MOSHI CO-OPERATIVE UNIVERSITY

CO-OPERATIVE HEALTH INSURANCE: ANALYSIS OF USHIRIKA AFYA SCHEME IN BABATI DISTRICT, TANZANIA

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BY

GODAMEN NAIMAN

A DISSERTATION IS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN CO-OPERATIVES AND COMMUNITY DEVELOPMENT OF THE MOSHI CO-OPERATIVE UNIVERSITY, TANZANIA

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I**, Godamen Naiman**, declare that this Dissertation is my own original work and that it has not been presented and will not be presented to any other higher learning Institution for a similar or any other academic award.

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CERTIFICATION

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CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance by the Moshi Co-operative University a Dissertation titled ***"Co-operative Health Insurance: Analysis of Ushirika Afya scheme in Babati District, Tanzania"*** in **partial** fulfilment of the requirements for the award of a degree of Master of Arts in Co-operative and Community Development of the Moshi Co-operative University.

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DEDICATION

I dedicate this Dissertation to almighty God, my lovely family and to my late Mother Elisara Elias. Mother, I hope you are happy with my academic success.

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LIST OF ABBREVIATIONS AND ACRONYMS

AGM	**:**	Annual General Meeting
AMCOS	:	Agricultural Marketing Co-operative Society
AMOS	:	Analysis of Moment Structures
CBHI	:	Community Based Health Insurance
CHF	:	Community Health Fund
DCOS	:	District Cooperative Officer
FA	:	Factor Analysis
FGD	:	Focused Group Discussion
ICA	:	International Cooperative Alliance
ICHF	:	Improved Community Health Fund
KCMC	:	Kilimanjaro Christian Medical Centre.
KMO	:	Kaiser Meyer Olkin
NHIF	:	National Health Insurance Fund.
NMB	:	National Microfinance Bank
PCA	:	Principal Component Analysis
SCT	:	Social Capital Theory
SEM	:	Structural Equation Model
SPSS	:	Statistical Package for the Social Sciences
TCDC	:	Tanzania Co-operative Development Commission
TPB	:	Tanzania Postal Bank
UN SDG	:	United Nations Sustainable Development Goals.
WHO	:	World Health Organization

ABSTRACT

Ushirika Afya scheme plays a crucial role in improving and protecting Co-operative members in health issues in the agriculture sector. The main objective of this study was Co-operative Health insurance, analysis of Ushirika Afya scheme among co-operative members in Babati, Tanzania. The specific objectives were to analyse socio-economic and demographic characteristics of co-operative members in Ushirika Afya scheme; examine the perception of co-operative members towards Ushirika Afya scheme and examine the key determinants of members engagement into Ushirika Afya scheme. This study was guided by the theory of planned behaviour (TPB) as the leading theory and Social capital theory. The study adopted a cross-sectional research design. The target population of the study was 1750 co-operative members who are in the Ushirika Afya scheme in the AMCOS at Babati district, Manyara region Tanzania and a sample size of 300 respondents. The study gathered both quantitative and qualitative data. Descriptive and thematic analysis was used to analyse data for the specific objective one and two and inferential analysis for the specific objective three. The study findings indicated that socio-demographic factors, including age, marital status, household income and size, level of education and economic activity have significantly influenced cooperative members in the Ushirika Afya scheme. Thematic analysis revealed that cooperative members' perception towards Ushirika afya was for health concerns, health protection, old and aged cooperative members, for sick people, and a government established scheme for cooperative members in AMCOS. The study demonstrated that the dependent variable is member engagement in the Ushirika Afya scheme and the independent variables are subjective norm, attitude, aspiration and perceived behavioural control. These variables were found to have a positive influence on members' engagement in the Ushirika Afya scheme. The study concludes that elder’s enrolment in Ushirika Afya scheme is higher compared to youth because of low engagement for youth in Cooperative activities. The study recommends that AMCOS should tailor their strategies on youth and services based on their needs. AMCOS and NHIF should invest in providing high-quality training and educational programs. The study recommends that TCDC needs to have an organised co-operative Health insurance program that will meet the needs of all cooperative members and non-cooperative members.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

Health insurance is attracting more and more attention in low and middle-income countries as a means of improving health care utilisation and to protect households against impoverishment caused by out of pocket medical expenditures. The World Health Organization and the World Bank have continuously suggested reducing out of pocket payments and promoting universal health coverage. Universal health coverage means that all people have access to the full range of quality health services they need, when and where they need them, without financial hardship (WHO,2019).

Different health financing approaches have been developed to counter the unfavourable effects of user fees introduced in the 1980s, but those efforts have not yet increased healthcare utilisation, particularly among marginalised populations, and, moreover, sometimes lead to catastrophic health expenditures (World Bank, 2007).The WHO estimated in 2010 that 100 million people were pushed into poverty and 150 million suffered financial catastrophe because of out of pocket payment on health services every year. Reports from the World Health Organization estimates that 1.3 billion people have no access to effective and affordable health care and more than 100 million people around the world are pushed into poverty each year because of catastrophic health care expenditure (WHO, 2015).

In Africa, countries with national health insurance are gradually increasing (WHO,2019). However, the percentage of the population enrolled in health insurance remains low. Many African countries have enrolment rates below 10% with the notable exceptions of Rwanda which reached enrolment rates of about 90% in 2015 (Cebul R. et al, 2011) while Ghana had an enrolment rate of 56% in 2014 (Amu et al., 2018). Hence, Ghana and Rwanda are among the very few countries in Africa where enrolments are mandatory for the entire population (McIntyre et al,2018).

Tanzania, like other East African countries, established the National Health Insurance (NHIF) in 1999. Initially, the schemes aimed to cover all public servants, their spouses, and children or dependents not exceeding four in number (URT, 2018). In 1996, Tanzania piloted a Community Health Fund (CHF) which was later scaled up countrywide after showing promising results. The CHF is a voluntary prepayment

scheme that primarily provides access to primary care services. In 2011, the Tanzanian government decided to reform the CHF and introduced an improved Community Health Fund(iCHF). The iCHF included additional services such as x-rays, ultrasounds, and in-patient services including major surgery from both hospital levels (District and Regional). iCHF also simplified the enrolment process by using a mobile application and insurance management information system. The government target was for at least 70% of the population to be covered by National Health Insurance Fund NHIF and iCHF by 2020 which are the two main public insurance schemes. The total population of 24% is covered by CHF and 9% under NHIF (Tungu et al., 2020). Since inception, NHIF beneficiaries have increased from 691,773 in the year 2001/2002 to 4,403,581 in the year 2020 which is only 8 % of the entire Tanzanian population (NHIF, 2020).

The government through the National Health Insurance Fund (NHIF) created a unique voluntary health insurance scheme for co-operative members namely “Ushirika Afya” in Kiswahili. The “Ushirika Afya” is a voluntary health insurance scheme designed to serve co-operative members who have no formal and conventional access to health insurance (Nzowa et al.2023). For other individuals employed in the formal sector health insurance is mandatory for all workers but AMCOS by-laws was changed to make it mandatory to all members so as to ensure health protection in farming activity. The difference between these two insurances is that Ushirika Afya scheme members are paying through their co-operative while for public and private sector premiums are remitted directly to insurance schemes or companies as employers deduct from their salaries (ILO,2021). The “Ushirika Afya” scheme was primarily designed for farmers in the agricultural sector to serve members of agricultural and marketing co-operative societies (AMCOS). However, members of other forms of co-operatives can also join the scheme. “Ushirika Afya” acts as a supplementary scheme for co-operative members employed in the formal sector and has a statutory health insurance cover.

Currently about 250 AMCOS in Tanzania are fully practising the Ushirika Afya scheme (TCDC 2022). The adoption of Ushirika Afya through AMCOS is a welcome development that seeks to provide affordable health care to a larger segment of the population. With this system in place members are able to access quality health care regardless of their income level. Co-operative societies have adopted the Ushirika Afya scheme to help and provide affordable health care to their members. The idea

behind the health insurance is to create a risk-sharing system that spreads to the insurance companies and the beneficiary of health care leading to health care accessible to a larger number of people. By pooling resources together members are able to contribute towards the health care needs of the group and in turn are able to benefit from the shared resources made available.

Ushirika Afya insurance scheme is working through partnership between Agricultural marketing co-operative societies and banks such as Tanzania Postal Bank (TPB), National microfinance bank (NMB) and CRDB bank which signed the contract with the Cooperative Unions all over the Country. NHIF charges Tsh 76,800/- per individual for AMCOS members who accept the Bank's offer (NHIF, 2020). Bank pays for AMCOS members immediately after members join a scheme for the health cover and collects back its money when farmers harvest in the next harvest season. This new service gives room to beneficiaries to offset their debts after selling their farm produce in the following harvest season.

Ushirika Afya insurance facilitates and enables members to access any type of medical services including major surgeries and full treatments for serious health conditions including cancer and dialysis services for those facing kidney complications at any health facility in Tanzania mainland. These processes ensure universal health care for smallholder farmers who are in agriculture marketing and their main economic activity is farming.

Ushirika Afya scheme has become one of the best platforms for health insurance for co-operative members that enable them to access health services in all health centres. However, Ushirika Afya scheme have been questionable because of emerged issues in the scheme like the process on members enrolment especially on the willingness to pay for the scheme based on their economic activity, perception of members toward schemes, health insurance literacy and health care utilisation in terms of range of services provided and reimbursement rate as well as sustainability. These key issues form the direction of the study on assessing the Ushirika Afya scheme as practice of co-operative health insurance with the view of finding out the Socio-economic characteristics of co-operative members participating in Ushirika Afya scheme. Explore the perception of cooperative members on Ushirika Afya scheme and establish key determinants of members engagement on Ushirika Afya scheme.

1.2 Statement of the Problem

The government of Tanzania has been keen in ensuring that NHIF improves its operations for the betterment of Tanzanians especially farmers who are in Co-operative society. National Health Insurance Fund (NHIF) introduced 'Ushirika Afya' product in 2019 that sponsors health services to Agricultural Marketing Co-operative Societies (AMCOS) members. While the scheme plays an essential role in facilitating health care utilisation there have been limited empirical investigations showing the extent to which co-operative members have utilised such a platform as the result of high numbers of Co-operative members still using out-of-pocket expenditures to address health needs.

Statistics show that only 32% of individuals have been accessing health insurance services in the country by 2019 whereby the NHIF covered 8% while 23% by Community Health Fund (CHF) and the remaining (1%) by private insurers (Kigume et al.,2021). However, statistics in 2022 indicate that the total Tanzania population covered by health insurance declined to about 15% of which CHF coverage decreased to about 5.4% and NHIF remained at 8%. In contrast, private insurers increased coverage to about 2% (Nzowa et al.,2023). This leaves about 85% of Tanzania's population without health insurance coverage, leading to challenges such as partial treatment, postponed medical care and catastrophic health expenditure in case of illness.

Despite the importance of Ushirika Afya Scheme, Studies have focused on the dimensions such as perception of Co-operative members on Ushirika Afya scheme, members engagement as well as members social-economic demographic characteristics. These studies include those research findings carried out by (Nzowa et al.,2023: Luhanga, 2015: Sambuo, 2022).

Previous studies have largely focused on the single model of community based health insurance (CBHI) through National health insurance (NHIF) but Ushirika Afya schemes offered by AMCOS through the NHIF are rare and none have focused. This study is aimed at analysis of Ushirika Afya scheme among co-operative members taking Babati District in Manyara region as the case study.

1.3 Objectives of the Study

1.3.1 General objective

The main objective of this study was co-operative health insurance, the analysis of the Ushirika Afya scheme among members in Babati, Tanzania.

1.3.2 Specific objectives

This study intends to achieve the following objectives;

i) Analyse Socio demographic characteristics of co-operative members in Ushirika Afya scheme;

ii) Examine the perception of co-operative members towards Ushirika Afya scheme;

iii) Examine the key determinants of members' engagement into the Ushirika Afya scheme.

1.4 Research Questions

i) What are the Socio demographic characteristics of co-operative members on the Ushirika Afya scheme?

ii) What is the perception of cooperative members towards the Ushirika afya scheme?

iii) What are the key determinants of members' engagement into co-operative health insurance?

1.5 Justification of the Study

One of the goals of sustainable development (SDG) is to ensure healthy lives and promote wellbeing for all at all ages by 2030. The findings of this study are expected to contribute to the achievement of 17 United Nations Sustainable Development Goals. In particular, by focusing on Good health and wellbeing, the study findings are likely to lead to universal health coverage, including financial risk protection, access to quality essential health care services and access to safe, effective, quality and affordable essential medicines and vaccines for all, as cherished in UN SDG number 3. One of the key indicators of Tanzania’s vision 2030 is to move towards achievement of universal health coverage through improving health insurance schemes for all citizens. (Bernabe, 2018).

The findings of the study will inform decision makers and policy makers that the health sector is the bedrock of the economy. Therefore, the study will be useful to

academicians who will have the desire of studying about the Ushirika Afya scheme and the role of cooperative society towards establishment of its own health insurance services to its members.

1.6 Organisation of the study

This study is organized into five chapters. Chapter one presents the background of the study, problem statement, objectives of the study, research questions and the significance of the study. Chapter two presents the literature review which include the key terms definitions, theories, empirical reviews and the conceptual framework. Chapter three presents the research methodology and how data was analysed. Chapter four presents the results and discussion obtained from the data analysis. Chapter five gives the summary of the key findings, conclusion, and recommendations of the study

CHAPTER TWO

2.0. LITERATURE REVIEW

2.1 Definitions of the Key Terms

2.1.1 Ushirika afya.

National Health Insurance Fund (NHIF) created a unique voluntary health insurance scheme for co-operative members namely “Ushirika Afya” in Kiswahili. The Ushirika Afya is a voluntary health insurance scheme designed to serve co-operative members who have no formal and conventional access to health insurance (Nzowa et al.,2023) The Ushirika Afya scheme was primarily designed for farmers in the agricultural sector to serve members of agricultural and marketing co-operative societies (AMCOS) that are involve direct on of five strategic crops which are Cotton, Coffee, Tea, Cashew and pigeon peas (NHIF ,2020). This service gives room to beneficiaries to offset their debts after selling their farm produce in the following harvest season. Ushirika Afya insurance scheme is working through partnership between Agriculture marketing co-operative society, Banks such as Tanzania Postal Bank (TPB), National microfinance bank (NMB) and CRDB bank which signed the contract with the Co-operative Union all over the Country. Co-operative members will contribute 76,800 Tanzania shillings per year and be given a medical card of National Health Insurance Fund (NHIF) which will be used to get treatment in more than 6,000 health centres registered with the NHIF in the whole country (NHIF,2020).

2.1.2 Co-operative

International Cooperative Alliance (ICA) defined a Co-operative as an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise (ICA,1995). It further explored that co-operatives are based on the values of self-help, self-responsibility, democracy, equality, equity and solidarity. Similarly, co-operatives include six basic principles; voluntary and open membership, democratic member control, member’s economic participation, autonomy and independency, education training and information, cooperation among co-operatives and concern for the community (Wanyama,2015).

2.1.3 Agriculture Marketing Co-operative Society (AMCOS)

Agriculture marketing co-operative can be defined as a group of farmers and other producers who pool together their resources to market and sell their agricultural

products. These co-operatives are created to help small-scale farmers and producers compete with larger-scale operations by providing them with a more streamlined and efficient way of getting their products to market (Wanyama,2015). Agriculture marketing co-operative as a register organisation, farmers and other producers work together to produce and package their crops then collect their products to the co-operative warehouse, which in turn markets and sells the products to retailers, wholesalers and other buyers. The co-operative uses its collective bargaining power to negotiate better prices on behalf of members and also provides them with access to other resources like financing, insurance and marketing support (USAD, 2000). One of the key benefits of an agriculture marketing co-operative is that it allows small-scale farmers and producers to access larger markets that they might not be able to reach on their own. Through the co-operative they can pool their resources and expertise to offer larger quantities of high-quality products to the buyers, which in turn can lead to greater profits for all members.

One important aspect of an agriculture marketing co-operative is that it is owned and controlled by its members. This means that decisions about how the co-operative operates and how profits are distributed are made democratically by the members themselves. This can be empowering for small-scale farmers who might not otherwise have much control over the market for their products (ICA,1995).

2.1.4 Co-operative health insurance

Co-operative insurance is a health insurance owned by a Co-operative society organisation that is used by members of cooperative society to obtain health services to the health centre according to the by-laws and the policy of the co-operative society. It is a form of mutual insurance were members come together to create a non-profit organisation that provides health insurance coverage to its members (David,2017). Unlike traditional health insurance company's co-operative health insurance is owned and operated by its members, who share in the decision-making process and any profits that may be generated. Members typically pay premiums into a shared pool which is used to cover the cost of medical services for all members.

According to Lemak (2008) Co-operative health insurance plans may be offered by various types of co-operative society according to the needs of members who are the owner of the insurance. The aim of co-operative health insurance is to provide

affordable and high-quality healthcare coverage to members while promoting cooperation and solidarity among members.

2.2 Theoretical Review

2.2.1 Theory of Planned Behaviour

This study was guided by the theory of Planned Behaviour (TPB) as the leading theory and the social capital theory (SCT) as the supporting theory. Theory of Planned Behaviour was proposed by Ajzen (1991), It describes that the intention to start and undertake insurance is influenced by different beliefs grouped in three categories. The first one is personal attitudes towards insurance creation and joining in groups behaviour which refers to whether people have a positive or negative perception about this behaviour (Felicia et al., 2013; Tesfayohannes, 2012; Tundui, 2012; UDEC, 2002). The second is subjective norms which consist of the perceived social pressure to do insurance business including parental role modelling, cultural obligations and opinions of important people and others. The third one is perceived control which includes self-efficacy or ability to perform the behaviour of interest. This implies that a high sense of self-efficacy will indicate a higher probability to take the decision to join the insurance business process (Adesina, 2011; Green, 2014; Upton, 2013).

