritized tasks. Generally, immunizations are considered as urgent, important and lifesaving to children under five and this is why they are prioritized by HSAs (Orienstein and Ahmed, 2017).

Additionally, in this study, all HSAs (100%) performed tasks related to immunization, health education and water and sanitation hygiene (WASH) that includes water chlorination. This finding is consistent with the finding by Kadzandira and Chilowa (2001) who found HSAs actively involved in immunizations, health education and WASH-related activities. Similarly, Kalaya (2014) found HSAs spending 4-5 days in a month on immunization, health education and WASH related activities. This finding dispels rumours that the HSAs are preoccupied with their new roles and have forgotten their old traditional roles.

In terms of task frequency, no activity was mentioned by over 70% of the participants as very frequently done (6-10 times per week). However, tasks that were frequently done (1-5 times) per week and mentioned by over 70% of the HSAs included vaccination and growth monitoring. This finding is consistent with the finding by Kadzandira and Chilowa (2001) who found HSAs spending about 1-22 days in a month on immunizations and growth monitoring. This is an indication that vaccination and growth monitoring tasks are the most prioritized by HSAs in their work. Tasks that were rarely done and were mentioned by over 50% of the HSAs

included salt iodization and sputum collection and examination. Tasks that are rarely done are usually very important such as salt iodization which is very crucial for the growth of children. Salt iodization monitoring in Malawi is carried out at household level by the HSAs using Rapid Testing Kits (RTKs).

Additionally, HSAs tasks such as the ANC and PNC, drug dispensing and nutrition had an influence on role ambiguity. Similarly, tasks such as HTS, MRDT and nutrition had a high propensity for role conflict in HSAs. Most of these tasks contributing to role conflict in HSAs were clinical related. In addition, the role overload in HSAs was attributed to tasks related to their preventive roles such as GMP, VHC meetings and HTS. However, the iCCM task, in this study, was not found as a contributing factor to the role stressors and job satisfaction. In addition, the study results suggest the performance of some tasks such as family planning, VHC meetings and sputum collection were negatively related to job satisfaction.

In summary, the most prioritized tasks in this study were vaccination and growth monitoring, Additionally, the study results suggest both clinical and preventive tasks have a contribution towards the role stressors. Therefore, it is imperative for the government of Malawi to take additional measures to address these role stressors in HSAs.

Relationship between Variables

Role ambiguity and Job Satisfaction.

The Pearson coefficient correlation (r) has revealed that there is an inverse and significant association between role ambiguity and job satisfaction. This finding suggests there is an association between role ambiguity and job satisfaction in HSAs. The finding is consistent with the findings from earlier studies conducted (Fichter, 2000; Fisher, 2001; Palomino & Frezatti, 2016b; Tarrant & Sabo, 2010).

In contrast, a study conducted in Pakistan to investigate the influence of role stressors (role ambiguity and role conflict) on job satisfaction of personnel working in water and sanitation agencies (WASAs) of Punjab in Pakistan has reported a positive and significant relationship between role ambiguity and job satisfaction (Shahbaz & Ghafoor, 2015).

Additionally, an inverse relationship has been reported in this study, between role conflict and job satisfaction. Studies conducted elsewhere have reported similar results (Babin & Boles, 1996; Belias & Koustelios, 2014; Kahn et al., 1964; Tosi & Tosi, 1970). These findings are congruent with the conceptual framework used in this study where higher role ambiguity and role conflict levels have been associated with lower job satisfaction levels in organizations (Ling, Bahron, & Boroh, 2014).

However, a non-significant negative relationship was reported in this study, between role conflict and job satisfaction. Studies conducted elsewhere have similarly reported a non-significant negative relationship between role conflict and job satisfaction (Babin & Boles, 1996; Belias & Koustelios, 2014; Kahn et al., 1964; Tosi & Tosi, 1970).

Multiple regression conducted in this study supports the finding that role ambiguity, role conflict and role overload are significant predictors of job satisfaction in HSAs. However, role ambiguity was the most important predictor of job satisfaction in HSAs. Role ambiguity is indeed most likely to occur among the HSAs. Nearly 82% of the respondents indicated they had no guidelines for use in their work. This is a call for concern considering the increased number of roles they are performing and the poor supervision they receive (Kok et al., 2014; Martiniuk et al., 2014; Rodríguez, Banda, & Namakhoma, 2015; Smith et al., 2014). It is, therefore, important that the Malawi MoH takes the leadership to drive the efforts to assist the HSAs with role ambiguity reduction.

The ANOVA test conducted between job speciality and role conflict, role ambiguity, role overload and job satisfaction revealed that there were no significant associations across groups except for role conflict which had significant results. The Tukey HSD post-hoc test conducted identified significant associations between different job specialities and role conflict.

In terms of role conflict, the results indicated that HSAs working under the cold chain group had lower levels of role conflict than their colleagues in the TB programme. Similarly, HSAs in the TB programme had higher role conflict than their colleagues in the HTS programme. Cold chain technicians are engaged in the Expanded Programme on Immunization (EPI) service provision. HSAs under the cold chain have little interaction with supervisors from other disciplines as their core business, cold chain, is under the supervision of EPI Coordinators who are AEHOs. While those in the TB and HTS programmes have multiple supervisors and clients they interact with. Hence, the high role conflict levels in HSAs working under the HTS and TB programme.

Role overload and job satisfaction.

In this study, the Pearson correlation *r* showed a negative and significant relationship between role overload and job satisfaction in HSAs. This finding is consistent with the findings by earlier researchers who reported a negative relationship between role overload and job satisfaction (Bozkurt et al., 2011; Chou & Robert, 2008; Pearson, 2008). The multiple regression for role ambiguity, role conflict and role overload as independent variables and job satisfaction as a dependent variable found role overload as one of the significant predictors of job satisfaction. This finding suggests role overload can contribute to lower job satisfaction in HSAs. In contrast, other researchers have reported a positive and significant association between role

overload and job satisfaction (Bacharach et al., 1991; Morter, 2010; Van De Vliert & Van Yperen, 1996).

Although there is a general consensus on the issue of role overload among HSAs by researchers, no suggestions have been put forward to address the issue of role overload in HSAs. Currently, there are moderate levels of role overload and if no control measures to either reduce or eliminate role overload are initiated, its consequences would be too enormous to bear. Possible consequences include; many absenteeism's at work, increased number of cases at OPD seeking medical attention to treat stress and depression, high employee turnover and lower levels of commitment and job satisfaction (Duxbury, Higgins, & Lyons, 2017). Evidence from the literature suggests role overload can be addressed by giving the employees a greater sense of control over their work and their work schedule and increasing the number of HSAs supportive supervisors (Duxbury et al., 2017). Supportive supervisors are important because they provide instrumental support as well as emotional support to workers (Yildirim & Aycan, 2008). With instrumental support, supportive supervisors could provide direct assistance and advice to HSAs on issues pertaining to their work such as the interpretation of the MoH policies and objectives. With emotional support, the supervisors would be able to understand the difficulties or challenges faced by HSAs in their work and could provide support on how to manage role overload. This could only be possible if there is a capable team to supervise the HSAs.

HSAs tasks and role stressors

An analysis which was conducted to ascertain the relationships between the individual HSAs tasks and the role stressors found relationships between some HSAs tasks and the role stressors. A further analysis found relationships existed between the overall curative and preventive tasks with the role stressors. The overall curative and preventive tasks were obtained

by summing up all row means and getting their average. The results revealed that the HSAs overall curative tasks were positively correlated with role conflict (r= 0.118, *p*=0.008) and role overload (*r*= .105, *p*= 0.015) while, the HSAs overall preventive tasks were positively correlated with role overload (*r*= .129, *p*= 0.004). Both the overall preventive and curative tasks were positively correlated with role overload while the curative task was negatively correlated with role ambiguity (*r*= -.108, *p*= 0.013). This finding suggests an increase in preventive tasks would increase the level of role overload in HSAs while, an increase in curative tasks would contribute to both role conflict and role overload. The HSAs tasks are many and if not regulated they would contribute to role stressors, lower job satisfaction and poor work performance.

Factors Contributing to Role Stressors and Job Satisfaction

The Role Episode Model suggests personal factors such as sociodemographic variables, interpersonal and organizational factors have a contribution towards role stressors (Kahn et al., 1964). For example, many literature evidences suggest demographic, situational and other variables have an influence on how employees perceive role stressors and job satisfaction (Al-Kahtani & Allam, 2016; Bozkurt et al., 2011; Hoboubi, Choobineh, Ghanavati, Keshavarzi, & Hosseini, 2017; Shoaib, Mujtaba, & Awan, 2018).

Sociodemographic variables, role stressors and job satisfaction.

In this study, the variable age, was only significantly related to job satisfaction and not related to role ambiguity, role conflict and role overload. Respondents in the middle age group 36-45 years had high job satisfaction levels than their colleagues in the other age groups. It is under this age group that HSAs now start to feel they are satisfied in their work. It is at this age when HSAs have undergone some changes in their life and career that they become satisfied in their job. Most recent literature evidence suggests when individuals reach an average age of >30

years they start to be committed in their work and think about their career progression and advancement at work (Hoboubi, Choobineh, Ghanavati, Keshavarzi, & Hosseini, 2017; Kunte et al., 2017). Further evidence suggests that in the middle years of their career employees' morale starts slowing down and picks up again in their late life. Herzberg has coined a term "U shaped relationship" to represent this type of relationship between age and job satisfaction (Hoboubi et al., 2017). In contrast, this study finding does not seem to support this idea of a U-shaped relationship between age and job satisfaction but a direct linear relationship.

Gender, in this study, was significantly related to job satisfaction, role ambiguity and role conflict and not role overload. This finding is consistent with the findings by Duc et al. (2015), who found gender having significant associations in the variances of the employees at a Bank for Investment and Development of Vietnam (BIDV) in Quang Nam. In this study, males had high job satisfaction and role conflict levels than their female counterparts. This finding contradicts the findings of other researchers who found females with more job satisfaction and role overload (Bozkurt et al., 2011; Hauret & Williams, 2017). The high role conflict levels in males have been explained in other literature evidences by the fact that males have multiple roles in various spheres of life such as family, work and society which affect their energies and physical abilities compared to women (Al-Kahtani & Allam 2016). Similarly, in Malawi, the issues of gender are not fully established males are considered as bread winners and as such, they have to fulfil familial, community and work obligations. With these roles they may not adequately fulfil all the expectations in their work and this may likely contribute to role conflict. However, other literature evidence has found no significant associations between job satisfaction and role overload according to gender (Shoaib et al., 2018).

Additionally, gender was significantly related to role ambiguity and that females had high role ambiguity levels. This finding is consistent with the findings by Bako (2014) in a study conducted on a different profession of female academics at a University in Nigeria, who found gender had an effect on the academic staff's perception of role ambiguity. Other literature evidence suggest females are affected with role ambiguity due to many responsibilities such as meeting family chores and lack of guidelines in their work (Al-Kahtani & Allam, 2016). In contrast, Al-Kahtani & Allam (2016) found male employees perceived a higher degree of role ambiguity and role conflict.

However, marital status was related to role overload and divorced women had more role overload levels compared with the other women under the marital status. Evidence from the literature suggests divorced women have high role overload levels due to multiple role demands or competing demands that usually need their time. Women after divorce become sole providers in the household and additionally, they have to meet both the household and the work demands (D'Ercole, 1988; Heath & Orthner, 1999).

In terms of education, this study has revealed significant findings where JCE holders had high role conflict, role overload and job satisfaction levels than their colleagues with either the MSCE or a PSLCE. However, education was not significantly related to role ambiguity. This study finding suggests that the education level had an impact on the HSAs perception of role conflict, role overload and job satisfaction while it had no impact on role ambiguity. In contrast, other studies conducted have associated education with decreased levels of job satisfaction based on the fact that when education does not lead to extrinsic rewards such as increased salary, many workers become dissatisfied (Clark, 1996; Eskildsen, Kristensen, & Westlund, 2004; Wharton et al., 2000).

According to years at service post, it had significant relationships with role ambiguity and role conflict. HSAs who had served for a period of fewer than 20 years had high role conflict levels than long-serving HSAs. This finding is consistent with findings from earlier studies conducted on role ambiguity and role conflict, where they found years at service post (tenure) had a relationship with role conflict (Al-Kahtani & Allam, 2016; Shenkar & Zeira, 1992). In contrast, Bako (2014) found no significant findings indicating relationship between years at service post and role conflict and role ambiguity.

In terms of work location whether the HSAs were working in an urban area or rural area, significant relationships were reported with role stressors and job satisfaction. HSAs in rural areas had high role ambiguity, role overload and job satisfaction compared with their counterparts in urban areas. The high role ambiguity and role overload might be a true reflection of the situation at the ground as most of the health facilities are located in rural remote areas with difficult access. This finding is in agreement with Kok et al. (2016) who suggested that HSAs in rural areas are more disadvantaged than their colleagues in urban areas in terms of resource availability, reporting and supervision frequency. In such a situation, supervision can be a challenge as supervisors face difficulties to reach the HSAs either by road or phone due to poor network coverage and road infrastructure. Similarly, communication can be a challenge and role ambiguity is very likely to occur. This finding is inconsistent with the findings of earlier studies conducted in other professions that found no significant associations based on location (urban, suburban and rural settings) (Cervoni & DeLucia-Waack, 2011).

Additionally, there were significant associations between HSAs working at a Health Centre level in all the three districts and those at the District Hospital in terms of job satisfaction. Evidence from the literature suggests employees working in the rural area such as HSAs usually

have high job satisfaction and little levels of stress because in rural areas such workers value cooperation and collaboration with fellow workers and even community members (Kim & Hopkins, 2017). Hence, the high job satisfaction among HSAs working at a Health Centre. Despite the high job satisfaction levels among HSAs at a Health Centre, slightly significant high levels of role ambiguity and role overload were reported in this study. The availability of a few HSAs at a Health Centre is very likely to trigger high role overload. While role ambiguity is likely to increase due to poor supervision from their supervisors. However, HSAs working at the District Hospital had slightly high significant levels of role conflict levels than their colleagues at a Health Centre. High role conflict levels are very likely to occur among HSAs at the district hospital, considering the broad nature of activities being provided. In addition, there is more interaction between the HSAs and other co-workers of which some are their supervisors from different professions such as environmental health, nursing and clinical services. In such situations, role conflict is very likely to occur according to the classical theory (dual and multiple authority).

In summary, the findings in this study, therefore indicate that demographic variables or personal characteristics have a role to play on HSAs role stressors and job satisfaction. Therefore, it is important to note that some of these demographic characteristics can have an impact on role ambiguity, role conflict and job satisfaction of HSAs.

Role Ambiguity.

The PCA analysis results indicate the main factors for role ambiguity were the supervisor, role clarity and work guidelines. In terms of role clarity, their roles are constantly changing with the addition of new tasks and this has a high likelihood for increased role ambiguity. Khan et al. (1964) agree to this, and they assert that role ambiguity occurs in

organizations, which are rapidly changing and are introducing new technologies like the case in the Malawi MoH where new initiatives are frequently being introduced. HSAs under these conditions are likely to find themselves in support of new initiatives without proper readiness. Role ambiguity usually occurs among employees when they are not sure of what to do (Boström et al., 2013; Duze, 2012). Specifically, when employees do not have adequate information such as work guidelines and protocols for them to effectively carry out the job tasks (Boström et al., 2013; Duze, 2012). Despite their initial training HSAs still need supervision, work guidelines, job protocols and job descriptions for them to effectively discharge their duties. Therefore, role clarity is very important for any organization to achieve high productivity, the motivation of its workers, and innovation (Amabile & Gryskiewicz, 1987). HSAs are very likely to perform better if they have clearly defined roles and a list of manageable tasks to perform than having an open-ended list of tasks to perform. In pursuance of such efforts, workers such as HSAs are proposed to have clearly defined roles, standardized protocols and job aids to assist them in their routine work to avoid role ambiguity (Busza et al., 2018; Haines et al., 2007). This is further echoed in the six building blocks of the health systems where governments are urged to give direction on issues such as standardized protocols and job aids (WHO, 2010a).

Further, with the addition of new roles, some of their roles are inconsistent and lack uniformity among them. It is important that HSAs services are consistently provided in an integrated manner (providing both clinical and preventive health services together) according to the building blocks of the health systems (WHO, 2010a). HSAs are capable of providing a comprehensive range of healthcare services at the community level such as iCCM. Ntopi (2010) in a study about the impact of the expansion of the HSAs program in Nkhatabay district of Malawi found HSAs operating village clinics commanded greater respect than their colleagues

who were not involved in their communities. This might a be a source of role stress among HSAs who are not providing such services at the community level.

According to the factor loadings, the major issue with the supervisor was that the respondents were not happy with their supervision as they did not explain things clearly to them. While with role clarity, the respondents did not know their responsibilities and were unable to know what exactly they were expected to do in their work. Supervision is very important for HSAs motivation as well as the prevention of role ambiguity. The importance of supervision in any organization cannot be overemphasized as it is vital for the development of the organization. It provides the opportunity for the supervisors who are AEHOs to interact with HSAs and when carried out according to schedule may enable discussions, support provision, empowerment and motivation (Crigler, Gergen, & Perry, 2013). Evidence from the literature is in agreement to this and suggests supervision of CHWs should be carried out regularly for the motivation and recognition of the CHWs (Crigler et al., 2013). Carpenter, Webb, Bostock, & Coomber (2017) in their systematic review agree to this view and asserts that the higher the frequency of supervision, the higher the level of job satisfaction in workers. In addition, HSAs working in rural areas need supervision in order to link them to the health system and to supplement their knowledge.

However, some evidence from the literature has presented interpersonal factors as some contributing factors towards role ambiguity and role conflict. Some communication challenges have been observed with AEHOs during the supervision of HSAs giving the impression that their supervision is unsupportive, demotivating and lacking the expertise to supervise (Kok et al., 2016; Rodríguez et al., 2015). The Role Episode Model suggests that for the role episode model cycle to be complete communication has to be done effectively and there must be

feedback. For example, in most supervisory visits conducted, HSAs challenges when presented are not adequately addressed as some of them are more administrative in nature requiring consultations with the DHMT. In this situation, subsequent supervisory visits made, are met by unresolved issues and such visits are likely to be considered unsupportive, demotivating and not conducted (Crigler et al., 2013). It is, therefore, important that every time supervisory visits are made prompt feedback needs to be provided. In addition, their supervisory visits are considered to be irregular and that they lack the necessary knowledge or skills required for the supervision of the HSAs clinical and MNH roles. Evidence from the literature suggests supervision should be done regularly and that the supervisors should be experts in the field who should be able to provide new knowledge and actively engage the supervisees during supervision (Hill et al., 2014).

Additionally, it is asserted in the literature that negative perceptions pertaining to supervision have a substantial influence on lower job satisfaction, commitment and the intention to quit (Baylor, 2010; Mardanov, Sterrett, & Baker, 2007). Furthermore, organizations that regulatory monitor employees work without providing employees with much-needed feedback may also result in non-motivated employees (Cardy & Selvarajan, 2004).

According to the role episode model these factors if not properly addressed may lead to role stressors and eventually lower the job satisfaction among employees. Carpenter et al. (2017) suggest both administrative and emotional supportive supervision is essential for the satisfaction of the workers. In resource-limited settings like Malawi, it is very difficult for the AEHOs to appropriately respond to the HSAs needs. Sometimes this is exacerbated by existing bureaucracies present when responding to issues. The issues from HSAs have to pass many

stages e.g., from AEHOs to EHOs, EHOs to DEHOs, DEHOs to DHMT for final approval. Such bureaucracies are likely to cause role conflict among HSAs.

Regarding the issue of the AEHOs competency in the supervision of the HSAs, some literature evidence suggests the AEHOs are not well placed to supervise the HSAs and have suggested the ECHNs and the SHSAs as the best supervisors for the HSAs (Rodríguez et al., 2015). They assert AEHOs are not conversant with some of the roles of the HSAs especially the clinical and MNH role considering their preventive background. However, the ECHNs and SHSAs might have their challenges as well. With the critical shortage of nurses in hospitals, ECHNs are often times deployed in hospital wards to provide nursing care. Additionally, the ECHNs are equally not conversant to all the roles of the HSAs especially their traditional roles such as WASH. Similarly, with the SHSAs they do not have any additional qualification to differentiate them from their supervisees.

With due consideration to all these issues, the interprofessional education and healthcare leadership in the management of HSAs is necessary as a solution to the HSAs supervision. Most recent evidence from the literature points at interprofessional supervision (IPS) as the best approach in supervision to address such challenges (Howard, Beddoe, & Mowjood, 2013). IPS involves supervision by supervisors from different disciplines. This would help to address the challenges faced in the supervision of the HSAs, where supervisors from a single profession are not adequate to provide adequate supervision to HSAs as their services are integrated.

In contrast, other professional bodies have recommended supervision to be carried out by professionals from the same discipline (Howard et al., 2013). In agreement to this, they have cited issues such as differences in language, content and philosophies of the professions as some

of the reasons why supervision has to be done by people from the same profession (Bogo, Paterson, Tufford, & King, 2011). Further, evidence from the literature suggests there is a positive relationship between the frequency of contact with supervisors from the same discipline and perceived impact, but not with supervisors from other disciplines (Kavanagh et al., 2003).

However, Townend (2005) in an open-ended qualitative survey to describe IPS with a sample of 170 randomly recruited accredited cognitive behavioural therapists asserts that IPS is not only necessary but ideal as it exposes supervision participants to different perspectives, wider knowledge and promotes critical thinking. In addition, IPS enhances the understanding of the contributions made by other professions (Mullarkey, Keeley, & Playle, 2001). In IPS, it does not matter who supervises who so long as the supervisors meet the criteria for carrying out HSAs supervision. With this in mind, where it may be applicable interprofessional teams can be formed to supervise the HSAs. The interprofessional team can comprise clinical officers, ECHNs and AEHOs. This agrees to the National Community Health Strategy (NCHS) proposition to build Community Health Teams (CHTs) where CHWs are expected to work within such teams. The CHTs composition includes community health volunteers (CHVs), HSAs, SHSA, an AEHO, a Community Health Nurse (CHN) and a clinical member such as a Medical Assistant (Malawi MoH, 2017b). Therefore, it is important that the Malawi Ministry of Health provides the necessary leadership to ensure these teams are operational as they would enhance peer learning and collaborative practice at the health facility.

Role conflict.

Using the PCA analysis, two factors were extracted and these were ‘incompatibility’ and ‘time and person values’. Under ‘incompatibility’ most of the items that loaded under this factor were organization related; such as breaking the rules of the organization in order for the

HSAs to carry out their duties, doing things differently under different conditions, working under incompatible policies and guidelines. The second Component or factor had issues of 'time and personal values.

Multiple regression results indicate the first-factor'incompatibility' as the most leading variable for role conflict in HSAs. This finding suggests that the HSAs were affected by role conflict. Considering the current work situation of the HSAs in Malawi, they have too many roles to perform that are likely to contribute to their role conflict. Additionally, they have multiple supervisors as their activities require supervision from clinical, nursing and environmental health. Under these circumstances, inter-sender conflicts are likely to occur as the principle of unity of command is likely to be violated and the employees are expected to follow instructions from, and report to, two or more superiors who have differing agendas. (Conley & Woosley, 2000; Flores, 2016). Evidence from the literature suggests the addition of more tasks to CHWs needs some adjustments such as reducing the catchment population, training and providing stronger supportive supervision (Jaskiewicz & Tulenko, 2012). Therefore, it is necessary for the government to provide the necessary leadership for this to be done. If not properly handled, may lead to role conflict and workers dissatisfaction (Ebbers & Wijnberg, 2017). In addition, this can create the risk of role conflict not only to the leaders themselves but also to the other members in the organization (Ebbers & Wijnberg (2017). Under such circumstances, role conflict is likely to be among the clinicians, nurses and AEHOs and can easily be extended to the HSAs and other members of staff.

The second-factor'time and person factor' could be classified as a person-role conflict which mainly revolved around issues of time and personal values of HSAs as individuals. For example, time may not be adequate for the HSAs if they have a lot of roles to perform. While

with the person value, HSAs sometimes may find themselves supporting initiatives that they do not value as individuals. A typical case there could be some interventions HSAs provide, may not be valuable to them as individuals and may concentrate their efforts on interventions they value. In philosophy, individual people view the world differently; and they have different worldviews (Anderson, 2014). Similarly, all HSAs may not have similar values and emotions amongst themselves and their supervisors and is likely to lead into role conflict.

Role overload.

In this study, role overload levels were moderate. The PCA analysis isolated two factors for role overload which, were time pressure and work overload. In terms of role overload classification, the HSAs could be said were perceiving both quantitative and qualitative role overload. The multiple regression result using the enter method revealed that the two factors were significantly related to role overload. Although the role overload levels were moderate, there is still a reason for concern and need for government intervention to avoid high and despicable levels of role overload. Evidence from the literature, in Malawi, asserts that HSAs as frontline workers of the Malawi MoH at the community level are overloaded (Kadzandira & Chilowa, 2001; Rodríguez et al., 2015). This issue is reported to have raised some concerns at the policy review meeting where some participants doubted the HSAs capacity and ability to perform their overwhelming number of tasks (Rodríguez et al., 2015). However, it is reported that no resolutions were made to address the role overload issue. Other authors have suggested workload reduction as a solution to role overload. Additionally, they have suggested it be done in line with human capacity, job redesign, and employment of additional workers (Iroegbu, 2014).

Job satisfaction.

According to Spector (1997) job satisfaction refers to the way people feel about their jobs and different aspects of the job. Many researchers, both old and new, are in support of this view and have defined job satisfaction as the extent to which employees like their work (Lee, 2017; Sudha, 2017). In this study, HSAs were highly satisfied with their job and the factors for their job satisfaction included: compensation and advancement, work conditions, supervision, ability utilization, social service and activity. However, the HSAs were dissatisfied with the job satisfaction dimension of compensation and advancement at 62%.

Multiple regression found all these variables significant. Additionally, 'compensation and advancement' was identified as the most important predictor followed by 'work conditions'. This finding is in agreement to Maslow (1943) who proposed a five-level hierarchy of needs which includes: physiological needs, safety, belongings and love, esteem and self-actualization. Most of the job satisfaction aspects have their foundation based on this theory (Evans et al., 2017; Kuhlen, 1963; Lee, 2017). In addition, this study finding is consistent with the findings of earlier studies conducted on CHWs globally and locally. For example, cross-sectional studies conducted in Malawi and Ghana found similar results where CHWs demanded increased salaries, promotion, and regular supervision for their job satisfaction (Agyepong et al., 2004; Bempah, 2013; Kalaya, 2014). Further, evidence from the literature, suggests particular attention should be given to the development of a career path and job satisfaction (Agyepong et al., 2004; Bempah, 2013). It is asserted in the literature that the recognition of CHWs is important in order to keep the CHWs motivated, appreciated, high performing and committed to the success of the organization (Baron, 1983; Danish & Usman, 2010). Furthermore, evidence from the literature

suggests job satisfaction should be looked at holistically i.e. taking a multi-dimensional approach towards job satisfaction (Keller, 1964).

Issues of pay and promotion, supervision and work conditions need to be clarified among workers to avoid job dissatisfaction (Kok et al., 2014). The Global Health Workforce Alliance (2010) consultative meeting proposed a positive practice environment, regular and continuous supportive supervision, proper information and communication channelling, a manageable workload and the availability of drugs, supplies and equipment as the prerequisites for high work performance and job satisfaction of CHWs. This is consistent to the WHO recommendation of one of the pillars for the health systems human resources for health which places a high priority on the establishment of job related norms, deployment of support systems and an enabling work environment for the human resources for health (WHO, 2010a).

Regarding the work conditions of HSAs in Malawi, the HSAs continue to face challenges in terms of office space as well as their accommodation. The EPI Annual Review of 2017, held at Hippo View Lodge in Liwonde was in agreement to this finding where many presentations made at the meeting indicated challenges with infrastructure (Malawi MoH, 2017c). Many HSAs were conducting immunization sessions under a tree shed or in churches, schools and mosques which were never meant for such purpose. Additionally, HSAs have problems with their mobility, they lack bicycles, uniform for their identity, guidelines in their work and are reported to have inadequate supplies and equipment in their work (Callaghan-Koru et al., 2012; Nsona et al., 2012).