Generally, the theory gives emphasis on the role of intention (Katundu & Gabagambi, 2016; Sahinidis, Vassiliou, & Hyz, 2014) which is assumed to capture the motivational factors that influence behaviour. Intentions are indications of how hard people are willing to join health insurance and how much of an effort they are planning to exert to perform the behaviour (Ajzen, 1991). Therefore, the intention of co-operative members to join the Ushirika Afya scheme will be determined by a society or individual beliefs and attitudes towards Ushirika Afya services. Nevertheless, other external factors such as co-operative by laws and politics do influence cooperative members' decisions (Green, 2014). In explaining the relationship between behaviour intentions and actual behaviour of an individual, TPB is relevant to Ushirika Afya Scheme because it remains open to exogenous factors that may play a role in the development of beliefs and attitudes (Fayolle, Gailly, & Lassarc-Clerc, 2006). Decision to join in Cooperative Health insurance is relevant patterns of behaviour which lead to the creation of different cultural values in co-operative societies, some of which influence the decision to join ushirika afya scheme**.**

2.2.2 The Social Capital Theory.

The social capital theory as proposed by Putnam (1995) refers to features of social organisation such as trust, norms and networks that can improve the efficiency of society by facilitating and coordinated actions. Social capital brings people together who have a common bond and enables groups to leverage resources, ideas and information from formal institutions beyond the community (Woolcock, 2001). Health care seeking behaviour requires individuals with a common bond that is a co-operative society built on a foundation of trust and norms to seek affordable and friendly health insurance depending on the beliefs of the networks.

The interactions between members can be affected by the level of trust, solidarity and reciprocity within the group (Moore 2017). These elements dictate bonding and regulate one's capabilities for decision making and participation in social issues for equitable enjoyment of benefits (Eriksson 2011).

Trust and perception were a sense of personal safety in a community group especially Co-operative Society and in community organisation and seen on number meetings attending and voting participation based on by-laws of the group. Norms and social trust facilitate coordination and cooperation for mutual benefit of Co-operative members in the Ushirika Afya scheme.

This study confines itself to social capital theory on the trust element and perception. Trust and perception of co-operative members was analysed to see how it dictates and regulates bonding and capabilities to use Ushirika Afya scheme insurance among co-operative members. The adoption of the trust and perception element is based on Putnam's argument that social capital is the degree of trust and perception between individuals that facilitates their actions and collaborations for mutual gain (Putnam's 1995). In Tanzania co-operatives have gone through different apogees and at a time co-operative were very strong and several initiatives through these institutions were successful. There was a time when co-operatives lost their direction due to various reasons such as malpractices and embezzlement among leaders. This was when co-operative members were marginalised and lost trust and hope. However, in the 1980s, co-operative revived and gained its lost glory. Following that revival co-operatives have been assigning responsibilities to various schemes such as Ushirika Afya to speed up economic development and improve members' welfare (Nzowa et al.2023).

2.3 Empirical Review

2.3.1 Socio demographic of co-operative members on Ushirika Afya Scheme.

Mwinuka and Elizabeth (2022) conduct a study on uptake of health insurance and its associated factors among informal sector workers in Dar es salaam, Tanzania. The study applied a sequential mixed method design and the study population were informal sector workers as well as insurance providers. Data was collected using interviews, questionnaires and focal group discussion. The purposive sampling technique was used to select 72 respondents and quantitative data were cleaned and coded before entering into excel and later transferred to SPSS version 23. Mwinuka and Elizabeth (2022) revealed that Income of the members, education, age, insurance regulations, fragmentation of insurance providers, cultural beliefs and low priority on health insurance were significantly associated with uptake of health insurance.

Similar findings were also reported by Lee *at al*., (2018) and Shree *et al*., (2017) who also found that members of informal sector hardly enrol in health insurance schemes might be due to the fact that a significant number of people who fall on informal sectors have lower and unreliable income and yet the insurance policies require them to pay in single instalment and they fail.

This study intends to replicate Mwinuka and Elizabeth (2022) study in Dar es salaam Tanzania to fill the existing contextual research gap by hypothesising that there is no significant relationship between motives and socio demographic characteristics of cooperative member's on Ushirika Afya scheme.

2.3.2 The determinants of members engagement into Ushirika Afya Scheme

Macha et al. (2014) carried out a study on determinants of community health fund membership in Tanzania the study uses quantitative methods such as household surveys and qualitative methods such as focus group discussions. The quantitative analysis revealed that the three middle income quintiles were more likely to enrol in the CHF than the poorest and the richest. CHF member households were more likely to be large and headed by a male than uninsured households from the same areas. The qualitative data supported the finding that the poorest were more likely to join as were large families and of greater risk of illness with disabilities or persons with chronic diseases. Households with elderly members or children under five years were also more likely to enrol. Poor understanding of risk pooling deterred people from joining the scheme and was the main reason for not renewing membership. On the supply side

poor quality of public care services limit benefit packages and a lack of provider choice were the main factors for low enrolment. This study intends to replicate Macha et al. (2014) study to fill the existing contextual research gap by hypothesising that there is no significant relation on the determinants of members engagement into Ushirika Afya scheme.

2.3.3 Perception of cooperative members towards Ushirika Afya Scheme

Kuwawenaruwa and Josephine (2011) conducted a study on Willingness to pay for voluntary health insurance in Morogoro Tanzania. The study uses Cross-sectional research design. Statistical significance was examined using Pearson chi-square for binary or categorical variables) and the Mann-Whitney U test for continuous variables. The study reveals that there is very limited willingness to pay Health insurance in a rural area due to income constraints, low understanding of health insurance schemes.

Nandonde *et al.,* (2023) conducted a study on moderation effects of co-operative institutions' capabilities on the relationship between health insurance literacy and participation in health insurance among co-operative members in Tanzania. The study using a cross-sectional survey that involved 480 co-operative members as respondents. Findings indicate that health insurance literacy is a significant factor influencing participation in health insurance particularly in Ushirika Afya.

Nzowa *et al.* (2023) conduct a study on the mediation effect of trust on willingness to pay for health insurance among co-operative members in Tanzania. The study uses social capital theory to analyse the mediation role of trust and single contingent valuation Method was used to elicit and estimate the amount cooperative members were willing to pay for health insurance. The Structural Equation modelling was used to analyse variables affecting co-operative members. The findings reveal that most co-operative members were willing to pay for health insurance. Further, except for price, trust issues fully and partially mediate quality attributes and access criteria, respectively, when it comes to willingness to pay for health insurance. Firm trust is required among co-operators, management, health insurers, and health facilities. This study intends to replicate Nzowa *et al.* (2023), study in Babati District to fill the existing contextual research gap by hypothesising that: there is no significant relationship between the perception of co-operative members to pay for Ushirika Afya scheme.

2.4 Conceptual Framework

Using theory of planned behaviour (TPB) as the main theory and supported theory of Social Capital theory, this study conceptualised that the intention of co-operative members to join Ushirika Afya scheme is influenced by beliefs, aspiration, perceived behaviour, subjective norms and attitudes towards Ushirika Afya services. Nevertheless, other external factors such as co-operative by laws and social demographics do influence cooperative members' decisions (Green, 2014). Using Social capital theory, co-operative members join Ushirika Afya, a scheme determined by trust and perception of co-operative members. Based on the dynamics that co-operatives have gone through, members of co-operatives are likely to lose trust in their institutions and among themselves. In that regard using social capital theory and planned behaviour theory was appropriate for this study. The assumption was that if individuals trust each other and their institution they are likely to increase their willingness to join the Ushirika Afya scheme. Further studies in insurance affirm that social capital elements that are trusted in particular increase willingness to enrol in health insurance (Campbell 2020).

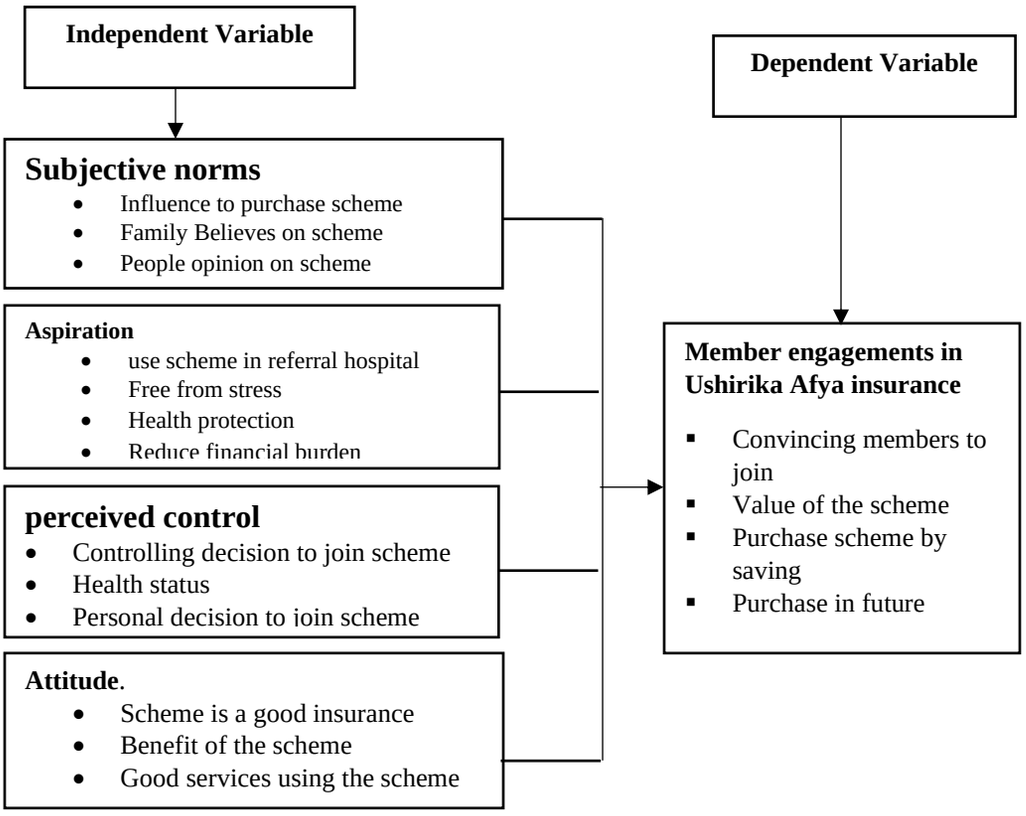


Figure 1: Conceptual framework.

2.4.1 Attitude

Attitude is an individual's overall judgement and assessment of behaviour (Ajzen, 1991). This means that attitude towards the Ushirika Afya scheme can be reflected by co-operative members' behaviour. Co-operative member attitude was an important component in perception and influences individual behavioural intention. Thus, the intention to perform certain behaviour is contingent upon a co-operative member's perceived attitude. Cooperative members tend to have the intention to perform a particular action when an attitude is formed.

De Rijk et al., (2019) found that farmers' attitude will influence their behavioural intention to engage in health insurance such as return to farming activity after long term sickness or absence. For instance, farmers who suffered injury or illness may feel that they want to resume farming activity immediately since no one has returned to farming activity. Hence, farmer attitude will influence their intention to return to farming after prolonged absence due to illness or injuries.

2.4.2 Subjective norms

Subjective norms are an individual's perception of the social pressure to perform or not to perform the target behaviour Ajzen and Francis (2004). It can also be defined as the individual's perception of other people's views and thoughts on the suggested behaviour. These perceptions can play an influential role and put pressure on an individual to perform a particular behaviour, such as joining Ushirika Afya insurance. This means that subjective norms of cooperative members depend on perception about the thoughts of significant others such family members, friends and the cooperative member on their performed behaviour.

2.4.3 Perceived behavioural control

Perceived behavioural control is an individual's belief about his or her capabilities of exhibiting certain behaviours Brouwer (2019). Similarly, Francis et al. (2004), asserts that perceived behavioural control can be conceptualised as people's ability to have control over their behaviour and their level of confidence in their ability to perform or not to perform. Therefore, co-operative member belief will influence the other co-operative member's intention to join the Ushirika Afya scheme.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Research Design

This study adopted cross-sectional, descriptive and qualitative research. The cross-sectional design provides the chance to study and access the required data easily and the downstream services from different actors (Magigi 2015). Likewise, it provided a good chance for researchers in data collection and making analysis hence come out with the result which helps to reach to conclusion and necessary recommendation. The information collected using this design will provide a meaningful and accurate picture of the Ushirika Afya scheme.

3.2 Geographical Coverage.

The study was conducted in Babati District in Manyara Region Tanzania. The district is crossed by the main road of Arusha and Dodoma, having 20 wards. The study focuses on two wards named Gallapo ward and Dareda ward which are almost 10 km each from Babati district headquarter. The study area was chosen because of the availability of 56 Agricultural and Marketing Co-operative societies (AMCOS) that are in the Ushirika Afya scheme. It accounts for the number of co-operative members using health insurance at the end of the financial year from July 2021 to September 2022 which are 1750(population for study) from AMCOS and total number of households is 20,341 (Babati district coordinator of Community health Fund 2021 and District cooperative officer report). based on the argument by Singh (2022) that a study area should be chosen based on its ability to provide the required data.

3.3 Target Population

The target population of the study was 1,750 co-operative members who are beneficiaries of the Ushirika Afya scheme in Babati District. The co-operative members in the Ushirika scheme in the AMCOS were the unit of analysis.

3.4 Population, Sample and Sampling Strategies

3.4.1 Sample size

In determining the sample size, the basic rule was the larger the sample the better. Leedy (1984) subject to cost and human resource constraints. The sample size of the studying population was considered to study a small population in depth insight of study phenomena which describe the reality to provide the lesson and experience to

others for learning. Using Slovenes formula N=1750 error of tolerance e=0.05. therefore, sample size is obtaining as:

$$n = \frac{N}{1+N(\varepsilon)^2}$$

Whereas n = number of sample size,

N = Population size

ε = margin of error

$$n = \frac{1750}{1 + 1750(\ 0.05)^2} \quad = \quad 326$$

Thus, the sample size was 326 co-operative members in the Ushirika Afya scheme.

3.4.2 Sampling techniques

The study adopted stratified purposive sampling. Purposive sampling techniques were used because samples of co-operative society using Ushirika Afya **were** members in ushirika afya scheme to ensure that the sample is a true representation of the entire population and bias are minimised. Key respondents were co-operative members in the ushirika afya scheme and co-operative board members.

3.5 Data Collection

3.5.1 Types of data

The study gathered both quantitative and qualitative data. Quantitative and qualitative data was collected through closed ended questions and open-ended questions respectively. The two types of data were utilised to complement each other since there are some questions which cannot be answered fully using one type of data**.**

3.5.2 Sources of data

The study utilised primary sources of data and secondary data. The use of primary sources of data increase the reliability of the collected data since the data collected directly from respondents who are in ushirika Afya scheme.

3.5.3 Secondary data sources

Kothari (2004) defines secondary data as information that is already available. Information which has already been collected and analysed by researchers. Secondary data for this study is through the use of documentary review such as co-operative by law, Co-operative Society Act No.6 of 2013 and Annual general meeting resolution (AGM).

3.6 Data Collection Methods

3.6.1 Surveying method

Data from the primary source was collected through a survey questionnaire that contained open ended questions. The survey questionnaire which were originally in English was translated into Kiswahili, and directly administered by the researcher to provide any clarifications where needed.

3.6.2 Focus group discussion

The study conducts four focused group discussion (FGD) in four purposeful selected AMCOS. Each focus group consisted of 9 participants. The FGD was divided into four groups co-operative members in Ushirika Afya Scheme. Howitt (2019) advise that, the FGD size should enable each participant the opportunity to give detailed responses without feeling the pressure to share time with others. The three selected AMCOS was Gallapo, Sayuni and DACOFA these are AMCOS with highest numbers of members using ushirika Afya scheme.

3.6.3 Key informants

The study used key informants whereby individuals who have experience and knowledge about Ushirika afya scheme such as Agriculture Marketing Co-operative Society (AMCOS) leaders and staff were interviewed to collect detailed information of the study.

3.6.4 Documentary review

The study collected data from secondary sources by reviewing membership lists of AMCOS to establish and identify members who are in the Ushirika scheme according to the laws of the co-operative societies. Reviewed general meetings attendance register to identify the type of members that usually attend the meetings. Annual income reports from the external checker were reviewed to identify the contribution of members in the Ushirika Afya scheme.

3.5 Data Validity and Reliability

To ensures the validity and reliability of the data during the field work, study was employ multiple source of evidence named documentary review and focus group discussion .These provide convergence of fact during data collection process .Second the study was using co-operative intern officers for data collection process because

are knowledgeable about research understanding and familiar with the study area environment .Third build understanding with respondents to make them aware of the research purpose with the help of District co-operative officer (DOCS).Lastly, was to check the quality of the data through daily meetings with co-operative intern to review the progress, constraints and way forward to test data reliability the co-operative intern was introduced to a co-operative board so as to adhere in research ethics. Furthermore, the questionnaire was translated into Kiswahili language and pre-testing to assess their appropriateness. Considering the reliability and minimising errors and biases in a research while Validity minimising subjectively during data collection and analysis.

3.7 Data Analysis

Data collected in the study was analysed using descriptive statistics analysis and the use of Structural Equation Model (SEM). Descriptive analysis was carried out to generate frequency and percent hence giving statistical meaning to the raw data. The data were analysed with SPSS 26 and analysis of a moment structures (AMOS) using structural equation modelling (SEM). confirmatory factor analysis was performed.

A category and a coding were developed deductively from the SME model. The Structural equation model (SME) was used to measure quality of data. All statistical analyses were performed using the professional version of SEM with SPSS AMOS Version 26. Focus group sessions were audio recorded using audio recorders and all of the audio was transcribed and analysed using qualitative data analysis and the thematic framework was developed according to the themes, concepts and categories of the text.