In terms of supervision, the supervision of HSAs in rural remote areas is very vital for mentoring the HSAs and linking them to the health system. Supervision of HSAs is important for their performance and job satisfaction. In this study, only 65.3% of the respondents were

satisfied with the supervision they get from their supervisors. Evidence from the literature is in support of this assertion that HSAs supervision is generally perceived as unsupportive, irregular, uncoordinated, bureaucratic, demotivating and lacking adequate training, and problem-solving or feedback mechanisms (Kwalamasa, 2017; Lehmann & Sanders, 2007; Smith et al., 2014). In addition, it is argued by others that it is being done with a negative approach and that feedback is rarely given (Kadzandira & Chilowa, 2001; Kok & Muula, 2013). Feedback is very important for the effective supervision of employees such as HSAs as it enhances employees' capabilities and communication with their supervisors (Martiniuk et al., 2014).

Despite the knowledge of the existence of the gaps in supervision, the HSAs are still being poorly supervised or are not supervised at all. Much has been said about the existence of gaps in HSAs supervision in the literature but very little or none has been suggested to improve HSAs supervision. In this study, the HSAs supervision needs to be prioritized by the policy makers to ensure HSAs are adequately supervised. However, further research is required to find out more on why the HSAs still remain poorly supervised. Evidence from the literature suggests factors such as long distances, inadequate resources and skills gap usually are some of the reasons why supervision is not adequately conducted among the CHWs (Jaskiewicz & Tulenko, 2012). It is, therefore, important that whenever there are plans for HSAs capacity development similar plans need to be arranged for their supervisors. It is important that when additional HSAs are being recruited consideration should also be given to the recruitment of their supervisors. Issues pertaining to the two, HSAs and their supervisors, are inseparable and need a collective approach in order to effectively deliver the EHP at the community level.

Compensation and advancement at work are very important for the job satisfaction of employees in any organization. The HSA salary, like many other employees in the public sector,

is very low. On average an HSA in Malawi earns the equivalent of USD137.29 as basic pay per month (Nkhotakota District Council, 2017). Other researchers have found pay as an issue among the HSAs (Kok & Muula, 2013). A number of initiatives have been introduced by the government to motivate HSAs such as the top-up allowance where an HSA receives about USD34 (Malawi MoH, 2012). Top-up allowance in Malawi is received by health workers working on the bedside of the patient such as medical doctors, clinical officers, and nurses (Malawi MoH, 2012). It is a great recognition and motivation on the part of HSAs, considering that CHWs in other countries are not on the government payroll and work as volunteers.

Regarding advancement, HSAs in Malawi have a long history of work advancement. They started as Cholera Assistants at the Classified Workers Grade (CW III); later they got promoted through normal restructuring to Subordinate Class Grade (SCII and SCIII). Finally, they all got promoted to Grade M and later Grade L for the Senior HSAs who act as their supervisors. However, the big concern with the promotion of the HSAs in Malawi is the lack of a clear plan for their promotion. According to the Maslow theory of the hierarchy of needs under self-esteem, there is need for HSAs to be recognized and respected in the community through advancement. Additionally, financial security is also a kind of safety needs, where organizations need to pay their employees fairly to ensure job satisfaction and high performance at work (Upadhyaya, 2014). Currently, HSAs are encouraged to go for further training as medical assistants, nurses or AEHOs (Ntopi, 2010). This arrangement put HSAs to greater disadvantage because they are redeployed elsewhere to work either as nurses or medical assistants dependent on the training they received. The desired practice is promoting HSAs within their ranks. For example, an HSA could be promoted from an HSA (Grade M) to a Health Surveillance Officer (Grade I). This could be achieved by making some changes to their training. For example, the

length of their training period could be revisited to suit this arrangement. The National Community Health Strategy has plans for increasing the training period to one year. The training could be modelled on the training of the former Health Assistant cadre, which used to take two years and abridged courses could be arranged for this purpose.

Currently, the government of Malawi has initiated a number of programmes for the job satisfaction of HSAs in the country. For the first time in the history of the country the Community Health Strategy is in place and for a long period of time community health has been operating without the strategy. There are plans for developing service delivery structures in hard to reach areas, constructing dwelling houses for HSAs and providing durable transport options to HSAs and SHSAs (Malawi MoH, 2017b). However, it is important that the Government of Malawi and its partners involved in community health should adhere to these plans. In addition, Government should ensure that there is fairness in the execution of the strategy to ensure HSAs in the underserved areas benefit from the plans. If there is unfair distribution it would trigger role conflict and poor job satisfaction among HSAs. Still, there is need for more initiatives to be explored to make the HSAs satisfied with their work. Evidence from Nigeria, indicates many health workers are very much unwilling to work in rural settings because of poor working conditions that emanate from poor infrastructure that is characterized by lack of or inadequate functional equipment and supplies, lack of social amenities such as electricity, potable water, and good housing, and availability of schools for their own continuing education as well as their children (Lawan, Amole, & Khayi, 2017). This has also affected some HSAs in Malawi to the extent that a good proportion of HSAs are resident in trading towns and operate to their catchment areas as visiting HSAs (Malawi MoH, 2017b).

Conclusion

The purpose of this study was to explore role stressors and job satisfaction in HSAs. Specifically, this study identified sociodemographic variables that are associated with role conflict, role ambiguity, role overload and job satisfaction in HSAs, established relationships between role ambiguity, role overload and job satisfaction, identified the predictors of role stressors and job satisfaction and determined how HSAs prioritized their work activities in terms of frequency and importance. The study used a cross-sectional design, and collected data through a self-administered questionnaire from HSAs in the three districts of Mangochi, Lilongwe and Mzimba South.

This study was conducted within the context that HSAs in Malawi were overloaded with work roles. HSAs roles in Malawi have massively expanded from simple risk factors identification at the community level to clinical practice. The study identified the sociodemographic variables such as age, gender and job specialization as the main influencers of role conflict, role ambiguity, role overload and job satisfaction. In this study, age was significantly related to job satisfaction and HSAs aged between 36-45 years were more satisfied than their colleagues in the other age groups. Gender was significantly related to role ambiguity, role overload and job satisfaction. Further, the findings in this study have identified the predictors of role stressors and job satisfaction. The most important predictors were: role conflict-incompatibility, role ambiguity- the supervisor, and role overload-time pressure. Furthermore, the study results have revealed immunizations and growth monitoring tasks as highly prioritized and important activities for HSAs.

The major finding in this study is that role ambiguity was the most important predictor of job satisfaction and that the most important factor for role ambiguity was the supervisor. The HSAs supervisor as an issue has been identified in both role ambiguity and job satisfaction as main factor. The supervision issue revolved around the issues of technical competence and relationships. One major recommendation is that there is a need to build the capacity of the supervisors to ensure that the HSAs are effectively and efficiently supervised. Supervision is well renowned for its ability to assist in the reduction of the role stressors. to address the role stressors. role overload the HSAs tasks need to be regulated to ensure HSAs are not overloaded with tasks. Therefore, it is important for Government and its partners to consider introducing measures aimed at improving HSAs supervision. This study would like to propose interprofessional supervision and the training of the HSAs supervisors as an essential element towards HSAs supervision improvement.

Contribution to the body of knowledge

Methodology

This study, for the first-time explored role ambiguity and role conflict among HSAs in Malawi in detail using high-level statistics such as the PCA and multiple regression to explore the role stressors and job satisfaction. Additionally, it developed the Task Questionnaire from the literature to incorporate HSAs tasks (Burgel et al., 1997; Uys, 2003). Further, a model for role stressors and job satisfaction in HSAs has been developed as illustrated below:

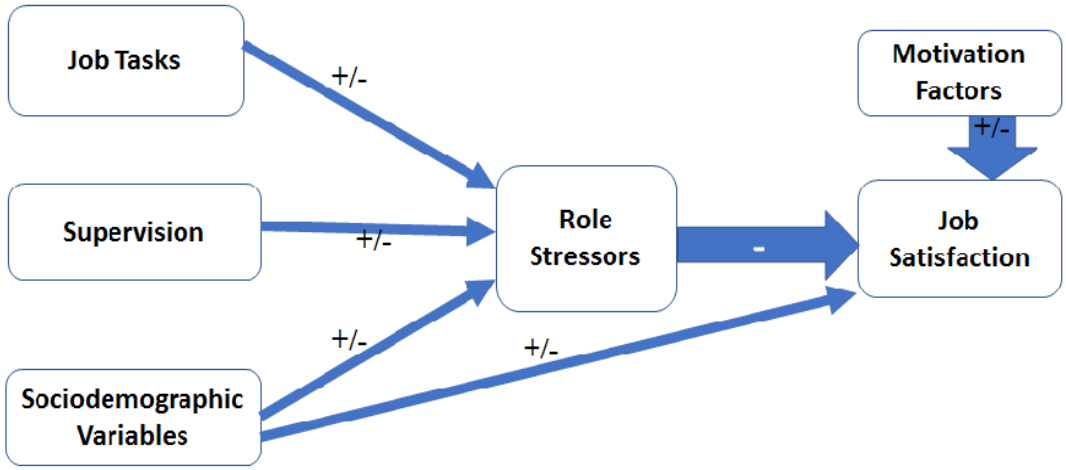

Figure 16: Role stressors and job satisfaction model

New information

Sociodemographic variables such as geographical location and age had significant associations with role conflict and job satisfaction. The HSAs in rural areas had high job satisfaction and lower role conflict levels compared with HSAs from urban areas. Additionally, HSAs working at the District Hospital had high role conflict than their colleagues working at a health centre. Additionally, significant associations were found between different groups of HSAs. HSAs involved in the cold chain had lower levels of role conflict than their colleagues in HTS, TB, iCCM and generalist HSAs. HSAs attached to TB and HTS had high role conflict levels.

Recommendations

With regard to the findings and conclusions of this study, there is low role ambiguity and moderate levels of role conflict and role overload in HSAs. It is therefore recommended that the Malawi MoH should develop a plan to reduce role conflict, role ambiguity, and role overload. In addition, some measures should be introduced in order to increase the job satisfaction of HSAs in Malawi as follows:

In Public Health Practice

There is need to develop clear guidelines for use by HSAs to avoid role ambiguity among HSAs in Malawi. This is in response to the moderate levels of role ambiguity reported among the HSAs during the study. HSAs need to be provided with clear job descriptions as well as clear guidelines in their work to avoid role ambiguity. This recommendation is in line with the evidence from the literature which suggests training and necessary support needs to be provided for the clear understanding of their roles in order to reduce role stress among CHWs (Baker, Benton, Friedman, & Russell, 2007; Huber, 2017).

The HSA training period, which is generally considered short (Martiniuk et al., 2014; Sarah Smith et al., 2014), should be extended to a period of one year or two years. The training could be modelled on the training of the former Health Assistant which used to take two years and abridged courses could be arranged for this purpose for serving HSAs. The training of the Health Assistants in Malawi in the past used to be 2 years at Zomba School of Hygiene and the Lilongwe School for Health Sciences. However, this might have some implications with the deployment of HSAs but if properly planned it can be a success.

In Management

There is need by management to develop a clear plan for the promotion of HSAs in line with the Maslow's theory (self-esteem) that employees need to be recognized and respected by others. If possible, the promotion should be done within their own ranks unlike encouraging them to go for an upgrading course to become professionals in other fields such as medical assistants, nurses and AEHOs for them to be promoted. Interprofessional supervision needs to be encouraged in order to carry out effective supportive supervision of HSAs.

Interprofessional Education collaboration

As an interprofessional education and collaboration PhD study programme, this study suggests interprofessional education and collaboration as a solution to role stressors in HSAs.

Interprofessional education "occurs when two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes" WHO, 2010b, p.13). While collaborative practice in health-care "occurs when multiple health workers from different professional backgrounds provide comprehensive services by working with patients, their families, carers and communities to deliver the highest quality of care across settings" (WHO, 2010b, p.13). This would mean both clinical and non-clinical health-related workers working together in the supervision of the HSAs. With the multiple allocation of tasks to HSAs no single cadre is efficient enough to supervise the HSAs looking at the expanded scope of their practice. Therefore, interprofessional collaborative practice is the best solution to the supervision of the HSAs. In this regard, a team comprising of a clinical officer, a community nurse and an assistant environmental health officer could be formed to oversee the supervision of the HSAs at the health centre.

Additionally, refresher training courses could be arranged for the team members on how they could work together in order to effectively supervise the HSAs. To achieve this, deliberate training programmes could be arranged where the clinical officers, nurses and the AEHOs would learn together on how to work as a team to support the HSAs during supervision. In addition, for those in college, the AEHO curriculum could be reviewed in line with the current challenges and aspirations of Malawians. The AEHO students in college could learn together with students from other professions. This would enable team efforts and improve collaboration among the health workers once they complete their training and get employed. The Kamuzu College of Nursing

could be approached for this purpose as it is the pioneer for interprofessional education (IPE) in Malawi.

Partners

There is need to provide supportive work environments to HSAs. This study would like to propose to government, bilateral and multilateral donors to build infrastructures in the community for HSAs Health Posts. This would not only promote safe and clean health services delivery at the community level but also contribute to their job satisfaction. In addition, supplies should be provided to all HSAs to ensure equitable distribution of resources at the community level in Malawi.

Practical Implications

The findings of this study indicate there is a negative association between the role stressors and job satisfaction. If the role stressors in HSAs are not controlled, they are likely to affect their job satisfaction, work performance and even service delivery at the community level. Additionally, the role stressors could likely cause stressful conditions among them such as depression, dissatisfaction, anxiety, tension and low performance. Therefore, there is urgent need by the authorities and partners to address these role stressors before they grow out of proportion.

Further, this study results would provide baseline information for further research on role stressors and job satisfaction. Furthermore, gaps identified in this study regarding the HSAs would inform the MoH and other partners to develop strategies aimed at improving the work conditions of the HSAs in Malawi.

Health Care Leadership

A number of areas have been identified requiring leadership from the MoH. For example, the issue of HSA tasks regulation requires bold leadership from the MoH to lead the

process. The MoH could initiate the consultation process with the regulatory bodies to discuss how HSAs tasks could be regulated. The MoH is in the right position to drive this process as the custodian of health in Malawi.

Areas for Further Research

There is need to conduct further research on some of the identified gaps and find strategies that can promote the development of the HSAs in Malawi. Some of the proposed areas are:

- There is need to find out how supervision of HSAs can be improved. Evidence from the literature suggests the HSAs are poorly supervised
- There is need to use a rigorous study design that would determine causality. This study used the cross-sectional study design which did not establish causality.
- Strategies to reduce role conflict, role ambiguity and role overload in HSAs.
- There is need for the task questionnaire to cover a comprehensive list of HSAs tasks to enable role prioritization in HSAs.

Constraints/Limitations

The mixed methods or the experimental design could have been used in this study. The mixed methods study design could have elicited more in-depth data from the qualitative data while the experimental research design could have established causality between the independent and the dependent variables. However, this was not possible due to time and other resource limitations. In addition, the mixed methods were not done since the philosophy of this study was grounded in the use of empirical knowledge. The task questionnaire used was not comprehensive as the tasks performed by HSAs were compressed into 17 task statements. The study results may not be representative of the HSAs tasks in Malawi. This was the case because of the time factor

as the study was done as a requirement for the partial fulfilment of the doctorate degree. This study engaged a cross-sectional study design, which found significant relationships between role overload and job satisfaction and role ambiguity and job satisfaction but causality could not be established.

References

Adams, K. A., & Lawrence, E. K. (2014). *Research methods, statistics, and applications*. Thousands Oaks, California: Sage Publications.

Afsar, H. A., & Younus, M. (2005). Recommendations to strengthen the role of lady health workers in the national program for family planning and primary health care in Pakistan: the health worker's perspective. *J Ayub Med Coll Abbottabad, 17. Journal of Ayub Medical College Abbottabad, 17*(1)*, 48-53.*

Agho, A. O., Price, J. L., & Mueller, C. W. (1992). Discriminant validity of measures of job satisfaction, positive affectivity and negative affectivity. *Journal of Occupational and Organizational Psychology*, *65*(3), 185–195.

Agyepong, I. A., Anafi, P., Asiamah, E., Ansah, E. K., Ashon, D. A., & Narh-Dometey, C. (2004). Health worker (internal customer) satisfaction and motivation in the public sector in Ghana. *The International Journal of Health Planning and Management*, *19*(4), 319–336.

Ahmad, A., & Saud, S. (2016). The effect of role overload on employee anxiety and organization citizenship behavior. *Journal of Managerial Sciences*, Retrieved on 11 February 2019 from http://www.qurtuba.edu.pk/jms/default_files/JMS/10_1/JMS_January_June2016_45-54.pdf .

Ahmady, S., Changiz, T., Masiello, I., & Brommels, M. (2007). Organizational role stress among medical school faculty members in Iran: dealing with role conflict. *BMC Medical Education*, doi: 10.1186/1472-6920-7-14.

Akin Aksu, A., & Aktaş, A. (2005). Job satisfaction of managers in tourism: cases in the Antalya region of Turkey. *Managerial Auditing Journal*, *20*(5), 479–488.

Al-Kahtani, N. S., & Allam, Z. (2016). A holistic approach to determine the relationship of sociobiographical variables with role ambiguity and role conflict. *International Business Management*, *10*(15), 2795–2801.

Altman, D. (1991). *Practical statistics for medical research*. London: Chapman & Hall.

Amabile, T., & Gryskiewicz, S. S. (1987). *Creativity in the R & D laboratory*. Greensboro, NC: Center for Creative Leadership.

Anderson, J., N. (2014, January 29). *What in the world is a worldview?: Part 3*. Retrieved on 18 April 2018 from https://www.crossway.org/articles/why-think-worldviews/

Andrews, M. C., & Kacmar, K. M. (2014). Easing employee strain: the interactive effects of empowerment and justice on the role overload-strain relationship. *Journal of Behavioral and Applied Management*, *15*(2), 43-58.

Ashforth, B. E., & Lee, R. T. (1990). Defensive behavior in organizations: a preliminary model. *Human Relations*, *43*(7), 621–648.

Babin, B. J., & Boles, J. S. (1996). The effects of perceived co-worker involvement and supervisor support on service provider role stress, performance and job satisfaction. *Journal of Retailing*, *72*(1), 57–75.

Bacharach, S. B., Bamberger, P., & Conley, S. (1991). Work-home conflict among nurses and engineers: Mediating the impact of role stress on burnout and satisfaction at work. *Journal of Organizational Behavior*, *12*(1), 39–53.

Bacharach, S. B., & Mitchell, S. (1982). Organizations and expectations: organizational determinants of union membership demands. In D. Lipsky (Eds.), Advances in Industrial and Labor Relations, Greenwich, CT: JAI Press.

Baker, B., Benton, D., Friedman, E., & Russell, A. (2007). *Systems support for task shifting to community health workers.* Geneva: The Global Health Alliance.

Bako, M. J. (2014). *Role ambiguity and role conflict amongst university academic and administrative staff: a Nigerian case study*. Retrieved on 15 October 2017 from http://hdl.handle.net/10547/556233.

Barg-Walkow, L. H., & Rogers, W. A. (2017). Modeling task scheduling in complex healthcare environments: Identifying relevant factors. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 61* (1), 772-775)

Baron, R. A. (1983). *Behaviour in organizations*. New York: Allyn & Bacon Inc.

Battacharyya, K., Winch, P., LeBan, K., & Tien, M. (2001). *Community health workers incentives and disincentives: how they affect motivation, retention and sustainability*. Arlington, Virginia. Basic Support for Institutionalizing Child Survival Project (BASICS II) for the United States Agency for International Development.

Baylor, K.M. 2010. *The influence of intrinsic and extrinsic job satisfaction factors and affective commitment on the intention to quit for occupations characterized by high voluntary attrition.* Doctoral dissertation, H. Wayne Huizenga School of Business and Entrepreneurship, Nova Southeastern University. Retrieved on 29 November 2018 from https://nsuworks.nova.edu/hsbe_etd/10.

Belias, D., & Koustelios, A. (2014). Organizational culture and job satisfaction: a review. *International Review of Management and Marketing*, *4*(2), 132-149.

Bempah, B. S. O. (2013). Determinants of job satisfaction among community health workers in the Volta Region of Ghana. Retrieved on 27 November 2018 from https://www.iiste.org/Journals/index.php/PPAR/article/view/8740/8974.

Beutel, A. M., & Marini, M. M. (1995). Gender and values. *American Sociological Review*, 436–448.

Biddle, B. J. (2013). *Role theory: expectations, identities, and behaviors*. Newyork: Academic Press.

Bilgiç, R. (1998). The relationship between job satisfaction and personal characteristics of Turkish workers. *The Journal of Psychology*, *132*(5), 549–557.

Blaauw, D., Ditlopo, P., Maseko, F., Chirwa, M., Mwisongo, A., Bidwell, P., Thomas, S., & Normand, C. (2013). Comparing the job satisfaction and intention to leave of different categories of health workers in Tanzania, Malawi, and South Africa. *Glob Health Action*, *6*, 19287. doi: 10.3402/gha.v6i0.19287

Bogo, M., Paterson, J., Tufford, L., & King, R. (2011). Interprofessional clinical supervision in mental health and addiction: toward identifying common elements. *The Clinical Supervisor*, *30*(1), 124–140.

Boström, E., Hörnsten, Å., Lundman, B., Stenlund, H., & Isaksson, U. (2013). Role clarity and role conflict among Swedish diabetes specialist nurses. *Primary Care Diabetes*, *7*(3), 207–212.

Bowling, N. A., Khazon, S., Alarcon, G. M., Blackmore, C. E., Bragg, C. B., Hoepf, M. R., Barelka, A, Kennedy, K., Wang, Q. and Li, H. (2017). Building better measures of role ambiguity and role conflict: the validation of new role stressor scales. *Work & Stress*, *31*(1), 1–23.

Bozkurt, V., Aytaç, S., Bondy, J., & Emirgil, F. (2011). Job satisfaction, role overload and gender in Turkey. *Sosyoloji Konferansları* (44), 49–68.

Brumels, K., & Beach, A. (2008). Professional role complexity and job satisfaction of collegiate certified athletic trainers. *Journal of Athletic Training*, *43*(4), 373–378.

Buitendach, J. H., & Rothmann, S. (2009). The validation of the Minnesota job satisfaction questionnaire in selected organisations in South Africa. *SA Journal of Human Resource Management*, *7*(1), doi:10.4102/sajhrm.v7i1.183.

Burgel, B. J., Wallace, E. M., Kemerer, S. D., & Garbin, M. (1997). Certified occupational health nursing: job analysis in the United States. *AAOHN Journal*, *45*(11), 581–591.

Busza, J., Dauya, E., Bandason, T., Simms, V., Chikwari, C. D., Makamba, M., Mchugh, G., Munyati, S., Chonzi, P., & Ferrand, R. A. (2018). The role of community health workers in improving HIV treatment outcomes in children: lessons learned from the ZENITH trial in Zimbabwe. *Health Policy and Planning*, *33*(3), 328–334.

Bvumbwe, T. M., & Mtshali, N. G. (2018). A middle-range model for improving quality of nursing education in Malawi. *Curationis*, *41*(1), 1–11.

Callaghan-Koru, J. A., Hyder, A. A., George, A., Gilroy, K. E., Nsona, H., Mtimuni, A., & Bryce, J. (2012). Health workers' and managers' perceptions of the integrated community case management program for childhood illness in Malawi: the importance of expanding access to child health services. *The American Journal of Tropical Medicine and Hygiene*, *87*(5_Suppl), 61–68.

Cardy, R. L., & Selvarajan, T. (2004). Assessing ethical behavior: development of a behaviorally anchored rating scale. Presented at the *47th Midwest Academy of Management Meeting.* doi: https://doi.org/10.5296/ijhrs.v8i3.13081.

Carpenter, J., Webb, C., Bostock, L., & Coomber, C. (2017). *Effective supervision in social work and social care.* Bristol: Social Care Institute for Excellence.

Cervoni, A., & DeLucia-Waack, J. (2011). Role Conflict and Ambiguity as Predictors of Job Satisfaction in High School Counselors. *Journal of School Counseling*, *9*(1), n1., Retrieved on 12 December 2017 from https://files.eric.ed.gov/fulltext/EJ914271.pdf.

Chakrapani, C. (2002). *Statistics in market research*. London: John Wiley & Sons Ltd.

Chen, M.-F., Lin, C.-P., & Lien, G.-Y. (2011). Modelling job stress as a mediating role in predicting turnover intention. *The Service Industries Journal*, *31*(8), 1327–1345.

Chen, Y., Chen, S., Tsai, C., & Lo, L. (2007). Role stress and job satisfaction for nurse specialists. *Journal of Advanced Nursing*, *59*(5), 497–509.

Chevalier, C., Lapo, A., O'Brien, J., & Wierzba, T. F. (1993). *Why do village health workers drop out*. *14*, 258–261.

Chiu, W. Y. B., & Ng, F. F. (2015). The mediation influence of job satisfaction on organisational commitment amongst quantity surveyors. *Construction Economics and Building*, *15*(1), 56-74.

Chou, R. J.-A., & Robert, S. A. (2008). Workplace support, role overload, and job satisfaction of direct care workers in assisted living. *Journal of Health and Social Behavior*, *49*(2), 208–222.

Clark, A. E. (1996). Job satisfaction in Britain. *British Journal of Industrial Relations*, *34*(2), 189–217.

Clark, A. E. (1997). Job satisfaction and gender: why are women so happy at work? *Labour Economics*, *4*(4), 341–372.

Coll, K. M. (1989). *A study of factors that contribute to job satisfaction and role congruence for community college counselors*. Retrieved on 21 March 2018 from https://ir.library.oregonstate.edu/concern/graduate_thesis_or_dissertations/3x816q522.

Conley, S. C., Bacharach, S. B., & Bauer, S. (1989). The school work environment and teacher career dissatisfaction. *Educational Administration Quarterly*, *25*(1), 58–81.

Conley, S., & Woosley, S. A. (2000). Teacher role stress, higher order needs and work outcomes. *Journal of Educational Administration*, *38*(2), 179–201.

Coverman, S. (1989). Role overload, role conflict, and stress: addressing consequences of multiple role demands. *Social Forces*, *67*(4), 965–982.

Crigler, L., Gergen, J., & Perry, H. (2013). *Supervision of community health workers.* Washington, DC: USAID/Maternal and Child Health Integrated Program (MCHIP).

D'Ercole, A. (1988). Single mothers: Stress, coping, and social support. *Journal of Community Psychology*, *16*(1), 41–54.

Danish, R. Q., & Usman, A. (2010). Impact of reward and recognition on job satisfaction and motivation: An empirical study from Pakistan. *International Journal of Business and Management*, *5*(2), 159-167.

Day, A. L., & Chamberlain, T. C. (2006). Committing to your work, spouse, and children: Implications for work–family conflict. *Journal of Vocational Behavior*, *68*(1), 116–130.

Debacker, J. (2013). *Instructional coach job satisfaction: an exploration of role stressors*. Retrieved on 15 October 2017 from https://kuscholarworks.ku.edu/bitstream/handle/1808/15069/Debacker_ku_0099D_13092_DATA_1.pdf;sequence=1.

Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: the state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, *4*, 19–43.

Dhurup, M., & Mahomed, F. (2011). Role ambiguity, role conflict and work overload and their influence on job satisfaction of sports facilitators in public schools in the Vaal Triangle, South Africa: job satisfaction in sport. *African Journal for Physical Health Education, Recreation and Dance*, *17*(Supplement 2), 172–188.

Dua, J. K. (1994). Job stressors and their effects on physical health, emotional health and job satisfaction in a university. *Journal of Educational Administration*, *32*(1), 59–78.

Duc, T., Van, N., Huu, P., & Tang, H. (2015). *Study on the factors affecting job satisfaction of employees at a bank for investment and development of Vietnam*. Retrieved from http://globalbizresearch.org/Vietnam_Conference/pdf/VL558.pdf (accessed when???)

Duxbury, L., Higgins, C., & Lyons, S. (2017). *The etiology and reduction of role overload in Canada's health care sector*. Ottawa: Sprott School of Business, Carleton University.

Duze, C. O. (2012). Managing role conflict among university administrators in Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies*, *3*(2), 162-169.

Ebbers, J. J., & Wijnberg, N. M. (2017). Betwixt and between: role conflict, role ambiguity and role definition in project-based dual-leadership structures. *Human Relations*, *70*(11), 1342-1365.Eskildsen, J. K., Kristensen, K., & Westlund, A. H. (2004). Work motivation and job satisfaction in the Nordic countries. *Employee Relations*, *26*(2), 122–136.

Evans, T., Akporuno, O., Owens, K. M., Lickers, B., Marlinga, J., Lin, H. C., & Loh, L. C. (2017). Using Maslow's hierarchy to highlight power imbalances between visiting health professional student volunteers and the host community: an applied qualitative study. *Education for Health*, *30*(2), 133-.https://doi.org/10.4103/efh.EfH_175_16.