3.7.1 Objective one: Socio demographic characteristics of co-operative members in Ushirika Afya Scheme.

The socio-economic and demographic characteristics were analysed using a descriptive statistic and thematic analysis to summarise the data using percentages and frequencies. From this information a co-operative member in ushirika Afya profile was generated. Participants responded to items inquiring about age, educational level, gender, age, marital status, occupation, income, household size and economic activity.

3.7.2 Objective two: Perception of co-operative members towards the Ushirika Afya Scheme

The second objective was qualitative analysis whereby qualitative data obtained from FGDs underwent thematic analysis. The first step involved coding, categorization,

sorting, and data retrieval. Transcripts were created from recorded information to the notes and written text. Coding was then applied to the text where phrases sharing the same idea were assigned identical codes. After coding themes and sub-themes were developed, aligning with the objectives of the study. Data were categorised into two main themes that are description and analytical themes. The data were analysed after being adapted into an analyzable format and documented with descriptions and interpretations.

3.7.3 Objective three: Determinants of members' engagement into the Ushirika Afya Scheme

Data were analysed using both factor analysis (FA) and principal component analysis (PCA). Statistical tests such as Bartlett's test of sphericity, Kaiser-Meyer-Olkin (KMO) for sampling adequacy and Cronbach's alpha test for internal consistency and scale reliability were performed to examine the suitability of the data for PCA and FA to determine the Perception of Co-operative member on Ushirika Afya scheme.

Exploratory approach was used to develop an adjusted model as needed. An indicator of a good fit based on chi-square criteria is a value close to zero and p-value >0.05. Various statistical tests performed before PCA and FA. The results for Bartlett's test of sphericity, Kaiser-Meyer-Olkin measure (KMO) and Cronbach's alpha indicate to what extent PCA and FA are appropriate. PCA assumes that there is no unique variance the total variance is equal to common variance while FA assumes that total variance can be partitioned into common and unique Variance. According to the Williams and Dame (2015) We observed that the standard requirements for KMO and Cronbach's requirement must be KMO > 0.5 on which in this study were fulfilled.

Structural equation modelling (SEM) is a statistical data analysis technique that is used for multivariate analysis with latent variables. The main goal of SEM is to find the limit where a hypothesised model is able to fit or adequately describe the sample data (Duodu et al.,2011). The fitness of a model will use a number of Goodness-of-fit to test the index.

CHAPTER FOUR

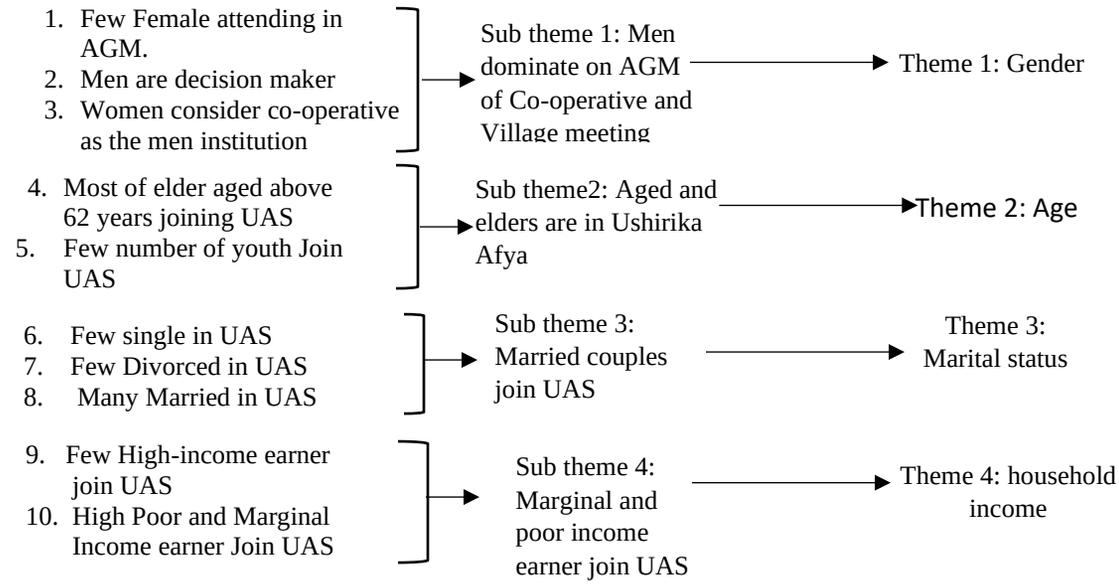
4.0. FINDINGS AND DISCUSSION

The chapter presents the research findings which were collected from the field. The findings which are presented in this chapter include the findings from specific objectives of the study and the findings on attributes of respondents of the study. The study contained three specific objectives which were; to analyse Socio economic demographic characteristics of co-operative member in Ushirika Afya scheme, to identify the perception of Co-operative members towards Ushirika Afya scheme and to establish the key determinants of members engagement into Ushirika Afya scheme.

4.1 Socio Demographics Characteristics of Co-operative Members Participating in Ushirika Afya Scheme.

The study applied thematic analysis and descriptive analysis to describe the social demographic characteristics of Cooperative members participating in Ushirika Afya Scheme. The demographic characteristics include religion, age, gender, occupation, level of education, marital status, household size, economic activity and income level.

4.1.1 Thematic Analysis results.



Key: UAS- Ushirika Afya scheme

AGM- Annual General Meeting

Figure 2: Thematic Analysis from codes to analytical themes.

4.1.2 Descriptive result of Socio demographics characteristics of co-operative members participating in Ushirika Afya Scheme.

The sex of respondents, the findings show that 218 respondents (72.7%) were males while 82 respondents 27.3% were females. The findings show that most of the respondents participated in the study were males. The age group with the highest participation was the elders from age 62 and above category, which are 112 respondents accounting for 37.3%. While the youth comprising the age between 18-39 were 56 respondents (18.7%). In the case of education level, the findings show that of the 198 respondents 66% had primary education, 66 respondents 22% had secondary education, 9 respondents 3% had tertiary education while 27 respondents 9% had university education. The marital status of the respondents provides insights into their family and social dynamics, which could influence their participation in the Ushirika Afya scheme. The majority of the participants were married, 82.3% of the total single individuals constituted 10% of the respondents, while divorced and widowed respondents made up 4% and 3.7%, respectively. Regarding income, it was observed that co-operative members in the Ushirika Afya scheme who have a monthly income range from 2500- 100,000 are 174 that is 58%. Regarding the economic activity the majority of co-operative members in Ushirika Afya scheme are smallholders' farmers who cultivate variety of crops such as pigeon peas, maize, sunflower, coffee and beans constitutes of 245 respondent that is 81.7%, while driver 4 respondent that is 1.3% are in Ushirika Afya scheme.

Table 1: Demographic and Socio-Economic Characteristics of Respondents (n=300)

Characteristics	Attributes	Frequency	Percent
Sex	Male	218	72.7
	Female	82	27.3
Age	18 -28	20	6.7
	29-39	36	12
	40-50	50	16.7
	51- 61	82	27.3
	62-72	90	30
	73 and above	22	7.3
Education	Primary	198	66
	Secondary	66	22
	Tertiary	9	3
	University	27	9
Household size	1- 3	57	19
	4- 6	124	41.3
	7- 9	88	29.3
	10 and above	31	10.4
Marital status	Married	247	82.3
	Single	30	10
	Divorced	12	4
	Widow and widower	11	3.7
Income (Tsh)	2500- 100,000	174	58
	100,000- 300,000	54	18
	300,000- 700,000	43	14.3
	700,000 and above	29	9.7
Economic Activities	Small Businesses	37	12.3
	Driver	4	1.3
	Mechanical Workers	5	1.7
	Food Vendors	9	3
	Farmer and Herdsman	245	81.7

Source: field data (2023)

4.1.3 Discussion on Socio demographics characteristics of co-operative members participating in Ushirika Afya Scheme

Descriptive and thematic analysis indicate that the number of males enrolled into Ushirika Afya scheme is higher as compared to the number of females because of culture on gender role belief that the role of Women is taking care of children and men are the one participates in AMCOS meeting and other meeting held in the village.

> *"Majority of members in our cooperative are men because in our society men are the one making decisions in everything in our family and men are the one participating in cooperative meetings and the decision to join ushirika Afya insurance is made by male as a member of AMCOS. Women especially in our area consider co-operative as the men's institution" (Key informant, Sayuni AMCOS, 26 August 2023).*

The findings also supported by Mwinukaa, (2022) reported on the study of uptake of health insurance and its associated factors found that men were more likely to attend

group and village meetings than women. The study attributed low participation of women in uptake of Ushirika Afya Insurance through AMCOS because culture required them to stay at home and provide care to the family**.**

The results entail that the elderly's enrolment of Ushirika Afya scheme is higher compared to youth because elders are at high risk of ill, indirect vulnerability and higher medical consumption. These statistics was also described during the FGD session whereas it was described that:

> *"Most of our members are elders ages range from 62 and above, they join in Ushirika Afya scheme because at elder age to see doctor for check-up and taking medicines is a normal thing, without Ushirika insurance you can died because of not attending by doctors and not getting medicine therefore Ushirika Afya is our saviour in health issues" (Key informant, Gallapo AMCOS, 5th august 2023).*

These findings were supported by Aman and Thomas (2021) who found most older adults from 61 and above visit hospital emergency rooms at higher rates than most other age groups. Old age is associated with ill health and thus possession of health insurance will enable easy and timely access to health services when the need arises.

Also, the study suggests that a substantial proportion of the co-operative members in Ushirika Afya might have basic literacy and numeracy skills, which could be relevant for their participation in co-operative activities that the level of primary education was up to health insurance. The above findings are in line with key informants who asked about social demographic characteristics of AMCOS members who use Ushirika Afya, they said that;

> *"Most of our Ushirika Afya scheme members have education level up to standard seven because they cannot obtain any other form of health insurance because they are not employed by government or private sector there are farmers , however currently we are receiving members with degree such as teachers and retired government officers who are interested in joining AMCOS so that they can pay for Ushirika Afya scheme and obtain other services" (Key informant, Sayuni AMCOS, 20 August 2023).*

These findings also are supported by Mwinuka and Elizabeth (2022) who conducted a study on uptake of health insurance and its associated factors among informal sector workers the study found a significant relationship between farmers in co-operative society with primary education and formal workers. Co-operative members with low levels of education were likely to take up health insurance because they have no other choice of insurance which is favourable to them unlike highly educated farmers who could get health insurance services elsewhere.

The study suggests the co-operative members who use health insurance schemes are low- and marginal-income earners. The above findings are in line with key informants respond about income characteristics of AMCOS members who use Ushirika Afya, they said that;

> *"Most of our Ushirika Afya scheme members they grow coffee and there are income is low they pay only Tsh 66,800/ and our cooperative society add Tsh 10,000/ so that they can get insurance card, sometimes our cooperative pays all amount to NHIF to the members who is not able to pay on time and start to deduct that amount from the members when selling his/her coffee or other crops through our co-operative Society." (Key informant, DACOFA AMCOS, 20 August 2023).*

This finding is contrary to Hussien and Azage (2021) revealed that low income earners in the rural area specific small holder farmers cannot purchase premium health insurance because the produce fetch low price in the market and low productivity due to depending on seasonal rainfall and poor agricultural technology these result on low level of their income.

Finally, the results of this study suggest that the co-operative members who use Ushirika Afya scheme are small holder farmers because the Ushirika afya scheme was designed to fit the needs of smallholder farmers who are in AMCOS. These findings supported by Nzowa, Nandonde and Seimu (2023) found that the "Ushirika Afya" scheme was primarily designed for workers in the agricultural sector to serve members of agricultural and marketing co-operative societies (AMCOS).Ushirika Afya scheme acts as a supplementary scheme for co-operative members employed in the formal sector and has a statutory health insurance cover.

4.2 Perception of po-operative members towards Ushirika Afya Scheme.

The study applied thematic analysis to uncover the perceptions of cooperative members on the Ushirika afya scheme. Eight open ended questions were asked to eight (8) focus groups whose profile is summarised in table 2.

Table 2: Focus groups socio demographic characteristics.

Characteristics	Attributes	n	%
Sex	Male	20	60
	Female	16	40
Age	18 -42	6	10
	43-60	8	20
	50-59	8	20
	60 and above	14	50
Marital Status	Single	4	5
	Married	25	70
	Divorced	2	5
	Widow	5	20
Education	Primary	15	66
	Secondary	9	9
	Tertiary	10	22
	University	2	3
Household Size	1- 3	10	19
	4- 6	21	42
	7- 9	3	29
	10 and above	2	10
Income (Tsh)	2500- 100,000	21	58
	100,000- 300,000	10	18
	300,000- 700,000	3	14.3
	700,000 and above	2	9.7
Economic Activity	Small Businesses (Petty Traders)	5	12.3
	Driver (Car ,tractor and Motorcycle	2	1.3
	Mechanical Workers	1	1.7
	Food Vendors	2	3
	Farmer and Herdsman	26	81.7
Occupation	Employed	2	13
	Self employed	23	66
	Labour	1	4.3
	Housewife	1	2.7
	Unemployed	4	4
	Family owned business	2	3.7
	Retire	3	6.3

As indicated in table 2, the majority of participants in FGs were male, married/partnered, aged between 50 to 60 years, with primary level of education and reported a family monthly income of TZS 2500 to 100,000. The FGD data was transcribed and analysed thematically. 15 codes were generated from Verbatim quotations (See code book in appendix iv). The codes were then synthesised to generate seven (7) sub themes and four (4) themes as shown in the thematic framework presented in Fig.2.

Content analysis revealed four main themes: Fear of death, Health concern, Ushirika afya as Security for Health issue, and Gender in balance on the scheme. Among these, sub-themes regarding Ushirika Afya service, individual vulnerabilities about risky,

health access, and procedure to join on Ushirika Afya scheme are most prominent. Figure 2 shows all themes discussed in all groups and provides information regarding the themes identified in the study by the number of quotations associated with the theme.

Table 3: Content analysis of the focus groups.

Theme/Category	Number of How Many Focus Groups Mentioned the Category	Number of Quotations Associated to Each Theme
Age		
code 1: Most of elder aged above 62 years joining UAS	2	5
code2: few numbers of youth join UAS	3	4
Household income:		
Code 3: Few High-income earner join UAS	1	12
Code 4: High Poor and Marginal Income earner Join UAS	3	7
Educational Level		
Code5: High number of primary and teary education are in Ushirika Afya	3	8
Code6: Few numbers of university and college education in Ushirika Afya	1	9
Gender in balance		
Code 7: Few Female attending in Annual general Meeting	1	
Code 8: Men are decision maker Women consider co-operative as the men institution	3	8
Marital status		
Code 9: Few single in Ushirika Afya Scheme	1	5
Code 10: Few Divorced in Ushirika Afya Scheme	1	2
Code 11: Many Married in Ushirika Afya scheme	2	8
Fear of Death		
Code 12: cooperative members psychological issue on Ushirika afya	3	12
Health concern		
Code 13: importance of having Ushirika Afya insurance	3	10
Security		
Code 14: Taking care health risk	2	5
Code15: saving money on health care issue	3	7

Note: A total of eight focus groups were conducted with community members (n = 36)

4.2.2 Theme 1. Fear of death due to chronic diseases.

This theme addresses the participants' fear of death due to chronic disease and health insurance helps them to reduce worries, these conditions impact cooperative members and relatives, these diseases require high cost and daily check-up in big hospitals like Kilimanjaro Christian Medical Centre (KCMC). Participants from nearly all focus groups defined fear of death as long-lasting diseases that cannot be cured on health centres in the village; it required following their treatments outside the Manyara region. In many instances, participants also mentioned different situations where the Ushirika Afya scheme served their lives in big hospitals through big medical operations that required skilled medical specialists. Several participants mentioned the Ushirika Afya scheme to serve their lives. Participants also mentioned medical services they receive through Ushirika Afya insurance. Other important themes for the

groups included access to the Ushirika Afya scheme, reducing worries and bringing happiness to co-operative members (see Table 3). Some participants showed concern in regard to being happy with health services from the scheme.

One of the most relevant themes related to fear of death, specifically bringing depression to family members if there is no Ushirika Afya. One of the participants stated:

> *"without Ushirika insurance through co-operative you can die because of not being able to attend hospital getting medicine therefore Ushirika Afya is our saviour in health issues' ' (Key informant, DACOFA AMCOS, 20 August 2023).*

Another participant from a different group expressed while crying:

> "*These illnesses have no cure in the health centre in the village, but with treatment through using Ushirika Afya scheme in Big hospital like KCMC we can continue living and being happy again, and I'm grateful to my cooperative and government that if not that insurance I will be dead. .....cried when remembering how Ushirika helped her" (Key informant, Sayuni AMCOS, 20 August 2023).*

4.2.3 Theme 2: Health concern due to illnesses.

This theme addresses the participants' perceptions towards ushirika afya scheme and the importance of the scheme. This importance may be related to chronic illness and the cost of health services. All groups discussed their concerns on check-ups for their health when they are sick and the majority were elders and aged cooperative members Some participants discussed concerns regarding changing to a health centre using Ushirika afya insurance if they hear about a new medical doctor programme in another District. Health check-up using the Ushirika Afya scheme, medication and other medical tools offered bin Ushirika Afya scheme . One participant stated:

> *"Using ushirika afya scheme I'm always going for check-up without any cost and at any hospital, last time I was at Kilimanjaro Christian Medical Centre (KCMC) hospital in Moshi for eye check-up and it was free if you have ushirika afya insurance" (Key informant, Gallapo AMCOS, 20 August 2023).*

Another participant from a different group expressed:

> "*when there is medical doctor programme outside the region ushirika Afya Scheme help me for paying all the check-up, last time we have a medical team at Hydom Lutheran centre where I obtain my health check up and get some medication for free but my friend pays a lot of money because he didn't have Ushirika afya Insurance" (Key informant, Sayuni AMCOS, 20 August 2023).*

In another group, a participant commented:

> "*The perception about Ushirika Afya scheme is our health helper when it comes to health check-up, most of co-operative members who had negative perception about our AMCOS are now speak loud and positive in the Villager meeting about good thing of our co-operative society AMCOS because of Ushirika Afya Insurance and for sure this insurance is our helper. All co-operative members and non-cooperative members have positive perceptions about Ushirika Afya insurance and our AMCOS." (Key informant, Gallapo AMCOS, 20 August 2023).*

4.2.4 Theme 3: Security to a co-operative member

This theme addresses the participants' perceptions about Ushirika Afya scheme as health security as well as health security if there is a farming accident, security when travelling outside the region. Most groups discussed security factors, risk factors and protectors in daily life. Some participants mentioned these themes when discussing the advantages of the Ushirika Afya scheme.