Ewen, R. B. (1964). Some determinants of job satisfaction: A study of the generality of Herzberg's theory. *Journal of Applied Psychology*, *48*(3), 161. https://doi.org/10.1037/h0048383

Fargher, S., Kesting, S., Lange, T., & Pacheco, G. (2008). Cultural heritage and job satisfaction in Eastern and Western Europe. *International Journal of Manpower*, *29*(7), 630–650.

Fellows, S., Kahn, W., & Kessler, E. (2016). Role theory. In *Encyclopedia of Management Theory* (2nd ed, pp. 670–674). Thousands Oaks, CA: Sage Publications.

Fichter, C. (2000). *A research study of role conflict, role ambiguity, job satisfaction, and burnout among financial advisors*. Retrieved on 5 December 2017 from https://spiral.lynn.edu/etds/248.

Fischer, J. A., & Sousa-Poza, A. (2008). *Does job satisfaction improve the health of workers? New evidence using panel data and objective measures of health*. *Health Economics*, *18*(1), 71-89.

Fisher, R. (2001). Role stress, the type A behavior pattern, and external auditor job satisfaction and performance. *Behavioral Research in Accounting*, *13*(1), 143–170.

Flores, H. R. (2016). *Middle management strategic roles: strategic role conflict and its antecedents*. Doctoral Dissertations. 570. Retrieved on 29 November 2018 from https://scholarworks.umass.edu/dissertations_2/570.

Fontinha, R., Easton, S., & Van Laar, D. (2017). Overtime and quality of working life in academics and non-academics: the role of perceived work-life balance. *International Journal of Stress Management*, doi*:* 10.1037/str0000067.

.

Franek, M., & Vecera, J. (2008). Personal characteristics and job satisfaction. *E+ M Ekonomie a Management*. Retrieved on 23 September 2018 from http://www.ekonomie-management.cz/download/1331826690_2bc1/06_franek.pdf.

Freed, M. (2000). *Reactive prioritization*. Presented at the Proceedings of the 2nd NASA international workshop on planning and scheduling in space. Retrieved on 8 February 2019 from http://robotics.estec.esa.int/IWPSS/IWPSS_2000/Poster/07P.pdf.

Gazioglu, S., & Tansel, A. (2006). Job satisfaction in Britain: individual and job related factors. *Applied Economics*, *38*(10), 1163–1171.

Ge, C., Fu, J., Chang, Y., & Wang, L. (2011). Factors associated with job satisfaction among Chinese community health workers: a cross-sectional study. *BMC Public Health*, *11*(1), 884. doi: https://doi.org/10.1186/1471-2458-11-884.

Gilboa, S., Shirom, A., Fried, Y., & Cooper, C. (2008). A meta-analysis of work demand stressors and job performance: examining main and moderating effects. *Personnel Psychology*, *61*(2), 227–271.

Global Health Work force Alliance: (2010). *Community health workers: key messages.* Montreux, Switzerland: Global Consultation on Community Health Workers.

Goldstein, D. K., & Rockart, J. F. (1984). An examination of work-related correlates of job satisfaction in programmer/analysts. *MiS Quarterly*, *8*(2), 103–115.

Gormley, D. K., & Kennerly, S. (2010). Influence of work role and perceptions of climate on faculty organizational commitment. *Journal of Professional Nursing*, *26*(2), 108–115.

Grace, G. (2012). *Role conflict and the teacher*. London: Routledge.

Graen, G. (1976). Role-making processes within complex organizations. *Handbook of Industrial and Organizational Psychology (pp. 1201-1245)*.

Gutzwiller, R. S., & Sitzman, D. M. (2017). *Examining task priority effects in multi-task management*. In proceedings of the Human Factors and Ergonomics Society Annual Meeting, 61 (1), 762-766. Sage CA: Los Angeles, CA: Sage Publications.

Ha, N. N., Rattanajarana, S., & Sakulkoo, S. (2011). *Effects of job stress, role conflict and role ambiguity on job satisfaction among staff nurses in Thai Nguyen provincial general hospitals, Vietnam*. Unpublished Master's thesis. Burapha University, Thailand.

Hafeez, A., Mohamud, B. K., Shiekh, M. R., Shah, S. A. I., & Jooma, R. (2011). Lady health workers programme in Pakistan: challenges, achievements and the way forward. *JPMA: Journal of the Pakistan Medical Association*, *61*(3), 210-215.

Haines, A., Sanders, D., Lehmann, U., Rowe, A. K., Lawn, J. E., Jan, S., Walker, D.G. and Bhutta, Z. (2007). Achieving child survival goals: potential contribution of community health workers. *The Lancet*, *369*(9579), 2121–2131.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis* (Vol. 5). Upper Saddle River, NJ.: Prentice Hall

Haq, Z., Iqbal, Z., & Rahman, A. (2008). Job stress among community health workers: a multi-method study from Pakistan. *International Journal of Mental Health Systems*, *2*(1), 1-6.doi: https://doi.org/10.1186/1752-4458-2-15.

Harris, M. M. (1991). Role conflict and role ambiguity as substance versus artifact: A confirmatory factor analysis of House, Schuler, and Levanoni's (1983) scales. *Journal of Applied Psychology*, *76*(1), 122-126.

Hauret, L., & Williams, D. R. (2017). Cross-national analysis of gender differences in job satisfaction. *Industrial Relations: A Journal of Economy and Society*, *56*(2), 203–235.

Heath, D. T., & Orthner, D. K. (1999). Stress and adaptation among male and female single parents. *Journal of Family Issues*, *20*(4), 557–587.

Hecht, L. M. (2001). Role conflict and role overload: different concepts, different consequences. *Sociological Inquiry*, *71*(1), 111–121.

Hermann, K., Van Damme, W., Pariyo, G. W., Schouten, E., Assefa, Y., Cirera, A., & Massavon, W. (2009). Community health workers for ART in sub-Saharan Africa: learning from experience–capitalizing on new opportunities. *Human Resources for Health*, *7*(1), 1, doi https://doi.org/10.1186/1478-4491-7-31

Herzberg, F. (2005). Motivation-hygiene theory. In J. Miner (Eds.), Organizational Behavior 1*:* Essential Theories of Motivation and Leadership (pp 61–74). New York, NY: Routledge.

Hill, M. D. (1986). A theoretical analysis of faculty job satisfaction/dissatisfaction. *Educational Research Quarterly 10*(4), 36-44.

Hill, Z., Dumbaugh, M., Benton, L., Källander, K., Strachan, D., ten Asbroek, A., Tibenderana, J, Kirkwood, B. and Meek, S. (2014). Supervising community health workers in low-income countries–a review of impact and implementation issues. *Global Health Action*, *7*(1), 24085 doi: 10.3402/gha.v7.24085. eCollection 2014.

Hirschfeld, R. R. (2000). Does revising the intrinsic and extrinsic subscales of the Minnesota Satisfaction Questionnaire short form make a difference? *Educational and Psychological Measurement*, *60*(2), 255–270.

Hoboubi, N., Choobineh, A., Ghanavati, F. K., Keshavarzi, S., & Hosseini, A. A. (2017). The impact of job stress and job satisfaction on workforce productivity in an Iranian petrochemical industry. *Safety and Health at Work*, *8*(1), 67–71.

House, R. J., & Rizzo, J. R. (1972). Role conflict and ambiguity as critical variables in a model of organizational behavior. *Organizational Behavior and Human Performance*, *7*(3), 467–505.

House, R. J., Schuler, R. S., & Levanoni, E. (1983). Role conflict and ambiguity scales: Reality or artifacts? *Journal of Applied Psychology, 68*(2), 334-337.

Howard, F. M., Beddoe, L., & Mowjood, A. (2013). Interprofessional supervision in social work and psychology in Aotearoa New Zealand. *Aotearoa New Zealand Social Work*, *25*(4), *25*(4): 25-40.

Huber, D. (2017). *Leadership and nursing care management*. Place of Publication: Elsevier Health Sciences.

Idris, M. K. (2011). Over time effects of role stress on psychological strain among Malaysian public university academics. *International Journal of Business and Social Science*, *2*(9), 154-161.

Imran, R., Majeed, M., & Ayub, A. (2015). Impact of organizational justice, job security and job satisfaction on organizational productivity. *Journal of Economics, Business and Management*, *3*(9), 840–845.

Iroegbu, M. N. (2014). Impact of role overload on job performance among construction workers. *Asian Journal of Social Sciences and Management Studies*, *1*(3), 83–86.

Ivancevich, J. M., & Matteson, M. T. (1980). *Stress and work: a managerial perspective*. Glenview IL: Scott Foresman.

Jackson, S. E., & Schuler, R. S. (1985). A meta-analysis and conceptual critique of research on role ambiguity and role conflict in work settings. *Organizational Behavior and Human Decision Processes*, *36*(1), 16–78.

Jaskiewicz, W., & Tulenko, K. (2012). Increasing community health worker productivity and effectiveness: a review of the influence of the work environment. *Human Resources for Health*, *10*(1), 38.

Jathanna, R., Melisha, R., Mary, G., & Latha, K. (2011). Determinants of Job satisfaction among healthcare workers at a Tertiary Care Hospital. *Online Journal of Health and Allied Sciences*, *10*(3), doi: https://doi.org/10.1186/1478-4491-10-38.

Javanparast, S., Windle, A., Freeman, T., & Baum, F. (2018). Community health worker programs to improve healthcare access and equity: are they only relevant to low-and middle-income countries. *International Journal of Health Policy Management*, 7(10): 943–954.

Jayasuriya, R., & Bhadra, J. (2014). *The moderating effect of compartmentalization on role consensus and work-life balance an investigation on managerial level employees in domestic commercial banks in Sri Lanka*. Retrieved on 6 January 2018 from http://hdl.handle.net/123456789/1601

Jehn, K. A. (1997). A qualitative analysis of conflict types and dimensions in organizational groups. *Administrative Science Quarterly*, 530–557.

Jerome, N. (2013). Application of the Maslow's hierarchy of need theory; impacts and implications on organizational culture, human resource and employee's performance. *International Journal of Business and Management Invention*, *2*(3), 39–45.

Jones, E., Chonko, L., Rangarajan, D., & Roberts, J. (2007). The role of overload on job attitudes, turnover intentions, and salesperson performance. *Journal of Business Research*, *60*(7), 663–671.

Kadzandira, J. M., & Chilowa, W. (2001). *The role of health surveillance assistants (HSAs) in the delivery of health services and immunisation in Malawi*. Zomba: Centre for Social Research, University of Malawi, Malawi.

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. (1964). *Organizational stress: Studies in role conflict and ambiguity.* Oxford, England: John Wiley.

Kahn, W. A., & Kram, K. E. (1994). Authority at work: internal models and their organizational consequences. *Academy of Management Review*, *19*(1), 17–50.

Kalaya, M., Jason. (2014). *The effect of job incentives on the job satisfaction of Health Surveillance Assistants in Nsanje district, Malawi.* Unpublished master's thesis. University of Malawi, Malawi. Blantyre, Malawi.

Karadal, H., Ay, U., & Cuhadar, M. T. (2008). The effect of role conflict and role ambiguity on job satisfaction and organizational commitment: A study in the public and private sectors. *The Journal of American Academy of Business, Cambridge*, *13*(2), 176–181.

Karimi, R., Omar, Z. B., Alipour, F., & Karimi, Z. (2014). The influence of role overload, role conflict, and role ambiguity on occupational stress among nurses in selected Iranian hospitals. *International Journal of Asian Social Science*, *4*(1), 34–40.

Kath, L. M., Stichler, J. F., Ehrhart, M. G., & Sievers, A. (2013). Predictors of nurse manager stress: a dominance analysis of potential work environment stressors. *International Journal of Nursing Studies*, *50*(11), 1474–1480.

Katz, D., & Kahn, R. L. (1966). L.(1978). The social psychology of organizations. *New York*: McGraw-Hill Humanities.

Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations* (Vol. 2). New York: Wiley.

Kavanagh, D. J., Spence, S. H., Strong, J., Wilson, J., Sturk, H., & Crow, N. (2003). Supervision practices in allied mental health: Relationships of supervision characteristics to perceived impact and job satisfaction. *Mental Health Services Research*, *5*(4), 187–195.

Kebriaei, A., & Moteghedi, M. (2009). Job satisfaction among community health workers in Zahedan District, Islamic Republic of Iran. *Eastern Mediterranean Health Journal*, *15*(5), 1156-1163.

Keller, R. T. (1975). Role conflict and ambiguity: correlates with job satisfaction and values. *Personnel Psychology*, *28*(1), 57–64.

Kelloway, E. K., & Barling, J. (1990). Item content versus item wording: disentangling role conflict and role ambiguity. *Journal of Applied Psychology*, *75*(6), 738- 742.

Kim, H., & Hopkins, K. M. (2017). The quest for rural child welfare workers: how different are they from their urban counterparts in demographics, organizational climate, and work attitudes? *Children and Youth Services Review*, *73*, 291–297.

King, L. A., & King, D. W. (1990). Role conflict and role ambiguity: a critical assessment of construct validity. *Psychological Bulletin*, *107*(1), 48-64.

King, N. (1970). Clarification and evaluation of the two-factor theory of job satisfaction. *Psychological Bulletin*, *74*(1), 18- 31

Kish, L. (1965). *Survey sampling*. Oxford, England: Wiley.

Kok, M. C., Dieleman, M., Taegtmeyer, M., Broerse, J. E., Kane, S. S., Ormel, H., Tijm, M.M., & de Koning, K. A. (2014). Which intervention design factors influence performance of community health workers in low-and middle-income countries? A systematic review. *Health Policy and Planning*, *30*(9), 1207–1227.

Kok, M. C., Namakhoma, I., Nyirenda, L., Chikaphupha, K., Broerse, J. E., Dieleman, M., … Theobald, S. (2016). Health surveillance assistants as intermediates between the community and health sector in Malawi: exploring how relationships influence performance. *BMC Health Services Research*, *16*(1), 164 doi https://doi.org/10.1186/s12913-016-1402-x.

Kok, M., & Muula, S. (2013). Motivation and job satisfaction of health surveillance assistants in Mwanza, Malawi: an explorative study. *Malawi Medical Journal*, *25*(1), 5–11.

Koon, A. D., Goudge, J., & Norris, S. A. (2013). A review of generalist and specialist community health workers for delivering adolescent health services in sub-Saharan Africa. *Human Resources for Health*, *1*(11), 1-9.

Kuhlen, R. G. (1963). Needs, perceived need satisfaction opportunities and satisfaction with occupation. *Journal of Applied Psychology*, *47*(1), 56-64.

Kunkel, A. G., Van Itallie, E. S., & Wu, D. (2014). Optimal distribution of medical backpacks and health surveillance assistants in Malawi. *Health Care Management Science*, *17*(3), 230–244.

Kunte, M., Gupta, P., Bhattacharya, S., & Neelam, N. (2017). Role overload, role self distance, role stagnation as determinants of job satisfaction and turnover intention in banking sector. *Indian Journal of Psychological Medicine*, *39*(5), 590-599.

Kwalamasa, K. J. (2017). *Improving the quality of health surveillance assistant management through block supervision in Malawi*. Retrieved on 23 April 2018 from https://www.google.com/search?q=K.J.+Kwalamasa%2C+The+Research+for+Equity+And+Community+Health+%28REACH%29+Trust%2C&ie=utf-8&oe=utf-8&client=firefox-b .

Lawan, U., Amole, G., & Khayi, J. (2017). Rural posting experience, requests for transfer, and perspectives about critical factors for staff retention among primary health care workers in urban Kano, Nigeria. *Nigerian Journal of Clinical Practice*, *20*(1), 25–30.

Lee, T. J. (2017). *Relationship between intrinsic job satisfaction, extrinsic job satisfaction, and turnover intentions among internal auditors*. Unpublished doctoral thesis. *Walden* University, Minnesota, USA.

Lehmann, U., & Sanders, D. (2007). *Community health workers: what do we know about them. The state of the evidence on programmes, activities, costs and impact on health outcomes of using community health workers.* Geneva: World Health Organization.

Lemeshow, S., Hosmer, D., Klar, J., & Lwanga, S. (1990). *Adequacy of sample size in health studies*. Chichester West Sussex: John Wiley & Sons Ltd.

Levin, K. A. (2006). Study design III: cross-sectional studies. *Evidence-Based Dentistry*, *7*(1), 24 - 25.

Ling, A. W., Bahron, A., & Boroh, P. (2014). A study on role stress and job satisfaction among bank employees in Kota Kinabalu, Sabah. *International Journal of Research in Management & Business Studies*, *1*(2), 19–23.

Locke, E. A. (1976). The nature and causes of job satisfaction. *Handbook of Industrial and Organizational Psychology*, *1*, 1297–1343.

Lopopolo, R. B. (2002). The relationship of role-related variables to job satisfaction and commitment to the organization in a restructured hospital environment. *Physical Therapy*, *82*(10), 984–999.

Lu, H., Barriball, K. L., Zhang, X., & While, A. E. (2012). Job satisfaction among hospital nurses revisited: a systematic review. *International Journal of Nursing Studies*, *49*(8), 1017–1038.

Lu, L., Kao, S.-F., Chang, T.-T., Wu, H.-P., & Cooper, C. L. (2008). Work/family demands, work flexibility, work/family conflict, and their consequences at work: A national probability sample in Taiwan. *International Journal of Stress Management*, *15*(1), 1- 21.

Maher, E. (2002). *Overcoming controllable and uncontrollable work difficulties: change environment or self?* Victoria : Deakin University.

Majoni, C. (2017). Curriculum overload and its impact on teacher effectiveness in primary schools. *European Journal of Education Studies*. 3(3), doi: 10.5281/zenodo.290597.

Malawi MoH. (2012). *Human Resources for Health Strategic Plan 2012-2016*. Lilongwe: Ministry of Health.

Malawi MoH. (2017a). *Health Sector Strategic Plan II 2017-2022*. Lilongwe: Ministry of Health.

Malawi MoH. (2017b). *National Community Health Strategy 2017-2022*. Lilongwe: Ministry of Health.

Malawi MoH. (2017c). *Proceedings of the National EPI Programme Review*. Lilongwe: Ministry of Health.

Manongi, R. N., & Marchant, T. C. (2006). Improving motivation among primary health care workers in Tanzania: a health worker perspective. *Human Resources for Health*, *4*(1), doi: 10.1186/1478-4491-4-6.

Mardanov, I., Sterrett, J., & Baker, J. (2007). Satisfaction with supervision and member job satisfaction in leader-member exchange: An empirical study in the restaurant industry. *Journal of Applied Management and Entrepreneurship*, *12*(3), 37-56.

Martiniuk, A., Smith, S., Deveridge, A., Berman, J., Negin, J., Mwambene, N., & Chingaipe, E. (2014). *Getting treatment and care to the last mile: analyzing the health surveillance assistant cadre in Malawi*. Discussion paper 10. Waterloo (Canada): Africa Initiative-Centre for International Governance Innovation.

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, *50*(4), 370-396.

Maslow, A. H. (1954). The instinctoid nature of basic needs. *Journal of Personality*, *22*(3), 326–347.

Masum, A. K. M., Azad, M. A. K., Hoque, K. E., Beh, L.-S., Wanke, P., & Arslan, Ö. (2016). Job satisfaction and intention to quit: an empirical analysis of nurses in Turkey. *PeerJ*, *4*, e1896. doi: https://doi.org/10.7717/peerj.1896.

Mbambo, S. (2003). A job analysis of selected health workers in a district health system in KwaZulu Natal-Part two: Job analysis of nurses in primary health care settings. *Curationis*, *26*(3), 42–52.

McGee, G. W., Ferguson, C. E., & Seers, A. (1989). Role conflict and role ambiguity: Do the scales measure these two constructs? *Journal of Applied Psychology*, *74*(5), 815.

McLeod, S. (2017). *Maslow's hierachy of needs. Retre*. Retrieved on 30 December 2017 from https://www.simplypsychology.org/maslow.html .

Merton, R. K. (1957). The role-set: Problems in sociological theory. *The British Journal of Sociology*, *8*(2), 106–120.

Millslagle, D., & Morley, L. (2004). Investigation of role retreatism in the teacher/coach. *Physical Educator*, *61*(3), 120-130.

MoH. (2012). *The health surveillance assistants, origins and current status*. Lilongwe: Ministry of Health.

Montgomery, M. (2012). Does an absence of managerial communication negatively influence job satisfaction. *A Quantitative Examination of the Correlation between Job Satisfaction and Role Conflict and Role Ambiguity among High-Tech Employees, CAPELLA University, Pub*, (3461658)??????????.

Morter, J. R. (2010). *Relationship of role overload to job satisfaction and intent to leave among acute care nurses*. Unpublished doctoral dissertation. University of Phoenix. Ann Arbor, USA.

Moss, C. (2015). *Role Conflict and Role Ambiguity as Predictors of Burnout in Special and General Education Co-teachers*. Unpublished doctoral dissertation, University of Walden. Minneapolis, Minnesota.

Mpembeni, R. N., Bhatnagar, A., LeFevre, A., Chitama, D., Urassa, D. P., Kilewo, C., … Killewo, J. (2015). Motivation and satisfaction among community health workers in Morogoro Region, Tanzania: nuanced needs and varied ambitions. *Human Resources for Health*. doi: 10.1186/s12960-015-0035-1

Mueller, D. H., Lungu, D., Acharya, A., & Palmer, N. (2011). Constraints to implementing the essential health package in Malawi. *PloS One*, *6*(6), e20741. doi: https://doi.org/10.1371/journal.pone.0020741

Mullarkey, K., Keeley, P., & Playle, J. (2001). Multiprofessional clinical supervision: challenges for mental health nurses. *Journal of Psychiatric and Mental Health Nursing*, *8*(3), 205–211.

Mustafa, S. S., Looper, K. J., Zelkowitz, P., Purden, M., & Baron, M. (2012). Role overload, pain and physical dysfunction in early rheumatoid or undifferentiated inflammatory arthritis in Canada. *BioPsychoSocial Medicine*, *6*(1), 1-6.

Naidoo, S. (2015). Epidemiology: a research manual for South Africa, Rodney Ehrlich and Gina Joubert (eds.): book review. *Southern African Journal of Infectious Diseases*, *30*(3), 200–200.

Naylor, J. C., Pritchard, R. D., & Ilgen, D. R. (2013). *A theory of behavior in organizations*. New York, USA: Academic Press.

Netemeyer, R. G., Johnston, M. W., & Burton, S. (1990). Analysis of role conflict and role ambiguity in a structural equations framework. *Journal of Applied Psychology*, *75*(2), 148-157.

Nkhotakota District Council. (2017). *Salary Records*. Nkhotakota: Nkhotakota District Council Health Sector.

Nsona, H., Mtimuni, A., Daelmans, B., Callaghan-Koru, J. A., Gilroy, K., Mgalula, L., & Kachule, T. (2012). Scaling up integrated community case management of childhood illness: update from Malawi. *The American Journal of Tropical Medicine and Hygiene*, *87*(5_Suppl), 54–60.

Ntopi, S. W. (2010). *Impact of the expansion of the health surveillance assistants programme in Nkhatabay District of North Malawi*. Unpublished master's thesis. University of Western Cape. Cape town, South Africa.

Nunnally, J. (1978). *Psychometric theory*. New York: Mc Graw-Hill Publ Co.

Nyanga, T., Mudhovozi, P., & Chireshe, R. (2012). Causes and effects of role ambiguity as perceived by human resource management professionals in Zimbabwe. *Journal of Social Sciences*, *30*(3), 293–303.

Olaleye, F., & Arogundade, B. (2013). Conflict management strategies of university administrators in South-West Nigeria. *Kuwait Chapter of the Arabian Journal of Business and Management Review*, *2*(6), 96.

Orienstein, W. A., & Ahmed, R. (2017). *Simply put: Vaccination saves life*. Retrieved on 17 May 2019 from https://www.pnas.org/content/pnas/114/16/4031.full.pdf.

Oxford, R. L., & Burry-Stock, J. A. (1995). Assessing the use of language learning strategies worldwide with the ESL/EFL version of the strategy inventory for language learning (SILL). *System*, *23*(1), 1–23.

Ozmete, E., & Hira, T. (2011). Conceptual analysis of behavioral theories/models: application to financial behavior. *European Journal of Social Sciences*, *18*(3), 386–404.

Pallant, J. (2013). *SPSS survival guide: a step by step guide to data analysis using IBM SPSS*. Maryborough, Victoria: McPherson's Printing Group.

Palomino, M. N., & Frezatti, F. (2016). Role conflict, role ambiguity and job satisfaction: Perceptions of the Brazilian controllers. *Revista de Administração*, *51*(2), 165–181.

Pearson, Q. M. (2008). Role overload, job satisfaction, leisure satisfaction, and psychological health among employed women. *Journal of Counseling and Development: JCD*, *86*(1), 57.

Perry-Jenkins, M., Seery, B., & Crouter, A. C. (1992). Linkages between women's provider-role attitudes, psychological well-being, and family relationships. *Psychology of Women Quarterly*, *16*(3), 311–329.

Peters, D. H., Chakraborty, S., Mahapatra, P., & Steinhardt, L. (2010). Job satisfaction and motivation of health workers in public and private sectors: cross-sectional analysis from two Indian states. *Human Resources for Health*, *8*(1), 1.

Petersen, B., & Eys, M. (2017). Role conflict negatively predicts role perceptions and cohesion in interdependent university sport teams. *Journal of Exercise, Movement, and Sport*, *49*(1), 116.

Polit, D. F., & Beck, C. T. (2014). *Nursing research: generating and assessing evidence for nursing practice* (9th ed.). Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins.

Rathod, C. (2014). A comparative study of role stress ingovernment and private hospital doctors. *Journal of Health Management*, *8*(1), 11-22.

Reid, W., & Karambayya, R. (2016). The shadow of history: situated dynamics of trust in dual executive leadership. *Leadership*, *12*(5), 609–631.

Reilly, M. D. (1982). Working wives and convenience consumption. *Journal of Consumer Research*, *8*(4), 407–418.

Ritter, K.-J., Matthews, R. A., Ford, M. T., & Henderson, A. A. (2016). Understanding role stressors and job satisfaction over time using adaptation theory. *Journal of Applied Psychology*, *101*(12), 1655.

Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organizations. *Administrative Science Quarterly*, 150–163.

Rodríguez, D. C., Banda, H., & Namakhoma, I. (2015). Integrated community case management in Malawi: an analysis of innovation and institutional characteristics for policy adoption. *Health Policy and Planning*, *30*(suppl_2), ii74–ii83.

Schriesheim, C., & Tsui, A. S. (1980). Development and validation of a short satisfaction instrument for use in survey feedback interventions. In *Western Academy of Management Meeting* (Vol. 1980, 115-17). Sekaran, U. (1986). Self-esteem and sense of competence as moderators of the job satisfaction of professionals in dual career families. *Journal of Organizational Behavior*, *7*(4), 341–344.

Sekaran, U. (2013). *Research Methods For Business: A Skill Building Approach*. New York: :John Wiley and Sons Inc.

Shahbaz, W., & Ghafoor, M. M. (2015). Role stress andjob satisfaction: a case study of personnel of water and sanitation agencies of Punjab, Pakistan. *International Journal of Management & Organizational Studies*, *4*(3), 234-244.

Shenkar, O., & Zeira, Y. (1992). Role conflict and role ambiguity of chief executive officers in international joint ventures. *Journal of International Business Studies*, *23*(1), 55–75.

Shindul-Rothschild, J., & Duffy, M. (1996). The impact of restructuring and work design on nursing practice and patient care. *Best Practices and Benchmarking in Healthcare: A Practical Journal for Clinical and Management Application*, *1*(6), 271–282.

Shoaib, S., Mujtaba, B. G., & Awan, H. M. (2018). Overload stress perceptions of public sector employees in Pakistan: a study of gender, age, and education in South Asia. *Public Organization Review*, 1–14.

Sinha, V., & Subramanian, K. (2012). Organizational role stress across three managerial levels: a comparative study. *Global Business and Organizational Excellence*, *31*(5), 70–77.

Smith, D. B., & Plant, W. T. (1982). Sex differences in the job satisfaction of university professors. *Journal of Applied Psychology*, *67*(2), 249.

Smith, P. C. (1969). *The measurement of satisfaction in work and retirement: a strategy for the study of attitudes.* Oxford, England: Rand McNally.

Smith, S., Deveridge, A., Berman, J., Negin, J., Mwambene, N., Chingaipe, E., … Martiniuk, A. (2014). Task-shifting and prioritization: a situational analysis examining the role and experiences of community health workers in Malawi. *Hum Resour Health*, *12*(1), 24.

Smith, S., Deveridge, A., Berman, J., Negin, J., Mwambene, N., Chingaipe, E., Puchalski, R.L.M and Martiniuk, A. (2014). Task-shifting and prioritization: a situational analysis examining the role and experiences of community health workers in Malawi. *Human Resources for Health*, *12*, 24–24.