> *"Ushirika Afya scheme was my security when it comes to health, last year. I travel to Arusha to visit my son and I got sick on the way but because I have my Card in my pocket I just went to the hospital and got medicine and check-up, This Ushirika afya ID is my security guard in health issues" (Key informant, Sayuni AMCOS, 20 August 2023).*

4.2.5 Discussion on the perception of co-operative members towards Ushirika Afya Scheme.

Focus group discussions promote a conversation about perception of Cooperative members towards Ushirika Afya such, Ushirika afya scheme is a protection of Co

operative towards death and it was only for co-operative members and also a government established scheme, these accompanied by themes regarding fear of death issues. The most mentioned topics were Ushirika Afya scheme was for sick people and old aged co-operative member and the majority of Ushirika afya scheme are married couple, aged members, low income earners, family with high number of household size because are the vulnerable group in the community when come to health issue. These findings also supported by Sambuo (2022) reported that Tanzania has made efforts through its regulatory organ and other agencies to ensure farmers in Co-operative society have access to health insurance services. The National Health Insurance Fund (NHIF) in Tanzania initiated a co-operative health program known in Kiswahili as *Ushirika Afya.*

The findings have demonstrated that there were high number of male in Ushirika afya scheme and married couple these because married couple they cannot migrate easily These findings supported by Reka and Steven (2019) in the study of farmer health insurance an innovative solution for other Americans found most members of AMCOS were married couples and these people are more enrolled in health insurance for the family security in health risk issues compare single and divorced members who rating very low on health insurance matter because their movable compared to other groups Status

The results suggest the Ushirika Afya scheme is for Health protection of co-operative members on their dairy farming activity, reduce worries on health issues for cooperative members and improve performance of farming activity to co-operative members in AMCOS whose majority are farmers.

4.3 Determinants of Members' Engagement into the Ushirika Afya scheme

4.3.1 Finding of the Determinants of members engagement into Ushirika Afya scheme

Data were analysed through inferential statistics for detailed analysis. Reliability using Cronbach Alpha was tested before continuing with other steps. Inferential statistics was done stepwise: Factor analysis using Principal Component Analysis (PCA) was conducted to reduce redundant items and to increase the reliability of each aspect. According to Jain (2019) the exploratory analysis procedure is a powerful tool that can address a wide range of theoretical questions Thereafter, the Structural Equation

(SEM) by using SPSS AMOS version 26 software was used in order to test the hypothesis in the model.

The main goal of SEM is to find the extent to which a hypothesised model fits or adequately describes sample data. SEM was chosen because it tests multiple regression models in a single analysis at once and has become popular technique to the researchers in social sciences and it combines factor analysis and linear regression (Kowalczyk et al., et al, 2013). It also addresses the problem of measurement error by removing it and therefore having a good estimation of relationship. SEM path modelling using AMOS is appropriate to carry on the confirmatory factor analysis which is more reliable and valid (Ryan & Tatum, 2013) by combining principal components analysis with other regression.

The two stages were involved in application of SEM as one of the requirements of the measurement model which includes the co-operative member in Ushirika Afya reliability, internal consistency and discriminate validity of the measures and (2) the assessment of the structural model.

4.3.2 SEM Goodness-of-fit (GOF).

These indices try to measure the distance or difference between the sample covariance or correlation matrix and the fitted covariance. Hair, *et al.* (2006). The goodness-of-fit is an indication of whether the established SEM reflects the data situation well. A poor goodness-of-fit renders the results unreliable. Thus, model evaluation should be performed when interpreting the results of SEM. There are various goodness-of-fit indices hence it is not easy to determine which index to use for an evaluation since each evaluated different aspects of model. Therefore, in order to remediate to that problem few researchers (Jessie, 2021; Kand &Ahn,2021) have proposed guidelines that have some support based on simulations such as Hu and Bentler (1999). For good-of-it, they suggest that Root Mean Square Error of Approximation (RMSEA) value should be close to 0.08 or below, Goodness-of-Fit Index should be closer to 0.95 or above, Goodness of Fit index and Comparative normed Fit Index (CFI)/Tucker-Lewis Index (TLI) should be close to 0.95 or above. They then concluded that when these values are met it may not be necessary for researchers to provide further statistical justification for their model fit. The results in table 3 show that the fit indices of the model were p=0.000, RMSEA= 0.71, CFI=0.958, TLI= 0.916, GFI=0.974. The other

relevant fit indices indicate a good overall fit as the TLI is closer to 0.95, GFI, CFI exceed 0.95 and the RMSEA is below 0.90.

Table 4: Goodness of fit indices

Model	RMSEA	CFI	TLI	GFI	GFI
Default model	0.071	0.958	0.916	0.974	0.974
Saturated model	-	1.000	-	1.000	1.000
Independence model	0.246	0.000	0.000	0.657	0.657

4.3.3 Multicollinearity, reliability and validity test

To assess the multicollinearity problem, variance inflation factor (VIF) was inspected. Table 5 indicates that all VIF are below 10 as suggested by Chin (2010) meaning that multicollinearity problem does not exist. Cronbach ‘s Alpha (Cronbach, 1951) is one of the widely used measures of reliability in the social sciences (Loewenthal and Lewis,2018; Diedenhofen and Musch, 2016; Bonett and Wright, 2015; Cronbach, 1951). Reliability of data was conducted in order to assess the internal consistency of the variable through Cronbach ‘s Alpha and was significant at an Alpha of 0.939. Then, the variable tested scored the reliability above 0.7 which indicates a very strong consistency among variables (Prajogo and Sohal, 2003). The results gave support to use factor analysis to determine whether some items could be removed and to capture the meaning of the framework accurately. Bartlett ‘s test of sphericity and Kaiser-Meyer- Olkin (KMO) measure of sampling adequacy were tested in order to evaluate the appropriateness of the data for factor analysis. Bartlett ‘s test was significant at $p < 0.001$ level, indicating that there is association among variables since the matrix is not an identity matrix. Besides, the KMOs in Table 4 are higher than the threshold of 0.5 (Darko *et al*., 2017; Williams, Onsman, and Brown, 2010), indicating that sample is acceptable for factor analysis.

Factor Analysis was performed through principal components for the perspectives with a total of 22 items/indicators by using a principal component extraction and Varimax rotation. The eigen value for each aspect was above 1.00. Perceived behaviour control gave 3 indicators explaining a 53.67% of total variance whereas subjective norms 2 indicators explaining a 62.811% of total variance. For the internal business there are five indicators explaining a 52.262 % total variance whereas Attitude 2 indicators explain 52.554% total variance. The total variance explained is within acceptable range of 50% for Aspiration. The entire factor loadings were above 0.50 which is acceptable (Hair *et al*, 2010), hence no item was deleted at this stage.

Table 5: Testing for Multicollinearity and Reliability of data.

Aspect	Cumulative Cronbach's Alpha		VIF	KMO	Bartlett's
	variance				Test
Perceived behaviour	53.67%	0.861	1.499	0.894	P<0.001
subjective norms	62.81%	0.839	1.75	0.854	P<0.001
Attitude	52.26%	0.847	1.655	0.875	P<0.001
Aspiration	50.55%	0.859	1.774	0.87	P<0.001
Overall reliability	0.939				

Construct validity was measured in two aspects that are convergent and discriminant validity. These examine the extent to which measures of a latent variable shared their variance and how they are different from others (Alarcón, Sánchez, and De Olavide,2015). The Composite Reliability (CR) was used in order to overcome some traditional CA deficiencies. The CRs in this study are in an acceptable range of above 0.80. Convergent validity was achieved since the factor loadings were above 0.6. (see Table 5.). The Average Variance Extracted (AVE) from this study as recommended by Buhi et al. (2007) was above 0.5 indicating that convergent validity was fit.

Table 6: Factor loadings, Average Variance Extracted and Composite reliability

Construct	Indicators	Factor loading	VIF	AVE	Cronbach's alpha	Composite reliability
PUS	PUS5	0.781	1.747	0.611	0.841	0.841
	PUS6	0.795	1.851			
	PUS4	0.815	1.942			
	PUS2	0.732	1.539			
	PUS1	0.783	1.673			
Asp	Aspiration7	0.721	1.627	0.573	0.851	0.89
	Aspiration8	0.767	1.773			
	Aspiration5	0.781	1.957			
	Aspiration6	0.758	1.709			
ENG	Engagement5	0.727	1.549			
	Engagement4	0.786	1.879			
	Engagement3	0.723	1.396	0.577	0.817	0.872
	Engagement2	0.71	1.543			
SN	SN7	0.766	1.701			
	SN6	0.774	1.758			
	SN5	0.819	1.879			
ATT	ATT5	0.723	1.633	0.56	0.842	0.884
	ATT6	0.812	2.127			
	ATT3	0.71	1.553			
PBC	PBC4	0.774	1.86			
	PBC5	0.712	1.667			
	PBC6	0.7	1.73			

PUS: perceived usefulness; ASP: Aspiration: ENG: engagement; SN: Subjective norm: ATT: Attitude; PBC: perceived behavioural control;

Discriminant Validity was tested according to Garson (2012) criteria that requires the square root of AVE to be greater than the correlations among the constructs. All square roots of AVE in Table 5. that appear in the diagonal for the model 's constructs

are greater than the inter-construct correlations, hence indicate that there is no problem with discriminant validity.

4.3.4 Structural model on determinants of members engagement in Ushirika Afya Scheme.

To assess the structural model, two measures were used namely: statistical significance (t- test) of the estimated path coefficient (β), and the coefficient of determination (R2) which explain the ability of the model to explain the variance in the dependent variable which Member engagement in Ushirika Afya scheme and the independent variable are subjective norm, attitude, aspiration and perceived behavioural control. The hypothesis model was tested by using SPSS AMOS method to confirm the relationship between the constructs within the model. The paths in the model were tested to determine their significance. Therefore, in order to assess the model, the squared multiple correlation (R2) was examined in each construct. Then the significance of the paths was also evaluated, R2 was assessed according to Buhi et al. (2017) suggested that, values of approximately to 0.190 are weak, values of 0.333 are moderate and 0.35 are substantial.

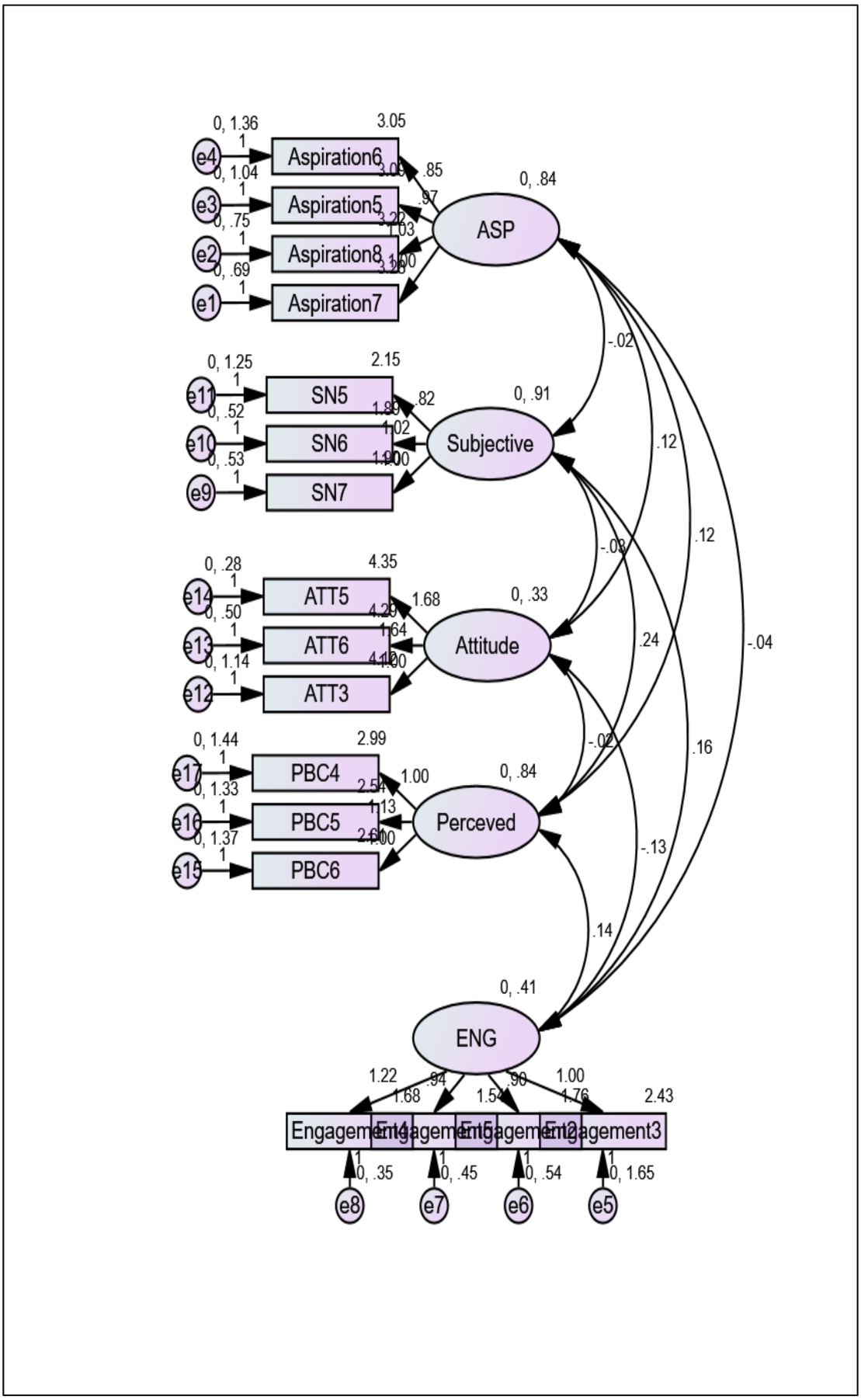


Figure 3: The AMOS SEM results.

4.3.7 Discussion on the determinant of member engagement in Ushirika Afya Scheme

The results showed that there was a significant effect of subjective norm on member engagement on use of the ushirika Afya scheme. The effect of subjective norm on insurance was shown on the PCA and the figure 3 above shows that factor loading of cooperative member engagement was due to influence of other members who have power to influence the decision of members to join Ushirika Insurance and family members believe on the importance of Ushirika Insurance. The findings in this study were supported by previous research conducted by Teo & Lee (2010) who found that attitudes toward usage and subjective norm were significant attribute for individual to engage on use of health insurance. These finding is supported by Asfaw and Johannes (2014) on the study of impacts of Community Health Insurance Schemes on Health Care Provision in Rural Tanzania showed that community insurance schemes member were influenced by community development officer to join insurance so as to advocated community health insurance was important means to reach the poorest of the poor.

The result shows that attitude influenced Co-operative members' engagement on ushirika afya because of ushirika Afya insurance was favourable on health care utilisation and benefit obtained from using Ushirika Afya scheme.

The result found that perceived Control was contributed on member engagement on Ushirika Afya scheme through on improve health benefit of the members and protect and reduce worries on health issue and also to improve their performance on farming activity. The findings in this study were supported by previous research conducted by Teo & Lee (2010) study showed that all three factors attitude, subjective norm, and perceived control had a statistically significant effect on member engagement on Ushirika Afya scheme

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents the summary of the findings, conclusions, recommendations, and areas for further research.

5.1 Summary

The first objective was to determine the profile of Socio economic and demographic characteristics of Co-operative members in Ushirika Afya and was analysed using descriptive statistics and qualitative analysis. The results entail that the elderly's enrolment of Ushirika Afya scheme is higher compared to youth because elders are at high risk of ill, indirect vulnerability and higher medical consumption. The number of males enrolled into the Ushirika Afya scheme is higher as compared to the number of females because of the culture of gender role belief.

The role of Women is taking care of children and men are the one who participates in AMCOS meetings and other meetings held in the village. The education level of Co-operative members in Ushirika Afya scheme the finding reveal that a substantial proportion of the co-operative members in Ushirika Afya might have basic literacy and numeracy skills, which could be relevant for their participation in co-operative activities that the level of primary education was up taker of health insurance. In marital status the study revealed that married individuals were more enrolled in a co-operative health insurance scheme. Income of up takers of Ushirika afya scheme was low income earners participating in farming activity.

The second objective was to identify the Perception of Co-operative members towards the Ushirika Afya scheme. The study found that cooperative members towards Ushirika Afya scheme were for protection of members towards death, and it was the government established scheme, it was for sick people and old aged cooperative member, married couple, low income earners, for family with high number of household size. The findings have demonstrated that there were high number of male in Ushirika afya scheme, and married couple these because married couple they cannot migrate easily. Also, Ushirika Afya scheme was for health protection of cooperative members on their dairy farming activity, reduce worries on health issues for cooperative members and improve performance of farming activity to cooperative of members in AMCOS who are majority are farmers

The third objective was to examine the key determinants of members' engagement into the Ushirika Afya scheme. Based on structural equation model and conceptual framework the results showed that there was a significant effect of subjective norm on member engagement on use of the ushirika Afya scheme. The effect of subjective norm on insurance was shown on the PCA and factor loading of cooperative member engagement was due to influence of other members who have power to influence the decision of members to join Ushirika Insurance and family members believe on the importance of Ushirika Insurance. The results show that attitude influenced Co-operative members' engagement on ushirika afya because of ushirika Afya insurance is favourable on health care utilisation and benefits obtained from using Ushirika Afya scheme. Perceived Control contributed to member engagement on the Ushirika Afya scheme through improving the health benefit of the members and protecting and reducing worries on health issues and also to improve their performance on farming activity.

5.2 Conclusion

The study concluded that socio demographic characteristics of co-operative members in Ushirika Afya including age, level of education, economic activity, gender marital status and income brought to the fore and adds to the surging studies about Ushirika Afya insurance. The study presents that elder’s enrolment in Ushirika Afya scheme is higher compared to youth because of low engagement for youth in Cooperative activities. Majority of the household heads were married, Christians, had tertiary education with monthly income of less than Tsh 100 000 and farming was a major income activity.

Regarding the perception of co-operative members towards Ushirika Afya scheme, the study revealed that member in ushirika afya scheme think the insurance is for elder people, for sick people, and for poor people therefore there is need of awareness and mind transforming training Among cooperative members and promotion for youth engagement in the co-operative society activities to foster stronger Co-operative society among farmers.

Concerning the determinants of members engagement into Ushirika Afya scheme, the study demonstrated that the co-operative member engagement in Ushirika afya insurance was because of their health status, services when using Ushirika Afya, to

covers medical expenses ,reduce financial burden on health services and to reduce worries on health issues. AMCOS and NHIF should thus emphasise the importance of health insurance to cooperative members and these insurance literacy will enable member to know importance of Ushirika Afya scheme.

5.3 Recommendations

The study recommends that AMCOS should tailor their strategies on youth and services based on their need specially by design the mode of payment that will enable them to access the Ushirika Afya scheme because there are also on health risk, AMCOS should consider implementing targeted programs and initiatives that cater to the specific needs and preferences of youth and female groups. Moreover, TCDC as regulator of cooperative society should conduct regular promotion roles specific for youth for the survival of Cooperative society whose majority of members are elders. The government through NHIF should make insurance through Cooperative that is flexible to reflect the socio-demographic features and economic conditions prevailing in farmers who are in Co-operative society so as to contribute to achieve UN development goals.

The study recommends that AMCOS and NHIF should invest in providing high-quality training and educational programs for cooperative members in the Ushirika Afya scheme. Given that mind transformation training was found to have the most substantial positive effect on perception of cooperative members towards Ushirika Afya scheme, AMCOS should allocate resources to develop comprehensive and favourable own health insurance based on their value and principal of co-operative society and effective training modules on various aspects of agriculture and cooperative management. Additionally, AMCOS should collaborate with other insurance companies and institutions to ensure quality insurance services that can fit the needs of all members regarding age, sex and religion.

TCDC needs to have an organised co-operative Health insurance program that will meet the needs of all cooperative members and non-cooperative members. This program should be designed to meet the needs of each cooperative member to enhance growth and development of cooperative society in Tanzania.

The findings from this study suggest that more focus should be made in educating or even simply exposing young adults to health insurance earlier in their lives.

Introducing health insurance information earlier can help to increase the health insurance literacy rates among young adults and thus increase their confidence when choosing a health insurance plan. The exposure of health insurance information can be done in a general meeting of the cooperative society or in the village meeting and area where youth are available. Focusing on health literacy education and advocacy will not only increase the health insurance literacy levels of cooperative members, it will also allow them to make health decisions that are best for them and their families.

By implementing these recommendations, AMCOS can enhance their relationship with non-cooperative members, especially youth, improve cooperative services, and contribute to the overall engagement of cooperative members in the Ushirika Afya scheme. These measures will not only benefit individual cooperative members but also strengthen the cooperative's position in the community

5.4 Areas for further research.

The study recommends that further study should be done on investigating the willingness to pay for health insurance for co-operative members in Tanzania. Despite the study’s significant contribution to practical and theoretical aspects regarding Ushirika Afya scheme health insurance, the base for analysis resides only on co-operative members. Thus, one should generalise this study’s findings cautiously as the idea of analysis of Ushirika Afya scheme in Babati District cuts across diverse populations. Yet, the stated limitation does not nullify the significance of this study findings and its contribution to the literature on cooperative health insurance.

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APPENDICES

Appendix I: This questionnaire is for Co-operative Society in Ushirika Afya Scheme

Questionnaire No: _____

Section A: Introduction Dear respondents,

My name is Godamen Naiman, a student of Moshi cooperative university pursuing Master of Arts in cooperative and community development. Before completing my studies, I expect to conduct research on the **Co-operative Health Insurance: Analysis of Ushirika Afya scheme among Co-operative members in Babati District, Tanzania.**

Below are a set of questions which will be helpful in accomplishing the study. I request for your cooperation in attempting these questions. The information you provide will be treated with maximum confidentiality.

SECTION B:

1. Social economic demographic information

ID	QUESTIONS	ANSWERS
A1	Age (years) (put a tick "√")	1. 18 -28 [ ] 2. 29-39 [ ] 3. 40-50 [ ] 4. 51- 61 [ ] 5. 62-72 [ ] 6. 73 and above [ ]
A2	Gender (put a tick "√")	1. Male [ ] 2. Female [ ]
A3	Marital status ((put a tick "√")	1. Single [ ] 2. Married [ ] 3. Divorced [ ] 4. Widow [ ]
A4	What is your present religion? (put a tick "√")	1. Christian [ ] 2. Muslim [ ] 3. Ancestral. [ ] 4. Tribal animist [ ] 5. Hindu [ ] 6. Buddhist [ ]
A5	Education Level: (put a tick "√")	1. Primary [.....] 2. Secondary [....] 3. Tertiary [....] 4. University […]
A6	What is your Household Size?	1. 1- 3 [ ] 2. 4- 6 [ ] 3. 7- 9 [ ] 4. 10 and above [ ]
A7	What is your annual household income?	1. 2500- 100,000 [ ] 2. 100,000- 300,000 [ ] 3. 300,000- 700,000 [ ] 4. 700,000 and above [ ]
A8	What is your Economic activity	(a) Small Businesses (Petty Traders) [ ] (b) Driver (Car ,tractor and Motorcycle [ ] (c) Mechanical Workers [ ] (d) Food Vendors [ ] (e) Farmer and Herdsman [ ] (f) Other_____

A9	What is your Occupation (**put a tick "√")**	1. Employed [ ] 2. Self-employed [ ] 3. Labour. [ ] 4. Housewife [ ] 5. Unemployed [ ] 6. . Professional. [ ] 7. Family owned business [ ] 8. Retire [ ] 9. Other…….

SECTION B: PERCEPTION TOWARDS USHIRIKA AFYA SCHEME.

Please rate your perception towards Ushirika Afya on the following image traits (circle your rating)1= Strong Agree (SA), 2 = Agree (A), 3=Neutral (N), 4 = Disagree (D) and 5= Strong Disagree (SD)

S/N	**Statements**	**Answers**					**Statements**
	I perceive Ushirika Afya scheme as	**SA**	**A**	**N**	**D**	**SD**	**I perceive Ushirika Afya scheme as**
I	For prevention of financial hardship if you get sick.	5	4	3	2	1	For spending money to seek healthcare while I am healthy.
II	For Sick people	5	4	3	2	1	For all healthy people.
III	For a sense of security regarding medical care to my family	5	4	3	2	1	I would prefer to pay at the time of illness instead of paying for Ushirika Afya
IV	Government established	5	4	3	2	1	Voluntarily established
V	For young people	5	4	3	2	1	For Old people(elders)
VI	For rich people	5	4	3	2	1	For poor people
VII	Cover all medical services	5	4	3	2	1	Covers less services
VIII	Difficulty to join	5	4	3	2	1	Easy to join

SECTION C. KEY DETERMINANTS

Please rate your opinion about the role of social pressure in joining Ushirika Afya **(**important people include parents, children, friends, cooperative society, government) (put a tick "√")

ID	Statements	SA	A	N	D	SD
C1	My co-operative society convinces me to join Ushirika Afya Ushirika Afya scheme.					
C2	My friends influence me to join Ushirika Afya scheme					
C3	Bylaws of my cooperative society requires me to join Ushirika Afya					
C4	My friends think sick people and elders should join Ushirika Afya scheme					
C5	People whose opinions I value believe I should be engaged in the Ushirika Afya scheme.					
C6	My family members believe I should be engaged in Ushirika Afya scheme					
C7	People who influence my decision think that I should purchase Ushirika Afya scheme					

2. HOW DO YOU RATE YOUR CONTROL IN JOINING USHIRIKA AFYA (put a tick "√")? PERCEIVED CONTROL

ID	Statements	SA	A	N	D	SD
C7	Overall, I am confident that I can easily join Ushirika afya scheme					
C8	For me the decision to join Ushirika Afya scheme is my own decision					
C9	I have the awareness necessary to join Ushirika Afya Scheme					
C10	The decision to join Ushirika Afya scheme is beyond my control					
C11	My health status made me to join Ushirika Afya scheme					
D12	I have the financial resources necessary to pay for Ushirika Afya scheme					

INDICATE YOUR LEVEL OF AGREEMENT OR DISAGREEMENT WITH STATEMENTS ABOUT YOUR PERCEIVED USEFULNESS ON USHIRIKA AFYA. (PUT A TICK "√")

ID	Statements	SA	A	N	D	SD
C7	It eases my future expenses.					
C8	Ushirika afya insurance improves my access to medical services.					
C9	Ushirika Afya improve my performance on farming activity					
C10	Covers treatment for ailments which I could not personally finance					
C11	It protects me and reduce worries on health issues					
C12	It improves my health benefits					

3. SECTION D: ATTITUDE TOWARDS USHIRIKA AFYA SCHEME

Indicate your level of agreement or disagreement with statements about your attitude towards Ushirika Afya. (put a tick "√")

ID	Statements	SA	A	N	D	SD
D1	I trust Ushirika Afya scheme					
D2	I get the best Quality services when I use Ushirika afya insurance					
D3	I get very poor services when using Ushirika Afya					
D4	I get more benefit from Ushirika afya Over a cost paid for it.					
D5	Overall, I consider Ushirika Afya as a bad thing					
D6	I do not benefit from Ushirika Afya					
D7	I would describe my overall attitude toward Ushirika Afya as very favourable					

4. What is your aspiration with respect to your health?

(Please select one number to present your answer on the statement below 0 = Not at all true,1 = Slightly true,2 = Moderately true, 3 = Quite a bit true, 4 = Very true of me)

ID	Statements	0	1	2	3	4
D7	I hope the Ushirika Afya scheme will cover medical expenses for my dependents.					
D8	I hope Ushirika Afya will increase members' solidarity and unity in my cooperative.					
D9	I know Ushirika Afya reduce my financial burden on health services					
D10	I want Ushirika Afya to bring more new members to my cooperative society.					
D11	I aspire to have my health checked regularly through Ushirika afya insurance.					
D12	I want a life free from stress due to high medical expenses					
D13	I aspire to have Ushirika Afya insurance for health protection.					
D14	I want to use Ushirika Afya insurance in a big hospital in Tanzania.					

SECTION E:

5. Cooperative members engagement Intention on Ushirika Afya scheme (put a tick "√")

ID	Statements	SA	A	N	D	SD
E1	I have no interest in the Ushirika Afya scheme.					
E2	I expect to purchase Ushirika Afya insurance in the future.					
E3	I am committed to saving money in order to join the Ushirika Afya Scheme.					
E4	I know Ushirika Afya insurance scheme is valuable and I want to purchase it as soon as possible					
E5	I am willing to convince other cooperative members to join Ushirika Afya.					

Appendix ii: FGD Guide

There has been a growing interest in understanding the behavioural insights surrounding cooperative member engagement on Ushirika Afya scheme, highlighting the unique services Ushirika afya scheme offer. This group discussion aims to explore the Ushirika Afya Scheme, attitudes, and key determinants of cooperative member engagement on Ushirika Afya scheme. **Discussion Points:**
1. What is your perception about Ushirika Afya?
Motivating Factors: What factors motivate the cooperative member to engage in the Ushirika Scheme?

Appendix iii: Document Review List

1. Contribution book for cooperative members on ushirika afya scheme
2. NHIF conditions on payment of Ushirika afya scheme
3. Annual audit report showing contribution of AMCOS to members on Ushirika afya scheme payment to NHIF
4. Resolution of annual general meeting Agenda
5. Member register book
6. AMCOS by laws

Appendix iv: Specific Objectives Based Matrix

Specific objective	Specific data required	Sources of data	Data collection methods	Data analysis methods
Examine socio-economic demographic characteristics of cooperative members in Ushirika Afya scheme	Age Education level Marital status Sex Household Size Economic activity. Religion Occupation Income level	Cooperative members in Ushirika Afya scheme	Questionnaire	Descriptive analysis
Examine member perception towards Ushirika Afya scheme AMCOS services	Perception Attitude Perceived behaviour Subjective norms	Cooperative members in Ushirika Afya scheme	Questionnaire, Focused Group Discussion,	Structural Equation Modelling (SEM) was used Content Analysis,
Examine key determinants of members engagement in Ushirika Afya scheme	Aspiration Engagement Perceived usefulness	Cooperative members in Ushirika Afya scheme	Questionnaire, Focused Group Discussion, Documentary review	Structural Equation Modelling (SEM) was used Content Analysis Likert scale

Appendix v: Sampling

NA	TYPE OF COOPERATIVE	ME	KE	TOTAL MEMBERS	TOTAL RESPONDENT	FEMALE RESPONDENT	MALE RESPONDENT
1	AMCOS 1	60	30	90	30	14	16
2	AMCOS 2	80	28	108	50	20	30
3	AMCOS 3	150	87	237	100	65	35
4	AMCOS 4	101	54	155	90	30	60
5	AMCOS 5	79	38	117	30	10	20
	TOTAL	470	237	707	300	139	161

Appendix iv: Code book.

Theme	**Statement of FGD Participant**	**Code**
Age	*"Most of our members are elders ages range from 62 and above years, they join in Ushirika Afya scheme because at elder age to see doctor for check-up and taking medicines is a normal thing and it happen regularly"* *"Youth in our cooperative are not interested on joining Ushirika Afya especially unmarried youth because they believe that being on ushirika afya insurance is like predicting that you will be sick on which is local believes"*	**Code 1:** Most of elder aged above 62 years joining UAS **Code 2:** few numbers of youth join UAS
Household income	*"Most of our Ushirika Afya scheme members they grow coffee and there are income is low they pay only Tsh 66,800/ and our cooperative society add Tshs 10,000/ so that they can get insurance card, sometimes our cooperative pays all amount to NHIF to the members who is not able to pay on time and start to deduct that amount from the members when selling his/her coffee or other crops through our co-operative Society."* *" Our members depend on the farming as source of income and we have only one season in the*	**Code 3:** Few High-income earner join UAS **Code 4:** High Poor and Marginal Income earner Join UAS

	year so our income is very low because of depending on rainfall for agriculture and if there is no rainfall our production will be low hence it affect our income"	
Educational Level	*"Most of our Ushirika Afya scheme members have education level up to standard seven because they cannot obtain any other form of health insurance because they are not employed by government or private sector there are farmers however currently we are receiving members with degree such as teachers and retired government officers who are interested in joining AMCOS so that they can pay for Ushirika Afya scheme and obtain other services"*	**Code5**: High number of primary and teary education are in Ushirika Afya scheme **Code6:** Few numbers of university and college education in Ushirika Afya scheme
Gender in balance	*"Majority of members in our cooperative are men because in our society men are the one making decisions in everything in our family and men are the one participating in Cooperative meetings and the decision to join ushirika Afya insurance is made by male as a member of AMCOS. Women especially in our area consider co-operative as the men institution"*	**Code 7:** Few Female attending in AGM. **Code 8**: Men are decision maker Women consider co-operative as the men institution
Marital status	*"Most of our cooperative members*	**Code 9:** Few single in UAS

	in Ushirika Afya scheme are married and these because the person who have family can be trusted I can trust married person rather than single who have no settlement he/she can move any time without thinking and consider what he/she can lose"	**Code 10:** Few Divorced in UAS **Code 11:** Many Married in UAS
Fear of Death	*"without Ushirika insurance through co-operative you can died because of not be able to attending hospital getting medicine therefore Ushirika Afya is our saviour in health issues"* *"I have the heart problem if it was not Ushirika Afya scheme I will not be in this world because the ushirika afya scheme enable me to do checkup and the operation without paying nothing"*	**Code 12: -** cooperative members psychological issue on Ushirika afya
Health concern	*"Using ushirika afya scheme I'm always going for check-up without any cost and at any hospital, last time I was at KCMC Hospital in Moshi for eye check-up and it was free if you have ushirika afya insurance"* *"Ushirika Afya Scheme help me on taking medicine regularly due to my health condition this scheme enable me to reduce the cost of medication on our pharmacy in our*	**Code 13:** importance of having Ushirika Afya insurance**.**

	village”	
Security	*“Ushirika Afya scheme was my security when comes to health, last year I travel to Arusha to see my son and I got sick on the way but because I have my Card in my pocket I just run to the hospital and get medicine and check-up, This Ushirika afya ID is my security guard in health issues”* *“Ushirika Afya scheme protect my health when I had a diabetes diseases and regularly I'm travelling outside my districts but having my Ushirika Afya scheme ID is like a security guard in my life ”*	**Code 14:** Taking care health risk **Code15:** saving money on health care issue

Appendix vii : Measured Item

Construct Area	Measured Construct Item	Label
Perceived Control	The decision to join Ushirika Afya scheme is beyond my control	PC DC
	My health status made me to join Ushirika Afya scheme	PC H
	I have the financial resources necessary to pay for Ushirika Afya scheme	PCFR
	My friends think sick people and elders should join Ushirika Afya scheme	SN F
Perceived Usefulness	It improves my health benefits	PU IH
	It protects me and reduce worries on health issues	PU RW
Subjective Norms	People who influence my decision think that I should purchase Ushirika scheme	SN DP
	My family members believe I should be engaged in it	SN FM

Appendix viii: Profile of Focus group discussion

Code	Number of Participants	Age	Gender
FGD-1	5	60 years and above	Male 3 and Female 2
FGD-2	5	43-60 years and above	Male 2 and Female 3
FGD-3	5	18-42 years	Male 3 and Female 3
FGD-4	5	50- 59 years and above	Male 4 and Female1

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Unapojibu tafadhali taja:
Kumb. Na. MoCU/MA-CCD/HD/348/21 Tarehe: 19 Juni, 2023

Katibu Tawala,
Mkoa wa Manyara,
S. L. P. 255,
MANYARA.