Spector, P. E. (1997). *Job satisfaction: application, assessment, causes, and consequences. Thousand Oaks, CA:*: Sage publications.

Spector, P. E., & Jex, S. M. (1998). Development of four self-report measures of job stressors and strain: interpersonal conflict at work scale, organizational constraints scale, quantitative workload inventory, and physical symptoms inventory. *Journal of Occupational Health Psychology*, *3*(4), 356-357.

Spencer, M. G. (1997). *Non-instructional staff perceptions of a quality-oriented work environment.* Unpublished doctoral thesis). University of Michigan. Michigan, USA.

Streiner, D. L., Norman, G. R., & Cairney, J. (2015). *Health measurement scales: a practical guide to their development and use*. New York, USA: Oxford University Press.

Sudha, V. (2017). Factors determining job satisfaction among private sector bank employees. *International Education and Research Journal*, *3*(3), 31-32.

Suozzo, S. H. (2015). *The effect of workload, job satisfaction, and role conflict on the timing of leaving of nursing faculty from their current faculty position* (Un published doctoral thesis) Seton Hall University, New Jersey, USA.

Surbhi, S. (2017). *Differences between Maslows and Herzberg's theories of motivation*. Retrieved on 18 March 2018 from https://keydifferences.com/difference-between-maslow-and-herzberg-theories-of-motivation.html.

Tankha, G. (2006). A comparative study of role stress in government and private hospital nurses. *Journal of Health Management*, *8*(1), 11–22.

Tarrant, T., & Sabo, C. E. (2010). Role conflict, role ambiguity, and job satisfaction in nurse executives. *Nursing Administration Quarterly*, *34*(1), 72–82.

Tosi, H. (1971). Organization stress as a moderator of the relationship between influence and role response. *Academy of Management Journal*, *14*(1), 7–20.

Tosi, H., & Tosi, D. (1970). Some correlates of role conflict and role ambiguity among public school teachers. *Journal of Human Relations*, *18*(3), 1068–1076.

Tovey, E. J., & Adams, A. E. (1999). The changing nature of nurses' job satisfaction: an exploration of sources of satisfaction in the 1990s. *Journal of Advanced Nursing*, *30*(1), 150–158.

Townend, M. (2005). Interprofessional supervision from the perspectives of both mental health nurses and other professionals in the field of cognitive behavioural psychotherapy. *Journal of Psychiatric and Mental Health Nursing*, *12*(5), 582–588.

Tracy, L., & Johnson, T. W. (1981). What do the role conflict and role ambiguity scales measure? *Journal of Applied Psychology*, *66*(4), 464.

Traynor, M., & Wade, B. (1993). The development of a measure of job satisfaction for use in monitoring the morale of community nurses in four trusts. *Journal of Advanced Nursing*, *18*(1), 127–136.

Tsolekile, L. P., Schneider, H., & Puoane, T. (2018). The roles, training and knowledge of community health workers about diabetes and hypertension in Khayelitsha, Cape Town. *Curationis*, *41*(1), 1–8.

University of Strathclyde. (2017). *Health worker motivation assessment for Scotland Chikhwawa Health Initiative Healthy Settings programme area. Retrieved on 6 January 2018 from* https://www.strath.ac.uk/media/other/malawi/HS_health_worker_motivation_-_Feb_2014.pdf.

Upadhyaya, C. (2014). Application of the Maslow's hierarchy of need theory; impacts and implications on organizational culture, human resource and employee's performance. *International Journal of Education and Management Studies*, *4*(4), 353.

Urien, B., Osca, A., & García-Salmones, L. (2017). Role ambiguity, group cohesion and job satisfaction: a demands-resources model (JD-R) study from Mexico and Spain. *Revista Latinoamericana de Psicología*, *49*(2), 137–145.

Uys, L. (2003). A job analysis of selected health workers in a district health system in KwaZulu Natal-Part one: Job analysis of nurses in hospital settings. *Curationis*, *26*(3), 32–41.

Van De Vliert, E., & Van Yperen, N. W. (1996). Why cross-national differences in role overload? Don't overlook ambient temperature! *Academy of Management Journal*, *39*(4), 986–1004.

Weaver, C. N. (1978). Sex differences in the determinants of job satisfaction. *Academy of Management Journal*, *21*(2), 265–274.

Weiss, D. J., Dawis, R. V., & England, G. W. (1967). *Manual for the Minnesota satisfaction questionnaire*. Place of publication: Minnesota Studies in Vocational Rehabilitation.

Wharton, A. S., Rotolo, T., & Bird, S. R. (2000, March). Social context at work: A multilevel analysis of job satisfaction. In *Sociological forum* (Vol. 15, No. 1, pp. 65-90). Kluwer Academic Publishers-Plenum Publishers.

World Health Organization. (Undated). *Process of translation and adaptation of instruments*. Retrieved February 2, 2019 from https://www.who.int/substance_abuse/research_tools/translation/en/ .

World Health Organization. (2010a). *Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies*. Geneva: World Health Organization.

World Health Organization. (2013). *Country health profile Malawi*. Geneva: Wolrd Health Organization

Wiener, Y., Muczyk, J. P., & Martin, H. J. (1992). Self-esteem and job involvement as moderators of the relationship between work satisfaction and well-being. *Journal of Social Behavior and Personality*, *7*(4), 539.

Williams, K. J., & Alliger, G. M. (1994). Role stressors, mood spillover, and perceptions of work-family conflict in employed parents. *Academy of Management Journal*, *37*(4), 837–868.

Wilson, J. S. (2000). *The study of selected demographic factors and their relationship to role ambiguity and burnout among social workers in the Metropolitan Atlanta area*. 10.5901/mjss.2015.v6n2s1p81Unpublished doctoral thesis. Clark Atlanta University, Atlanta Georgia.

World Health Organization. (2010b). *Framework for action on interprofessional education and collaborative practice*. Geneva: World Health Organization.

Yaacob, M., & Long, C. S. (2015). Role of occupational stress on job satisfaction. *Mediterranean Journal of Social Sciences*, doi: 10.5901/mjss.2015.v6n2s1p81

Yildirim, D., & Aycan, Z. (2008). Nurses' work demands and work–family conflict: a questionnaire survey. *International Journal of Nursing Studies*, *45*(9), 1366–1378.

Yongkang, Z., Weixi, Z., Yalin, H., Yipeng, X., & Liu, T. (2014). The Relationship among role conflict, role Ambiguity, role overload and job stress of Chinese Middle-Level cadres. *Chinese Studies*, *3*(01), 8.

Yu, X., Yu, X., Miao, C., Miao, C., Leung, C., Leung, C., … Salmon, C. T. (2017). Role conflict and ambivalence in the aged-parent-adult-child relationship. *International Journal of Crowd Science*, *1*(2), 161–170.

Annex I: Sampling Procedures

Step 1

Calculation of sample size for health facilities

The target population for health facilities is clearly identified in the study. The target population was all health facilities in the three districts except private institutions. To get the required sample size, a sample size formula for a cross-sectional study was used (Kish, 1965). The formula was applied as follows:

n= $\frac{Z^2 \mathrm{pqD}}{\mathrm{d}^2}$

Where, n=the desired sample size when the study target population is over 10,000;

Z = is the normal deviate=1. 96;

P = Proportion of the target population estimated to have the desired characteristics =0.50 since the exact overall role stressors and job satisfaction scores is not known

Q =is the proportion of the health facilities = 1 - P = 0.50;

d = Error margin of 5% = 0.05;

D= is the design effect = 1 (since there will be no comparison between the two study areas)

therefore, n= $\frac{1.96 \text{ x } 1.96 \text{ x } 0.50 \text{ x } 0.50 \text{ x } 1}{0.2 \text{ x } 0.2}$

Hence, the desired sample size (n) is 24.01 ≈24

Since the target population of health facilities is less than 10,000 where the above formula is applied in instances where the target population is greater than 10,000, the formula by Fisher et al., 1998 is applied as follows:

nf = $\frac{n}{1}$ - $\left(\frac{n}{N}\right)$where,

nf = the desired sample size when the population is less than 10,000;

n= the desired sample size when the total population is more than 10,000 and

N= the estimated number of health facilities in the three districts

Therefore, nf = $24/1 - \left(\frac{24}{131}\right)$= 29.38 ≈ 29 health facilities

Step 2

Determining the number of health facilities to be sampled at a district

The total number of health facilities in the three districts was 131 (N=131). The sample size for the health facilities sampled was (n=29). Using the formula: $f = \frac{n}{N}$. Where,

$f =$ is the fraction which is a constant across strata

n= desired sample size

N= total number of health facilities in the three districts

Translating into the formula $f = \frac{29}{131} = 0.22$

So, $nh = fNh = n\left(\frac{Nh}{N}\right) = nWh,$

Where $Wh = Nh/N$ is the stratum weight. Translating into the formula, the sampled health facilities were derived as follows:

Table 14: Showing number of health facilities sampled per district

District	**≠ of H/Facilities (Nh)**	**Proportion (f)**	**Calculation ($Nh * f$)**	**Sampled (nh)**
Mangochi	45	0.22	45*.22	10
Lilongwe Rural	42	0.22	42*.22	9
Lilongwe Urban	14	0.22	14*.22	3
Mzimba South	30	0.22	30*.22	7
Total	**131**			**29**

Step 3

Determining the number of HSAs to be sampled at the district and health facility

In the three districts records available at the DHO office indicate the population of HSAs in the three districts was at 1825 (N=1825). The sample size for the study was 385 (n=385). Using the proportional formula f= n/N the proportion of HSAs to be sampled was determined for each district as follows:

f=n/N = 385/1825 = 0.21

Mangochi District

Total number of HSAs in Mangochi (512) = 0.21 X 512= 108

Therefore, the total number of HSAs in Mangochi sampled was 108

Proportional allocation of HSAs in Mangochi

Similarly, to get the number of HSAs to be sampled at the health facility the formula f= n/N was used. In the ten health facilities sampled, the population of HSAs was 108 (N=162) and n=108. Therefore, f= n/N = 108/162 = 0.67. Below is a table indicating how the number of HSAs at each health facility were determined.

Table 15: Showing Number of HSAs Sampled per Health Facility in Mangochi District

HEALTH FACILITY	POPLN OF HSAS	PROPORTION	SAMPLED
Koche	11	0.67	7
Malukula	12	0.67	8
MDH	53	0.67	35
Chilipa	14	0.67	9
Phiri Longwe	11	0.67	7
Malembo	16	0.67	11
Lulanga	11	0.67	7
Katuli	10	0.67	7
Nancholi	11	0.67	7
St Martins	13	0.67	9
Total	**162**		**108**

Mzimba District

Total number of HSAs in Mzimba South (330) = 0.21 × 330= 69

Therefore, the total number of HSAs in Mzimba South sampled was 69

At the district level sampling was done as follows:

N=105

n= 69

f= n/N = 69/105= 0.66

Proportional allocation of HSAs in Mzimba South

N= 105

n= 69

f=n/N = 69/105= 0.66

Table 16: Showing Number of HSAs Sampled per Health Facility in Mzimba District

HEALTH FACILITY	POPLN OF HSAS	Calculation	Sampled
Chikangawa	6	0.66×6	4
Endindeni	8	0.66×8	5
Kalikumbi	10	0.66×10	7
Luwawa	2	0.66×2	1
Manyamula	14	0.66×14	9
Mzalangwe	8	0.66×8	5
MDH	57	0.66×57	38
Total	**105**		**69**

Lilongwe City

Total number of HSAs in Lilongwe City (372) = 0.21 ×372= 78

Therefore, the total number of HSAs in Lilongwe City sampled was 78

N= 118

n= 78

f=n/N = 78/118= 0.21

Using proportional sampling HSAs were sampled as follows:

Table 17: Showing number of HSAs sampled per health facility in Lilongwe District

Health facility	**Popln of HSAS**	**Calculation**	**Sampled**
Bwaila	48	0.66×48	32
Likuni	45	0.66×45	30
Area 18	25	0.66×25	16
Total	118		108

Lilongwe Rural

Total number of HSAs in Lilongwe Rural (671) = 0.21 ×671= 141

Therefore, the total number of HSAs in Lilongwe Rural sampled was 141

Proportional allocation of HSAs in Lilongwe Rural

N= 218

n= 141

f=n/N = 141/218= 0.57

Table 18: Showing Number of HSAs Sampled per Health Facility in Lilongwe Rural

HEALTH FACILITY	**POPLN OF HSAS**	**Calculation**	**Sampled**
Chileka	23	0.65×23	15
St Gabriel	7	0.65×7	5
Mtenthera	36	0.65×36	23
Malembo	12	0.65×12	8
Mbangombe I	13	0.65×13	8
Mitundu	46	0.65×46	30
Chioza	19	0.65×19	12
Nathenje	40	0.65×40	26
Chiwamba	22	0.65×22	14
Total	**218**		**141**

Summary

f=n/N = 29/131 = 0.22

N1 = Total number of health facilities in Mangochi (45) = 0.22 × 45= 10

Therefore, the total number of health facilities in Mangochi sampled was 10

N_2= Total number of health facilities in Mzimba South (30) = 0.22 × 30= 6.6≈ 7

Therefore, the total number of health facilities in Mzimba South sampled was 7

N3 = Total number of health facilities in Lilongwe Urban (14) = 0.22 × 14= 3.08 ≈ 3

Therefore, the total number of health facilities in Lilongwe Urban sampled was 3

N4= Total number of health facilities in Lilongwe Rural (40) = 0.22× 40= 8.8 ≈ 9

Therefore, the total number of health facilities in Lilongwe Rural sampled was 9

Annex II: English Questionnaire

A STUDY ON HSAS ROLE CONFLICT, ROLE AMBIGUITY, ROLE OVERLOAD AND JOB SATISFACTION SURVEY (ENGLISH QUESTIONNAIRE)

Section A: Demographic data

Name……Today's Date…… Date of Birth……

1. Gender (tick one): 1) Male 2) Female
2. Marital Status (check one): 1) Married 2) Unmarried 3) Other; Specify----------
3. Circle your education qualification completed:

   1) Primary Certificate 2) Secondary Certificate 3) Diploma 4) Degree
4. What is your present job called? _____
5. What do you do on your present job? _____
6. How long have you been on your present job? _____
7. Apart from being a general duty HSA do you have any other job specialization? Yes/ No

   If yes, what is the specialization?