YAH: KIBALI CHA KUFANYA UTAFITI KWA WANAFUNZI WA CHUO KIKUU CHA USHIRIKA MOSHI (MoCU)

Tafadhali husika na kichwa cha habari hapo juu.

Madhumuni ya barua hii ni kumtambulisha kwako Ndugu Godamen Naiman mwanafunzi wa Chuo Kikuu cha Ushirika Moshi ambaye kwa sasa anatarajia kufanya utafiti katika enec lako.

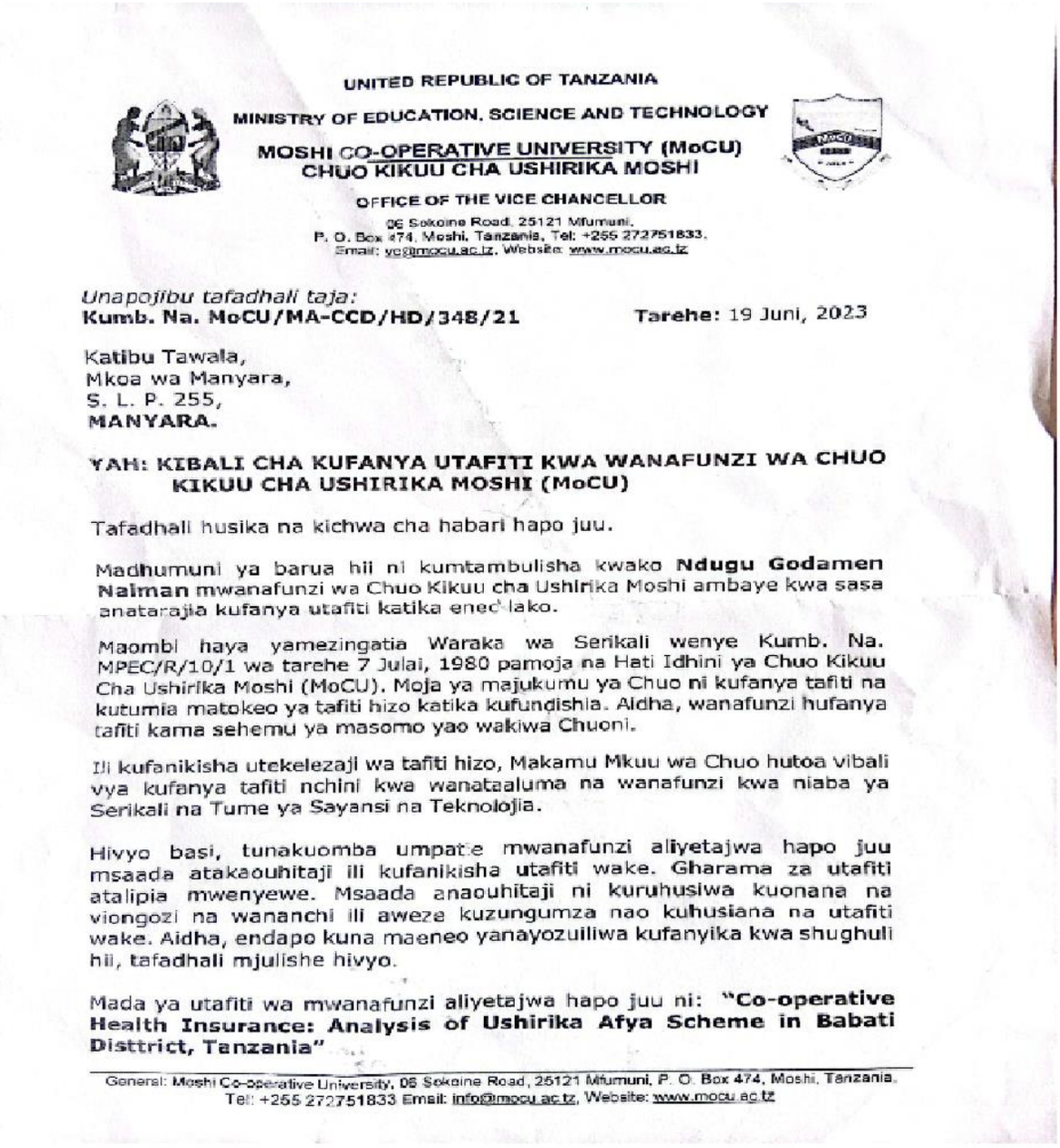
Maombi haya yamezingatia Waraka wa Serikali wenye Kumb. Na. MPEC/R/10/1 wa tarehe 7 Julai, 1980 pamoja na Hati Idhini ya Chuo Kikuu Cha Ushirika Moshi (MoCU). Moja ya majukumu ya Chuo ni kufanya tafiti na kutumia matokeo ya tafiti hizo katika kufundishla. Aidha, wanafunzi hufanya tafiti kama sehemu ya masomo yao wakiwa Chuoni.

Ili kufanikisha utekelezaji wa tafiti hizo, Makamu Mkuu wa Chuo hutoa vibali vya kufanya tafiti nchini kwa wanataaluma na wanafunzi kwa niaba ya Serikali na Turne ya Sayansi na Teknolojia.

Hivyo basi, tunakuomba umpatie mwanafunzi aliyetajwa hapo juu msaada atakaouhitaji iii kufanikisha utafiti wake. Gharama za utafiti atalipia mwenyewe. Msaada anaouhitaji ni kuruhusiwa kuonana na viongozi na wananchi iii aweze kuzungumza nao kuhusiana na utafiti wake. Aidha, endapo kuna maeneo yanayozuiliwa kufanyika kwa shughuli hii, tafadhali mjulishe hivyo.

Mada ya utafiti wa mwanafunzi aliyetajwa hapo juu ni: "Co-operative Health Insurance: Analysis of Ushirika Afya Scheme in Babati Disttrict, Tanzania"

Appendix x : Permit letter



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Tafadhali husika na kichwa cha habari hapo juu.

Madhumuni ya barua hii ni kumtambulisha kwako **Ndugu Godamen Naiman** mwanafunzi wa Chuo Kikuu cha Ushirika Moshi ambaye kwa sasa anatarajia kufanya utafiti katika eneo lako.

Maombi haya yamezingatia Waraka wa Serikali wenye Kumb. Na. MPEC/R/10/1 wa tarehe 7 Julai, 1980 pamoja na Hati Idhini ya Chuo Kikuu Cha Ushirika Moshi (MoCU). Moja ya majukumu ya Chuo ni kufanya tafiti na kutumia matokeo ya tafiti hizo katika kufundishia. Aidha, wanafunzi hufanya tafiti kama sehemu ya masomo yao wakiwa Chuoni.

Ili kufanikisha utekelezaji wa tafiti hizo, Makamu Mkuu wa Chuo hutoa vibali vya kufanya tafiti nchini kwa wanataaluma na wanafunzi kwa niaba ya Serikali na Tume ya Sayansi na Teknolojia.

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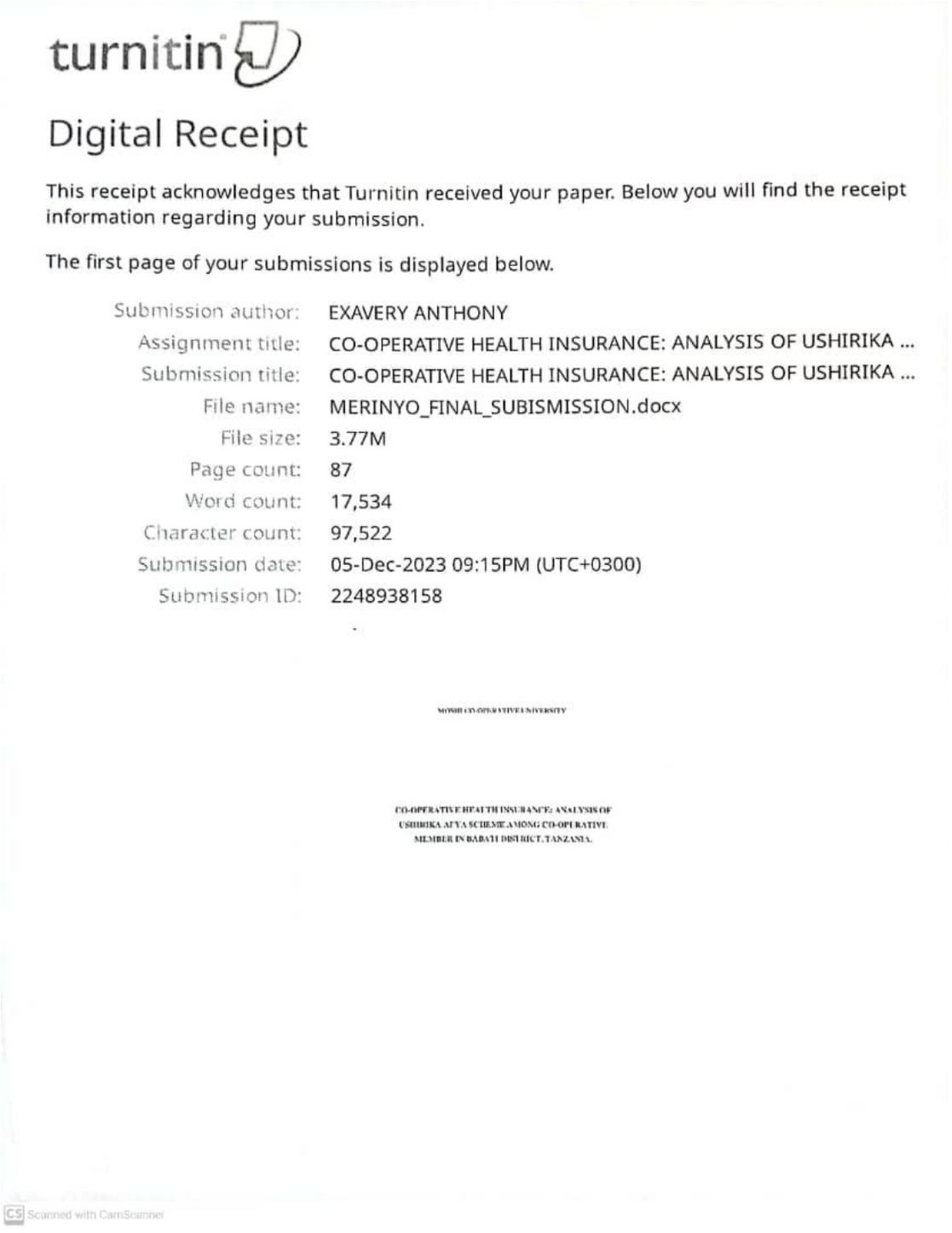
Mada ya utafiti wa mwanafunzi aliyetajwa hapo juu ni: **"Co-operative Health Insurance: Analysis of Ushirika Afya Scheme in Babati Disttrict, Tanzania"**

General: Moshi Co-operative University, 06 Sokoine Road, 25121 Mifumuni, P. O. Box 474, Moshi, Tanzania.
Tel: +255 272751833 Email: info@mocu.ac.tz, Website: www.mocu.ac.tz

Appendix xi : Plagiarism Report



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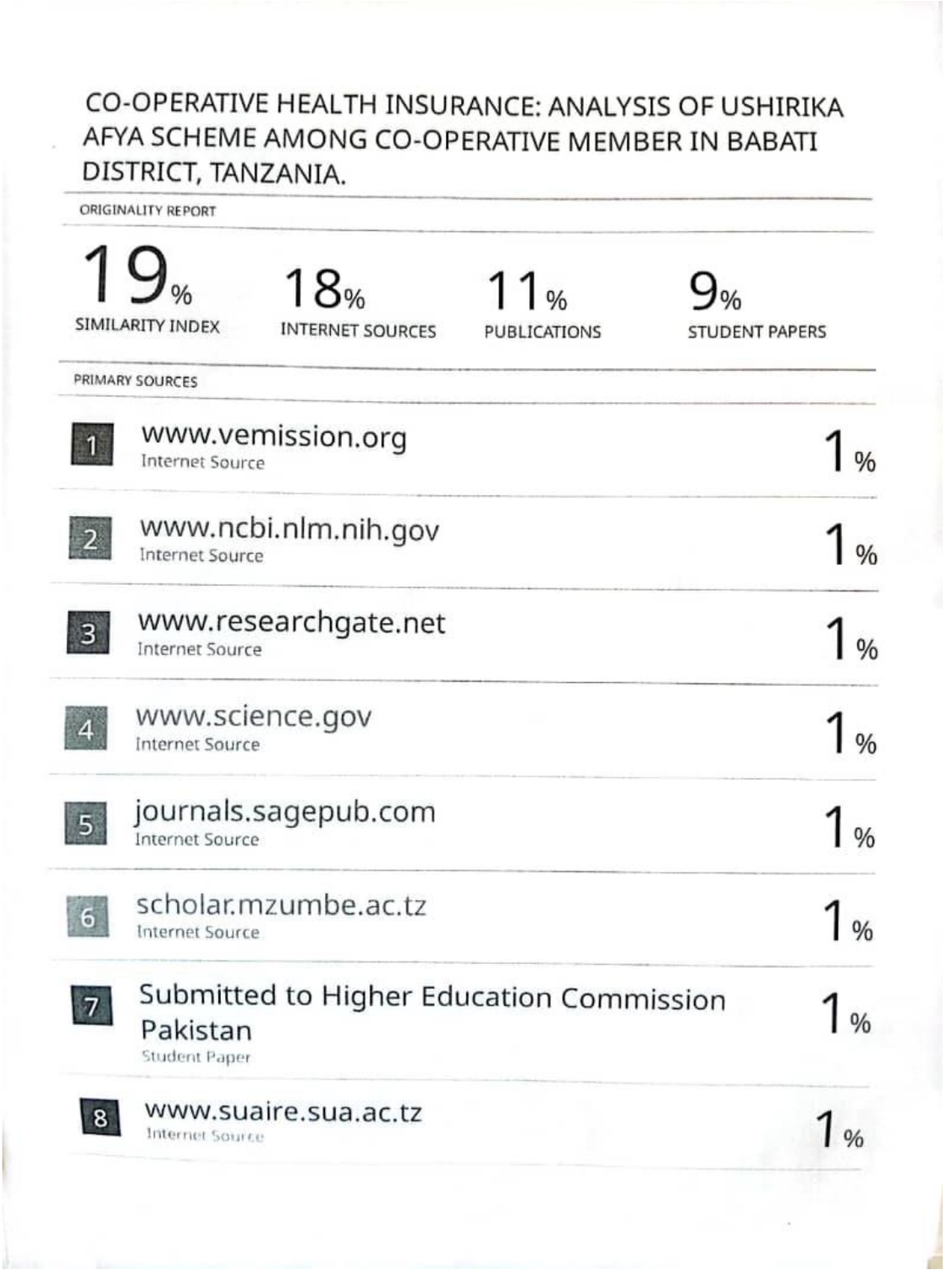

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CO-OPERATIVE HEALTH INSURANCE: ANALYSIS OF USHIRIKA AFYA SCHEME IN BABATI DISTRICT, TANZANIA.

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Abstract

Ushirika Afya scheme plays a crucial role in improving and protecting Cooperative members in health issues in the Agriculture sector. The main objective of this study was Co-operative Health insurance, analysis of Ushirika Afya scheme among Co-operative members in Babati, Tanzania. The specific objectives were to analyse Socio economic and demographic characteristics of co-operative members in Ushirika Afya scheme; examine the perception of Co-operative members towards Ushirika Afya scheme and examine the key determinants of members engagement into Ushirika Afya scheme. The study adopted a cross-sectional research design. The target population of the study was 1750 co-operative members who are in the Ushirika Afya scheme in the AMCOS at Babati district, Manyara region Tanzania and a sample size of 300 respondents. The study gathered both quantitative and qualitative data. The study recommends that AMCOS should tailor their strategies on youth and services based on their needs. The study recommends that AMCOS and NHIF should invest in providing high-quality training and educational programs for cooperative members in the Ushirika Afya scheme.

Keywords: *Ushirika Afya scheme, Co-operative society and Cooperative Health Insurance.*

1.0 INTRODUCTION

Health insurance is attracting more and more attention in low and middle-income countries as a means of improving health care utilisation and to protect households against impoverishment caused by out of pocket medical expenditures. The World Health Organization and the World Bank have continuously suggested reducing out of pocket payments and promoting universal health coverage. Universal health coverage means that all people have access to the full range of quality health services they need, when and where they need them, without financial hardship (WHO,2019).