1) Cold Chain 2) TB 3) HCT 4) Village Clinic 5) Others; Specify ----------

8. How long have you been in this line of work?_____Years_____months
9. Do you have any intention to quit your job? 1) Yes 2) No
10. If yes, when? -------- years' time

Section B: Task Prioritization

How often do you think you carry out the tasks listed in the table below:

Tick in the box of your estimated frequency

No	EHP services delivered by HSAs	Does this task apply to your setting	Less than 1 per week	1-5 times per week	6-10 times per week	More than 10 times per week
EHP1	Immunizations					
EHP2	Health Education					
EHP3	Hygiene and sanitation promotion					
EHP4	Water chlorination					
EHP5	Antenatal and postnatal clients visits					
EHP6	Testing salt for Iodine at household level					
EHP7	Growth monitoring promotion					
EHP8	TB					
EHP9	HIV/AIDS					
EHP10	Distribution of drugs					
EHP11	Treatment of various illnesses					
EHP12	Malaria Diagnosis					
EHP13	TB diagnosis					
EHP14	Meetings with VHCs and the community					
EHP15	Family Planning					
EHP16	Follow-up of patients					
EHP17	Nutrition related work					

SECTION C (Role Conflict & Ambiguity Scale)

In this section, we would like you to share with us the difficult situations you probably face during work and how your supervisors help to get your work done. From questions RCA1 to RCA15, please tick the most appropriate number using the scales below:

		Strongly Disagree	**Somewhat Disagree**	**Neutral**	**Some what Agree**	**Strongly Agree**
RCA1	I have clear, planned goals and objectives for my job					
RCA2	Things are so clear that I am able to divide my time properly between various activities at work					
RCA3	I clearly know what my responsibilities are					
0RCA4	I know exactly what is expected of me on the job					
RCA5	I am quite sure about how much authority I have on the job					
RCA6	My supervisors have explained clearly of what has to be done on the job					
RCA7	I lack guidelines to help me in my work					
RCA8	I am told how well I am doing my work					
RCA9	I have enough time to complete my work					
RCA10	I often have to break a rule or policy in order to carry out an assignment					
RCA11	I have to do things that should be done differently under different conditions					
RCA12	I receive incompatible requests from two or more people					
RCA13	I work under incompatible policies and guidelines					
RCA14	I perform work that suits my values					
RCA15	I often receive an assignment without the manpower to complete it					

1.

SECTION D: Role Overload Scale

In this section, we would like you to share with us the difficult situations you probably face during work and how your supervisors help to get your work done. From questions ROS1 to ROS9, please tick the most appropriate box using the scales below:

		Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
ROS1	I have to do things that I do not really have the time and energy for.					
ROS2	I need more hours in the day to do all the things that are expected of me.					
ROS3	I cannot ever seem to catch up.					
ROS4	I do not ever seem to have any time for myself.					
ROS5	There are times when I cannot meet everyone's expectations.					
ROS6	I seem to have more commitments to overcome than other parents I know					
ROS7	I have to prepare priority lists to get all the things done. Otherwise, I forget because I have so much to do.					
ROS8	I feel I have to do things hastily and may be less careful to get everything done.					
ROS9	Many times I have to cancel commitments.					

Section E Job Satisfaction

In this section we would like you to share with us **how you feel about your present job,** what things you are satisfied with and what things you are **not satisfied** with. From questions MSQ1 to MSQ20, please tick the most appropriate box using the scales below:

		Very Dissatisfied	**Dissatisfied**	**Neutral**	**Satisfied**	**Very Satisfied**
MSQ1	Being able to keep busy all the time					
MSQ2	The chance to work alone on the job					
MSQ3	The chance to do different things on the job					
MSQ4	The chance to be 'somebody' in the community					
MSQ5	The way my boss handles his/her workers					
MSQ6	The competence of my supervisor in making decisions					
MSQ7	Being able to do things that don't go against my conscious					
MSQ8	The way my job provides for steady employment					
MSQ9	The chance to do things for other people					
MSQ10	The chance to tell people what to do					
MSQ11	The chance to do something that makes use of my abilities					
MSQ12	The way company policies are put into practice					
MSQ13	My pay and the amount of work I do					
MSQ14	The chances for advancement on this job					
MSQ15	The freedom to use my own judgment					
MSQ16	The chance to try my own methods of doing the job					
MSQ17	The working conditions					
MSQ18	The way my co-workers get along with each other					
MSQ19	The praise I get for doing a good job					
MSQ20	The feeling of accomplishment I get from the job					

Appendix 2: Chichewa Questionnaire

Section A: Demographic data

Tsiku la lero: …… Tsiku lanu lobadwira:……

1) Jenda: (1) Mwamuna (2) Mkazi
2) Kodi ndinu wokwatira kapena wosakwatira:

a) Wokwatira b) Wosakwatira c) Ngati pali zina; Longosolani…….

3) Kodi maphunziro anu mudalekezera pati?

a) Primary Certificate c) Diploma

b) Secondary Certificate d) Degree

4) Kodi ntchito yanu imatchedwa kuti chani?----------

5) Nanga mumachita chani pa ntchito imeneyi?

---

6) Kupatulapo kugwira ntchito ngati mulangizi wa zaumoyo (HSA). Kodi anakugawiraninso ntchito yina yapadera monga izi:

a) Yokonza ma fridge

b) HCT Counselor

c) Assistant TB Officer

d) Dotolo pa village clinic

e) Ngati pali ntchito zina; Longosolani……..

7) Kodi mwagwira ntchito ngati HSA nthawi yotalika bwanji?

a) 1-5 years d) 16-20 years

b) 6-10 years e) 21-25 years

c) 11-15 years f) 25 years and above

Section B: Task Prioritization

Kodi mumagwira ntchito izi zalembedwa munsimu kangati pasabata? Chongani mukabosi mogwirizana ndi nthawi imene mumagwira ntchitoyo.

No	Ntchito zimene ma HSAs amagwira	Kodi ntchito imeneyi mumayigwila?	Kuchepera kamodzi pasabata	Kamodzi mpaka kasanu pasabata	Kasanu mchimodzi mpaka mwakanthawi khumi pasabata	Kuposera khumi pasabata
EHP1	Kupereka Katemera					
EHP2	Kuphunzitsa wanthu zaumoyo					
EHP3	Kulimbikitsa ntchito yaukhondo					
EHP4	Kuteteza madzi kuzirombo ndi mankhwala a Chlorine					
EHP5	Kuyendera azimayi oyembekezera ndi amene angobereka kumene					
EHP6	Kuona kuti mchere uli ndi iodine					
EHP7	Kuyesa wana sikelo					
EHP8	Kugwira ntchito yokhudzana ndi matenda a TB					
EHP9	Kugwira ntchito yokhudzana ndi matenda a HIV/AIDS					
EHP10	Kugawa mankhwala					
EHP11	Kupereka mankhwala kwa odwala					
EHP12	Kuyesa malungo (MRDT)					
EHP13	Kuyesa makhololo (TB)					
EHP14	Kukumana ndi a VHC komanso anthu akumudzi					
EHP15	Kupeleka njira zakulera					
EHP16	Kuyendera odwala					
EHP17	Kugwira ntchito yokhudzana ndi zamadyedwe abwino					

SECTION C: Role Conflict & Ambiguity Scale

Mundime iyi tikufuna kuti timve mavuto amene mumakumana nawo mukamagwira ntchito yanu. Tifunanso kumva mene a Supervisor anu amakuthandizirani kuti ntchito yanu igwirike bwino. Kuyambira funso number 63 mpaka 77 chonde zunguzani nambala imene ili mukabokosi mogwirizana ndi mulingo (sikelo) ili pa munsipa. *Maganizo anu onse amene mupereke adzasungidwa mwachinsinsi*.

1	2	3	4	5
Sindigwirizana nazo kwambiri	Sindikugwirizana nazo pangono	Ndilipakatikati	Ndilikugwirizana nazo pangono	Ndikugwirizana nazo

RCA1	Zolinga zantchito yanga ndilinazo ndipo ndi zomveka bwino	1	2	3	4	5
RCA2	Ntchito yanga ndiyomveka bwino lomwe ndipo nthawi ndiyokwanira nimatha kuyigawa bwino pogwira ntchito zanga	1	2	3	4	5
RCA3	Ndimadziwa bwino lomwe zaudindo wanga	1	2	3	4	5
RCA4	Ndimadziwa zimene anthu amayembekezera kwa ine pa ntchito yanga	1	2	3	4	5
RCA5	Ndikudziwa bwino za mphamvu ndilinazo pantchito yanga	1	2	3	4	5
RCA6	A supervisor anga anandifotokozera bwino zonse zoyenera kumachita	1	2	3	4	5
RCA7	Ndilibe ma guidelines/job description yonithandizira pa ntchito yanga	1	2	3	4	5
RCA8	A supervisor amandiuza mmene ndimagwilira ntchito	1	2	3	4	5
RCA9	Ndimakhala ndi nthawi yambiri yoti nkumalizitsa ntchito zanga	1	2	3	4	5
RCA10	Nthawi zina nimatha kuswa malamulo apa ntchito kuti nithe kugwira bwino ntchito zanga zina	1	2	3	4	5
RCA11	Nthawi zina ndimatha kugwira ntchito mosiyananilapo ndi malamulo malinga ndi mene zinthu zilili panthawiyo	1	2	3	4	5
RCA12	Nthawi zina ndimatha kufunidwa ndi anthu awiri kapena odusirapo azolinga zosiyana pantchito yanga	1	2	3	4	5
RCA13	Ndimatha kugwira ntchito zina zimene sizigwirizana ndi malamulo a ntchito yanga	1	2	3	4	5
RCA14	Ntchito yanga imagwirzana ndi zimene ine ndimafuna (values)	1	2	3	4	5
RCA15	Ndimapatsidwa ntchito nthawi zina opanda zipangizo zoyenera kumalizitsa ntchitoyo	1	2	3	4	5

SECTION D: Role Overload Scale

Mundime iyi tikufuna kuti timve mavuto amene mumakumana nawo mukamagwira ntchito yanu. Tifunanso kumva mene a Supervisor anu amakuthandizirani kuti ntchito yanu igwirike bwino. Kuyambira funso number 78 mpaka 86, chonde zunguzani nambala imene ili mukabokosi mogwirizana ndi mulingo (sikelo) ili pa munsipa. *Maganizo anu onse amene mupereke adzasungidwa mwachinsinsi*.

1	2	3	4	5
Sindigwirizana nazo kwambiri	Sindikugwirizana nazo pangono	Ndilipakatikati	Ndilikugwirizana nazo pangono	Ndikugwirizana nazo

ROS1	Ndimagwira ntchito zina zimene ndilibe nazo nthawi ndi mphamvu kuzigwira	1	2	3	4	5
ROS2	Ndimafunikila nthawi yambiri kuti nimalize ntchito ndili nazo pa tsiku	1	2	3	4	5
ROS3	Ndimaona siningathe kumalizitsa ntchito zonse	1	2	3	4	5
ROS4	Ndimaona ndilibe nthawi yoti nkumatha kupanga zinthu zina zokhudza ine mwini	1	2	3	4	5
ROS5	Nthawi zina sinimatha kukwaniritsa zinthu zimene wina aliyense amayembekezera kwa ine ngati mlangizi wawo	1	2	3	4	5
ROS6	Ndimaona ngati ndimakhala ndi zambiri zoti ndizichita kuposa makolo anzanga amene ndimaadziwa	1	2	3	4	5
ROS7	Ndimayenera kulemba ndandanda wazinthu zoyenera kuchitidwa kuopesera kuziyiwala malinga ndikuchuluka kwa ntchito	1	2	3	4	5
ROS8	Ndimaona ndimapanga zinthu zanga mwa phuma ndinso mosasamala kuyangana ndi nthawi imene nimakhala nayo	1	2	3	4	5
ROS9	Nthawi zambiri ndi ma lepheretsa zinthu zimene zinayenera kuchitika pa ntchito yanga	1	2	3	4	5

E: Job Satisfaction

Mundime ino tikufuna mutigawileko maganizo anu mmene mumayiwonela ntchito yanu, ndi zinthu ziti zimene zimakusangalatsani, nanga ndi ziti zime sizimakusangalatsani. Kuyambira funso 87 mpaka 106, chonde zunguzani nambala imene ili mukabokosi mogwirizana ndi mulingo (sikelo) ili pa munsipa. *Maganizo anu onse amene mupereke adzasungidwa mwachinsinsi*.

1	2	3	4	5
Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

MSQ1	Ndimakhala wotanganidwa (busy) nthawi zonse	1	2	3	4	5
MSQ2	Ndimakhala ndi mwayi wotha kumagwila ntchito pandekha	1	2	3	4	5
MSQ3	Mwayi wotha kumagwira ntchito zosiyana siyana pa ntchito yanga	1	2	3	4	5
MSQ4	Mwayi woti anthu athe kunizindikira m'mudzi	1	2	3	4	5
MSQ5	M'mene abwana anga amacitira handle zinthu	1	2	3	4	5
MSQ6	M'mene abwana anga amagamulira nkhani (decisions)	1	2	3	4	5
MSQ7	Kutha kumapanga zinthu zimene sizitsutsana ndi maganizo anga	1	2	3	4	5
MSQ8	Mmene ntchito yanga ilili ndiyokhazikika (Permanent/steady employment)	1	2	3	4	5
MSQ9	Mwayi wotha kumathangata wanthu wena	1	2	3	4	5
MSQ10	Mwayi wotha kumawauza anthu zocita	1	2	3	4	5
MSQ11	Mwayi wotha kugwiritsa ntchito nzeru ndi luntha pantchito zina	1	2	3	4	5
MSQ12	M'mene malamulo apa ntchito akugwiritsidwira	1	2	3	4	5
MSQ13	Malipilo ndi ntchito imene ndimagwira	1	2	3	4	5
MSQ14	Mwayi woti nditha kutukuka pa ntchito	1	2	3	4	5
MSQ15	Ufulu wotha kumagamula nkhani (decision)	1	2	3	4	5
MSQ16	Mwayi womatha kugwiritsa njira zanga pogwira ntchito	1	2	3	4	5
MSQ17	Chikhalidwe chapantchito (The working conditions)	1	2	3	4	5
MSQ18	M'mene amzanga amakhalira wina ndi nzake pantchito	1	2	3	4	5
MSQ19	Mayamiko amene ndimalandila ndikagwira ntchito yabwino	1	2	3	4	5
MSQ20	Chipambano chimene ndimachiona ndikamagwira ntchito	1	2	3	4	5