In Africa, countries with national health insurance are gradually increasing (WHO,2019). However, the percentage of the population enrolled in health insurance remains low. Many African countries have enrolment rates below 10% with the notable exceptions of Rwanda which reached enrolment rates of about 90% in 2015 (Cebul R. et al, 2011) while Ghana had an enrolment rate of 56% in 2014 (Amu et al., 2018). Hence, Ghana and Rwanda are among the very few countries in Africa where enrolments are mandatory for the entire population (McIntyre et al,2018).

Tanzania, like other East African countries, established the National Health Insurance (NHIF) in 1999. Initially, the schemes aimed to cover all public servants, their spouses, and children or dependents not exceeding four in number (URT, 2018). In 1996, Tanzania piloted a Community Health Fund (CHF) which was later scaled up countrywide after showing promising results. The CHF is a voluntary prepayment scheme that primarily provides access to primary care services. In 2011, the Tanzanian government decided to reform the CHF and introduced an improved Community Health Fund(iCHF). The iCHF included additional services such as x-rays, ultrasounds, and in-patient services including major surgery from both hospital levels (District and Regional). iCHF also simplified the enrolment process by using a mobile application and insurance management information system. The government target was for at least 70% of the population to be covered by National Health Insurance Fund NHIF and iCHF by 2020 which are the two main public insurance schemes. The total population of 24% is covered by CHF and 9% under NHIF (Tungu et al., 2020). Since inception of NHIF beneficiaries has increased from 691,773 in the year 2001/2002 to 4,403,581 in the year 2020 which is only 8 % of the entire Tanzanian population (NHIF, 2020)

The government through the National Health Insurance Fund (NHIF) created a unique voluntary health insurance scheme for co-operative members namely “Ushirika Afya” in Kiswahili. The “Ushirika Afya” is a voluntary health insurance scheme designed to serve co-operative members who have no formal and conventional access to health insurance (Nzowa et al.2023). For other individuals employed in the formal sector health insurance is mandatory for all workers but AMCOS by-laws was changed to make it mandatory to all members so as to ensure health protection in farming activity. The difference between these two insurances is that Ushirika Afya scheme members are paying through their co-operative while for public and private sector premiums are remitted directly to insurance schemes or companies as employers deduct from their salaries (ILO,2021). The “Ushirika Afya” scheme was primarily designed for farmers in the agricultural sector to serve members of agricultural and marketing co-operative societies (AMCOS). However, members of other forms of co-operatives can also join the scheme. “Ushirika Afya” acts as a supplementary scheme for co-operative members employed in the formal sector and has a statutory health insurance cover.

Currently about 250 AMCOS in Tanzania are in full practice of the Ushirika Afya scheme (TCDC ,2022). The adoption of Ushirika Afya through AMCOS is a welcome development that seeks to provide affordable health care to a larger segment of the population. With this system in place members are able to access quality health care regardless of their income level. Co-operative societies have adopted the Ushirika Afya scheme to help and provide affordable health care to their members. The idea behind health insurance is to create a risk-sharing system that spreads to the insurance companies and the beneficiary of health care leading to health care accessible to a larger number of people. By pooling resources together members are able to contribute towards the health care needs of the group and in turn are able to benefit from the shared resources made available.

Ushirika Afya insurance scheme is working through partnership between Agriculture marketing co-operative society and banks such as Tanzania Postal Bank (TPB), National microfinance bank (NMB) and CRDB bank which signed the contract with the Cooperative Union all over the Country. NHIF charges 76,800/- per head for AMCOS members who accept the Bank's offer (NHIF, 2020). Bank pays for AMCOS members immediately after members join a scheme for the health cover and collects back its

money when farmers harvest in the next harvest season. This new service gives room to beneficiaries to offset their debts after selling their farm produce in the following harvest season.

Ushirika Afya insurance facilitates and enables members to access any type of medical services including major surgeries and full treatments for serious health conditions including cancer and dialysis services for those facing kidney complications at any health facility in Tanzania mainland. These processes ensure universal health care for smallholder farmers who are in agriculture marketing and their main economic activity is farming.

2.0 LITERATURE AND THEORETICAL REVIEW

2.2.1 Theory of Planned Behaviour

This study was guided by the theory of Planned Behaviour (TPB) as the leading theory and the social capital theory (SCT) as the supporting theory. Theory of Planned Behaviour was proposed by Ajzen (1991), It describes that the intention to start an undertaking is influenced by different beliefs grouped in three categories. The first one is personal attitudes towards insurance creation and joining in groups behaviour which refers to whether people have a positive or negative perception about this behaviour (Felicia et al., 2013; Tesfayohannes, 2012; Tundui, 2012; UDEC, 2002). The second is subjective norms which consist of the perceived social pressure to do insurance business including parental role modelling, cultural obligations and opinions of important people and others. The third one is perceived control which includes self-efficacy or ability to perform the behaviour of interest. This implies that a high sense of self-efficacy will indicate a higher probability to take the decision to join the insurance business process (Adesina, 2011; Green, 2014; Upton, 2013).

Generally, the theory gives emphasis on the role of intention (Katundu & Gabagambi, 2016; Sahinidis, Vassiliou, & Hyz, 2014) which is assumed to capture the motivational factors that influence behaviour. Intentions are indications of how hard people are willing to join health insurance and how much of an effort they are planning to exert to perform the behaviour (Ajzen, 1991). Therefore, the intention of Co-operative members to join in the Ushirika Afya scheme will be determined by a society or individual beliefs and attitudes towards Ushirika Afya services. Nevertheless, other external

factors such as co-operative by laws and politics do influence cooperative members' decisions (Green, 2014). In explaining the relationship between behaviour intentions and actual behaviour of an individual, TPB is relevant to Ushirika Afya Scheme because it remains open to exogenous factors that may play a role in the development of beliefs and attitudes (Fayolle, Gailly, & Lassarc-Clerc, 2006). Decision to join in Cooperative Health insurance is relevant patterns of behaviour which lead to the creation of different cultural values in co-operative societies, some of which influence the decision to join ushirika afya scheme**.**

2.2.2 The social capital theory.

The social capital theory as proposed by Putnam (1995) refers to features of social organisation such as trust, norms and networks that can improve the efficiency of society by facilitating and coordinated actions. Social capital brings people together who have a common bond and enables groups to leverage resources, ideas and information from formal institutions beyond the community (Woolcock, 2001). Health care seeking behaviour requires individuals with a common bond that is a co-operative society built on a foundation of trust and norms to seek affordable and friendly health insurance depending on the beliefs of the networks.

Trust and perception were a sense of personal safety in a community group especially Co-operative Society and in community organisation and seen on number meetings attending and voting participation based on by-laws of the group. Norms and social trust facilitate coordination and cooperation for mutual benefit of Co-operative members in the Ushirika Afya scheme.

This study confines itself to social capital theory on the element trust and perception. Trust and perception of co-operative members was analysed to see how it dictates and regulates bonding and capabilities to use Ushirika Afya scheme insurance among co-operative members. The adoption of the trust and perception element is based on Putnam’s argument that social capital is the degree of trust and perception between individuals that facilitates their actions and collaborations for mutual gain (Putnam’s 1995). In Tanzania co-operatives have gone through different apogees and at a time co-operative were very strong and several initiatives through these institutions were successful. There was a time when co-operatives lost their direction due to various

reasons such as malpractices and embezzlement among leaders. This was when co-operative members were marginalised and lost trust and hope. However, in the 1980s, co-operative revived and gained its lost glory. Following that revival co-operatives have been assigning responsibilities to various schemes such as Ushirika Afya to speed up economic development and improve members' welfare (Nzowa et al.2023).

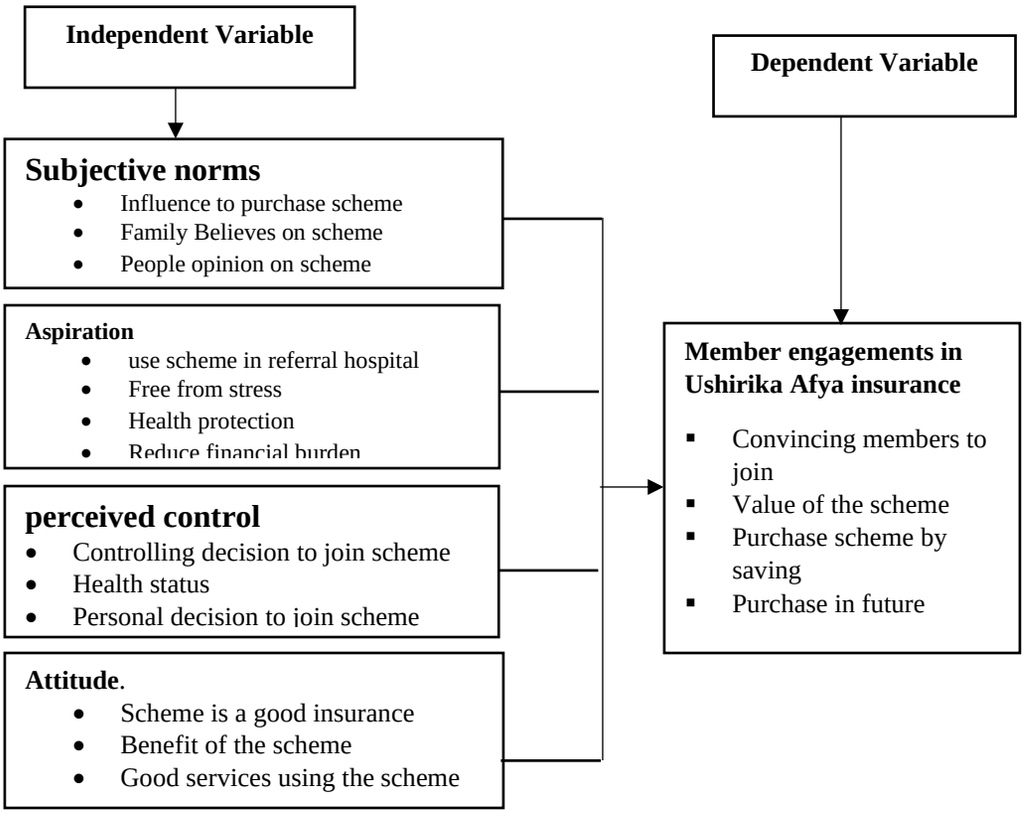


Figure 2: Conceptual framework.

3. 0 RESEARCH METHODOLOGY

This study adopted cross-sectional descriptive research design and qualitative design. The cross- sectional design provides the chance to study and access the required data easily and the downstream services from different actors (Magigi 2015). Also, it provided a good chance for researchers in data collection and making analysis hence come out with the result which helps to reach to conclusion and necessary recommendation. The information collected using this design will provide a meaningful and accurate picture of the Ushirika Afya scheme.

3.1 Geographical Coverage.

The study was conducted at Babati District in Manyara Region of Tanzania. The district is crossed by the main road of Arusha and Dodoma, having 20 wards. The study will focus on two wards named Gallapo ward and Dareda ward which are almost 10 km each from Babati district headquarter. The study area was chosen because of the availability of 56 Agriculture and marketing co-operative societies (AMCOS) that are in the Ushirika Afya scheme. It accounts that number of co-operative members using health insurance to the end of financial year from July 2021 to September 2022 which are 1750(population for study) from AMCOS and total number of households is 20,341 (Babati district coordinator of Community health Fund 2021 and District cooperative officer report). based on the argument by Singh (2022) that a study area should be chosen based on its ability to provide the required data.

3.3 Target Population

The target population of the study was 1,750 co-operative members in the Ushirika Afya scheme in Babati District. The co-operative members in the Ushirika scheme in the AMCOS were the unit of analysis.

3.4 Sample Size and Sampling Techniques

3.4.1 Sample Size

In determining the sample size, the basic rule was the larger the sample the better. Leedy (1984) subject to cost and human resource constraints. The sample size of the studying population was considered to study a small population in depth insight of study phenomena which describe the reality to provide the lesson and experience to others for learning. Using Slovenes formula N=1750 error of tolerance e=0.05. therefore, sample size is obtaining as:

$$n = \frac{N}{1+N(\varepsilon)^2}$$

Whereas n = number of sample size,

N = Population size

ε = margin of error

$$n = \frac{1750}{1 + 1750(0.05)^2} = 326$$

Thus, the sample size was 326 co-operative members in the Ushirika Afya scheme.

3.4.2 Sampling Techniques

The study adopted stratified purposive sampling, proportional sampling and simple random sampling. Purposive sampling techniques were used because samples of co-operative societies using Ushirika Afya **were** members in the ushirika afya scheme. Proportional sampling was used to allocate respondents from each AMCOS using the Ushirika afya scheme. To ensure that the sample is a true representation of the entire population and bias are minimised. Simple random sampling was used to select participants into the study. The study relied on referrals made by respondents to get more respondents that are involved in a Ushirika Afya scheme. Key respondents were co-operative members in the ushirika afya scheme and co-operative board members.

3.6 Data Collection Methods

3.6.1 Surveying method

Data from the primary source was collected through a survey questionnaire that contained open ended questions. The survey questionnaire which were originally in English was translated into Kiswahili, and directly administered by the researcher to provide any clarifications where needed.

3.6.2 Focus Group Discussion

The study conducts four focused group discussion (FGD) in four purposeful selected AMCOS. Each focus group consisted of 9 participants comprising. The FGD was divided into four groups Co-operative members in Ushirika Afya Scheme. According to Howitt (2019) advise that the FGD size should enable each participant the opportunity to give detailed responses without feeling the pressure to share time with others. The three selected AMCOS was Gallapo, Sayuni and DACOFA these are AMCOS with highest numbers of members using ushirika Afya scheme.

3.6.3 Key Informants

The study used key informants whereby individuals who have experience and knowledge about Ushirika afya scheme such as Agriculture Marketing Co-operative

Society (AMCOS) leaders and staff were interviewed to collect detailed information of the study.

3.6.4 Documentary Review

The study collected data from secondary sources by reviewing membership lists of AMCOS to establish and identify members who are in the Ushirika scheme according to the laws of the co-operative. It reviewed the general meetings attendance register to identify the type of members that usually attend the meetings. Annual income reports also were reviewed to identify the contribution of members in the Ushirika Afya scheme.

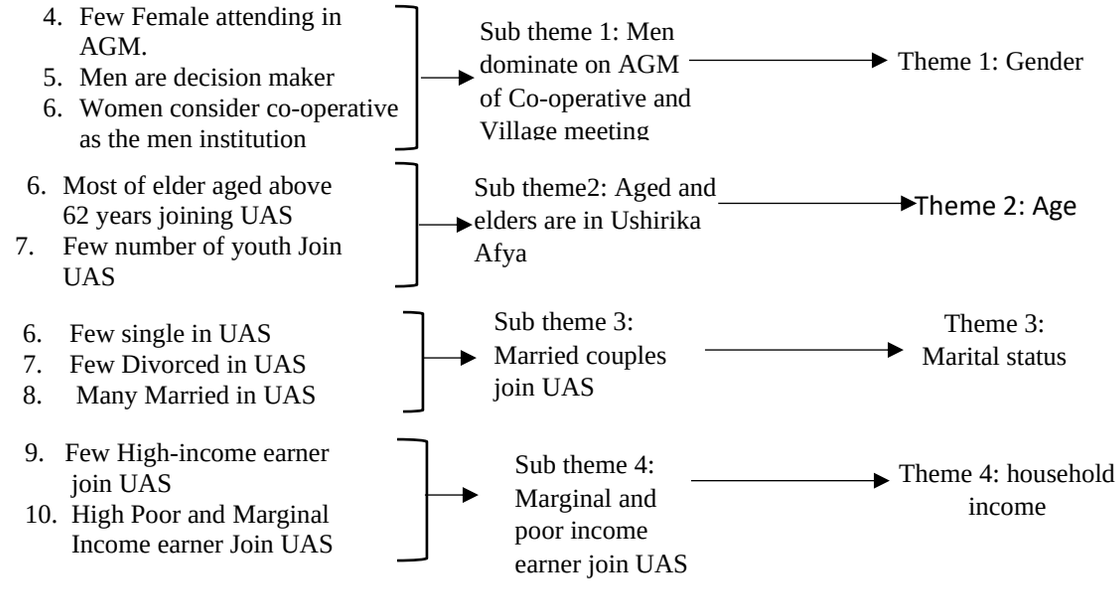
4.0 RESULT AND DISCUSSION

4.1 Socio-economic and demographics characteristics of Co-operative members participating in Ushirika Afya Scheme.

The study applied thematic analysis and descriptive analysis to describe the Social economic and demographic characteristics of Cooperative members participating in Ushirika Afya Scheme. The demographic characteristics include religion, age, gender, occupation, level of education, marital status, household size, economic activity and income level.

4.1.1 Thematic Analysis results.

Figure 5: Thematic Analysis from codes to analytical themes.



Key: UAS- Ushirika Afya scheme

AGM- Annual General Meeting

4.1.2 Descriptive result of Socio-economic and demographics characteristics of Co-operative members participating in Ushirika Afya Scheme.

The sex of respondents, the findings show that 218 respondents (72.7%) were males while 82 respondents 27.3% were females. The findings show that most of the respondents participating in the study were males. The age group with the highest participation was the elders from age 62 and above category, which are 112 respondents accounting for 37.3%. While the youth comprising the age between 18-39 were 56 respondents (18.7%). In the case of education level, the findings show that of the 198 respondents 66% had primary education, 66 respondents 22% had secondary education, 9 respondents 3% had tertiary education while 27 respondents 9% had university education. The marital status of the respondents provides insights into their family and social dynamics, which could influence their participation in the Ushirika Afya scheme. The majority of the participants were married, 82.3% of the total Single individuals constituted 10% of the respondents, while divorced and widowed respondents made up 4% and 3.7%, respectively. Regarding income, it was observed that Co-operative members in the Ushirika Afya scheme who have a monthly income range from 2500- 100,000 are 174 that is 58%. Regarding the economic activity the majority of cooperative members in Ushirika Afya scheme are smallholders' farmers constituting 245 respondent that is 81.7%, while driver 4 respondent that is 1.3% are in Ushirika Afya scheme.

Table 7: Demographic and Socio-Economic Characteristics of Respondents (n=300)

Characteristics	Attributes	Frequency	Percent
Sex	Male	218	72.7
	Female	82	27.3
Age	18 -28	20	6.7
	29-39	36	12
	40-50	50	16.7
	51- 61	82	27.3
	62-72	90	30
	73 and above	22	7.3
Education	Primary	198	66
	Secondary	66	22
	Tertiary	9	3
	University	27	9
Household Size	1- 3	57	19
	4- 6	124	41.3
	7- 9	88	29.3
	10 and above	31	
	Married	247	82.3
	Single	30	10
	Divorced	12	4
	Widow and widower	11	3.7
Income (Tsh	2500- 100,000	174	58
	100,000- 300,000	54	18
	300,000- 700,000	43	14.3
	700,000 and above	29	9.7
	Small Businesses	37	12.3
	Driver	4	1.3
	Mechanical Workers	5	1.7
	Food Vendors	9	3
	Farmer and Herdsman	245	81.7

Source: field data (2023)

4.1.3 Discussion on Socio-economic and demographics characteristics of Co-operative members participating in Ushirika Afya Scheme

Descriptive and thematic analysis indicate that the number of males enrolled into Ushirika Afya scheme is higher as compared to the number of females because of culture on gender role belief that the role of Women is taking care of children and men are the one participates in AMCOS meeting and other meeting held in the village.

> *"Majority of members in our cooperative are men because in our society men are the one making decisions in everything in our family and men are the one participating in Cooperative meetings and the decision to join ushirika Afya insurance is made by male as a member*

of AMCOS. Women especially in our area consider co-operative as the men institution" (FGD, Sayuni AMCOS, 26 August 2023)

The findings also supported by Mwinukaa, (2022) reported on the study of uptake of health insurance and its associated factors found that men were more likely to attend group and village meetings than women. The study attributed low participation of women in uptake of Ushirika Afya Insurance through AMCOS because culture required them to stay at home and provide care to the family**.**

The results entail that the elderly's enrolment of Ushirika Afya scheme is higher compared to youth because elders are at high risk of ill, indirect vulnerability and higher medical consumption. These statistics was also described during the FGD session whereas it was described that:

"Most of our members are elders ages range from 62 and above, they join in Ushirika Afya scheme because at elder age to see doctor for check-up and taking medicines is a normal thing, without Ushirika insurance you can died because of not attending by doctors and not getting medicine therefore Ushirika Afya is our saviour in health issues" (FGD, Gallapo AMCOS, 5th august 2023).

These findings were supported by Aman and Thomas (2021) who found most older adults from 61 and above visit hospital emergency rooms at higher rates than most other age groups. Old age is associated with ill health and thus possession of health insurance will enable easy and timely access to health services when the need arises.

Also, the study suggests that a substantial proportion of the co-operative members in Ushirika Afya might have basic literacy and numeracy skills, which could be relevant for their participation in co-operative activities that the level of primary education was up to health insurance. The above findings are in line with key informants who asked about social demographic characteristics of AMCOS members who use Ushirika Afya, they said that;

"Most of our Ushirika Afya scheme members have education level up to standard seven because they cannot obtain any other form

> *of health insurance because they are not employed by government or private sector there are farmers , however currently we are receiving members with degree such as teachers and retired government officers who are interested in joining AMCOS so that they can pay for Ushirika Afya scheme and obtain other services" (Key informant, Sayuni AMCOS, 20 August 2023).*

These findings also supported by Mwinuka and Elizabeth (2022) who conducted a study on uptake of health insurance and its associated factors among informal sector workers the study found a significant relationship between farmers in Co-operative society with primary education and formal workers. Co-operative members with low levels of education were likely to take up health insurance because they have no other choice of insurance which is favourable to them, unlike highly educated farmers who could get health insurance services elsewhere.

The study suggests the Co-operative members who use health insurance schemes are low- and marginal-income earners. The above findings are in line with key informants who asked about income characteristics of AMCOS members who use Ushirika Afya, they said that;

> *"Most of our Ushirika Afya scheme members they grow coffee and there are income is low they pay only Tsh 66,800/ and our cooperative society add Tsh 10,000/ so that they can get insurance card, sometimes our cooperative pays all amount to NHIF to the members who is not able to pay on time and start to deduct that amount from the members when selling his/her coffee or other crops through our co-operative Society." (Key informant, DACOFA AMCOS, 20 August 2023).*

This finding is contrary to Hussien and Azage (2021) revealed that low income earners in the rural area specific small holder farmers cannot purchase premium health insurance because of low level of their income.

Finally, the results of this study suggest that the co-operative members who use Ushirika Afya scheme are small holder farmers because the Ushirika afya scheme was

designed to fit the needs of smallholder farmers who are in AMCOS. These findings supported by Nzowa, Nandonde and Seimu (2023) they found that the “Ushirika Afya" scheme was primarily designed for workers in the agricultural sector to serve members of agricultural and marketing co-operative societies (AMCOS).Ushirika Afya scheme acts as a supplementary scheme for co-operative members employed in the formal sector and has a statutory health insurance cover.

4.2 Perception of Co-operative members towards the Ushirika Afya scheme.

The second objective was to identify the perception of Co-operative members towards the Ushirika Afya scheme. The study applied thematic analysis to uncover the perceptions of cooperative members on Ushirika afya. Eight open ended questions were asked to eight (8) focus groups whose profile is summarised in table 2.

Table 8. Focus groups sociodemographic characteristics.

Characteristics	Attributes	n	%
Sex	Male	20	60
	Female	16	40
Age	18 -42	6	10
	43-60	8	20
	50-59	8	20
	60 and above	14	50
Marital Status	Single	4	5
	Married	25	70
	Divorced	2	5
	Widow	5	20
Education	Primary	15	66
	Secondary	9	9
	Tertiary	10	22
	University	2	3
Household Size	1- 3	10	19
	4- 6	21	42
	7- 9	3	29
	10 and above	2	10
Income (Tsh)	2500- 100,000	21	58
	100,000- 300,000	10	18
	300,000- 700,000	3	14.3
	700,000 and above	2	9.7
Economic Activity	Small Businesses (Petty Traders)	5	12.3
	Driver (Car ,tractor and Motorcycle	2	1.3
	Mechanical Workers	1	1.7
	Food Vendors	2	3
	Farmer and Herdsman	26	81.7
Occupation	Employed	2	13
	Self employed	23	66
	Labour	1	4.3
	Housewife	1	2.7
	Unemployed	4	4
	Family owned business	2	3.7
	Retire	3	6.3

As indicated in table 2, the majority of participants in FGs were male, married/partnered, aged between 50 to 60 years, with primary level of education and

reported a family monthly income of TZS 2500 to 100,000. The FGD data was transcribed and analysed thematically. 15 codes were generated from Verbatim quotations (See code book in appendix iv). The codes were then synthesised to generate seven (7) sub themes and four (4) themes as shown in the thematic framework presented in Fig.2.

Content analysis revealed four main themes: Fear of death, Health concern, Ushirika afya as Security for Health issue, and Gender in balance on the scheme. Among these, sub-themes regarding Ushirika Afya service, individual vulnerabilities about risky, health access, and procedure to join on Ushirika Afya scheme are most prominent. Figure 2 shows all themes discussed in all groups and provides information regarding the themes identified in the study by the number of quotations associated with the theme.

Table 9: Content analysis of the focus groups.

Theme/Category	**Number of How Many Focus Groups Mentioned the Category**	**Number of Quotations Associated to Each Theme**
Age		
code 1: Most of elder aged above 62 years joining UAS	2	5
code2: few numbers of youth join UAS	3	4
Household income:		
Code 3: Few High-income earner join UAS	1	12
Code 4: High Poor and Marginal Income earner Join UAS	3	7
Educational Level		
Code5: High number of primary and teary education are in Ushirika Afya	3	8
Code6: Few numbers of university and college education in Ushirika Afya	1	9
Gender in balance		
Code 7: Few Female attending in Annual general Meeting		
Code 8: Men are decision maker Women consider co-operative as the men institution	1 3	8
Marital status		
Code 9: Few single in Ushirika Afya Scheme	1	5
Code 10: Few Divorced in Ushirika Afya Scheme	1	2
Code 11: Many Married in Ushirika Afya scheme	2	8
Fear of Death		
Code 12: cooperative members psychological issue on Ushirika afya	3	12
Health concern		
Code 13: importance of having Ushirika Afya insurance	3	10
Security		
Code 14: Taking care health risk	2	5
Code15: saving money on health care issue	3	7

Note: A total of eight focus groups were conducted with community members (n = 36)

4.2.2 Theme 1. Fear of death due to Chronic Diseases.

This theme addresses the participants' fear of death due to chronic disease and health insurance helps them to reduce worries, these conditions impact cooperative members and relatives, these diseases require high cost and daily check-up in big hospitals like KCMC. Participants from nearly all focus groups defined fear of death as long-lasting diseases that cannot be cured on health centres in the village; it required following their treatments outside the Manyara region. In many instances, participants also mentioned different situations where the Ushirika Afya scheme serves their lives in a big Hospital through Big operation. Several participants mentioned the Ushirika Afya scheme to serve their lives. Participants also mentioned medical services they receive through Ushirika Afya insurance. Other important themes for the groups included access to the Ushirika Afya scheme, reducing worries and bringing happiness to co-operative members (see Table 2). Some participants showed concern in regard to being happy with health services from the scheme.

One of the most relevant themes related to fear of death, specifically bringing depression to family members if there is no Ushirika Afya. One of the participants stated:

> *"without Ushirika insurance through co-operative you can died because of not be able to attending hospital getting medicine therefore Ushirika Afya is our saviour in health issues"*

Another participant from a different group expressed while crying:

> "*These illnesses have no cure in health centre in the village, but with treatment through using Ushirika Afya scheme in Big hospital like KCMC we can continue living and being happy again, and I'm grateful to my Cooperative and government if not the insurance I will be died…….crying when remember how Ushirika Help her"*

4.2.3 Theme 2: Health concern due to Illnesses.

This theme addresses the participants' perceptions towards ushirika afya scheme and the importance of the scheme. This importance may be related to chronic illness and the cost of health services. All groups discussed their concerns on check-ups for their health when they feel sick and the majority were elders and aged cooperative members

Some participants discussed concerns regarding changing to a health centre using Ushirika afya insurance if they hear about a new medical doctor programme in another District. Health check-up using the Ushirika Afya scheme, medication and other medical tools offered bin Ushirika Afya scheme . One participant stated:

> *"Using ushirika afya scheme I'm always going for check-up without any cost and at any hospital, last time I was at KCMC Hospital in Moshi for eye check-up and it was free if you have ushirika afya insurance"*

Another participant from a different group expressed:

> "*when there is medical doctor programme outside the region ushirika Afya Scheme help me for paying all the check-up, last time we have a medical team at Hydom Lutheran centre where I obtain my health check up and get some medication for free but my friend pays a lot of money because he didn't have Ushirika afya Insurance"*

In another group, a participant commented:

> "*The perception about the Ushirika Afya scheme is our health helper when it comes to health check-ups. Villagers know our co-operative society AMCOS because of Ushirika Afya Insurance and for sure this insurance is our helper. I think that it is time for villagers to get educated about Ushirika Afya insurance so that we can join together with all the villagers."*

4.2.4 Theme 3: Security to a Co-operative member

This theme addresses the participants' perceptions about Ushirika Afya scheme as health security as well as health security if there is a farming accident, and security when travelling outside the region. Most groups discussed security factors, risk factors and protectors in daily life. Some participants mentioned these themes when discussing the advantages of the Ushirika Afya scheme.

> *"Ushirika Afya scheme was my security when comes to health, last year I travel to Arusha to see my son and I got sick on the way but because I have my Card in my pocket I just run to the*

hospital and get medicine and check-up, This Ushirika afya ID is my security guard in health issues"

4.2.5 Discussion on the Perception of Co-operative members towards Ushirika Afya.

Focus group discussions promote a conversation about perception of Cooperative members towards Ushirika Afya such, Ushirika afya scheme is a protection of Co-operative towards death and it was only for co-operative members and also a government established scheme, these accompanied by themes regarding fear of death issues. The most mentioned topics were Ushirika Afya scheme was for sick people and old aged co-operative member and the majority of Ushirika afya scheme are married couple, aged members, low income earners, family with high number of household size because are the vulnerable group in the community when come to health issue. These findings also supported by Sambuo (2022) reported that Tanzania has made efforts through its regulatory organ and other agencies to ensure farmers in Co-operative society have access to health insurance services. The National Health Insurance Fund (NHIF) in Tanzania initiated a co-operative health program known in Kiswahili as *Ushirika Afya.*

The findings have demonstrated that there were high number of male in Ushirika afya scheme and married couple these because married couple they cannot migrate easily These findings supported by Reka and Steven (2019) in the study of farmer health insurance an innovative solution for other Americans found most members of AMCOS were married couples and these people are more enrolled in health insurance for the family security in health risk issues compare single and divorced members who rating very low on health insurance matter because their movable compared to other groups Status

The results suggest the Ushirika Afya scheme is for Health protection of co-operative members on their dairy farming activity, reduce worries on health issues for cooperative members and improve performance of farming activity to co-operative members in AMCOS whose majority are farmers.

4.3 Determinants of members' engagement into the Ushirika Afya scheme.

4.3.1 Finding of the Determinants of members engagement into Ushirika Afya scheme.

Data were analysed through inferential statistics for detailed analysis. Reliability using Cronbach Alpha was tested before continuing with other steps. Inferential statistics was done stepwise: Factor analysis using Principal Component Analysis (PCA) was conducted to reduce redundant items and to increase the reliability of each aspect. According to Jain (2019) the exploratory analysis procedure is a powerful tool that can address a wide range of theoretical questions Thereafter, the Structural Equation (SEM) by using SPSS AMOS version 26 software was used in order to test the hypothesis in the model.

The main goal of SEM is to find the extent to which a hypothesised model fits or adequately describes sample data. SEM was chosen because it tests multiple regression models in a single analysis at once and has become popular technique to the researchers in social sciences and it combines factor analysis and linear regression (Kowalczyk et al., et al, 2013). It also addresses the problem of measurement error by removing it and therefore having a good estimation of relationship. SEM path modelling using AMOS is appropriate to carry on the confirmatory factor analysis which is more reliable and valid (Ryan & Tatum, 2013) by combining principal components analysis with other regression.

The two stages were involved in application of SEM as one of the requirements of the measurement model which includes the co-operative member in Ushirika Afya reliability, internal consistency and discriminate validity of the measures and (2) the assessment of the structural model.

4.3.2 SEM Goodness-of-fit (GOF).

These indices try to measure the distance or difference between the sample covariance or correlation matrix and the fitted covariance. Hair, *et al.* (2006). The goodness-of-fit is an indication of whether the established SEM reflects the Data situation well. A poor goodness-of-fit renders the results unreliable. Thus, model evaluation should be performed when interpreting the results of SEM. There are various goodness-of-fit indices hence it is not easy to determine which index to use for an evaluation since each

evaluated different aspects of model. Therefore, in order to remedy that problem few researchers (Jessie, 2021; Kane &Ahn,2021) have proposed guidelines that have some support based on simulations such as Hu and Bentler (1999). For good-of-it, they suggest that Root Mean Square Error of Approximation (RMSEA) value should be close to 0.08 or below, Goodness-of-Fit Index should be closer to 0.95 or above, Goodness of Fit index and Comparative normed Fit Index (CFI)/Tucker-Lewis Index (TLI) should be close to 0.95 or above. They then concluded that when these values are met it may not be necessary for researchers to provide further statistical justification for their model fit. The results in table 3 show that the fit indices of the model were p=0.000, RMSEA= 0.71, CFI=0.958, TLI= 0.916, GFI=0.974. The other relevant fit indices indicate a good overall fit as the TLI is closer to 0.95, GFI, CFI exceed 0.95 and the RMSEA is below 0.90.

Table 10: Goodness of fit indices

Model	RMSEA	CFI	TLI	GFI	GFI
Default model	0.071	0.958	0.916	0.974	0.974
Saturated model	-	1.000	-	1.000	1.000
Independence model	0.246	0.000	0.000	0.657	0.657

4.3.3 Multicollinearity, reliability and validity test

To assess the multicollinearity problem, variance inflation factor (VIF) was inspected. Table 4 indicates that all VIF are below 10 as suggested by Chin (2010) meaning that multicollinearity problem does not exist. Cronbach ‘s Alpha (Cronbach, 1951) is one of the widely used measures of reliability in the social sciences (Loewenthal and Lewis,2018; Diedenhofen and Musch, 2016; Bonett and Wright, 2015; Cronbach, 1951). Reliability of data was conducted in order to assess the internal consistency of the variable through Cronbach ‘s Alpha and was significant at an Alpha of 0.939. Then, the variable tested scored the reliability above 0.7 which indicates a very strong consistency among variables (Prajogo and Sohal, 2003). The results gave support to use factor analysis to determine whether some items could be removed and to capture the meaning of the framework accurately. Bartlett ‘s test of sphericity and Kaiser-Meyer- Olkin (KMO) measure of sampling adequacy were tested in order to evaluate the appropriateness of the data for factor analysis. Bartlett ‘s test was significant at $p < 0.001$ level, indicating that there is association among variables since the matrix is not

an identity matrix. Besides, the KMOs in Table 4 are higher than the threshold of 0.5 (Darko *et al*., 2017; Williams, Onsman, and Brown, 2010), indicating that sample is acceptable for factor analysis.

Factor Analysis was performed through principal components for the perspectives with a total of 22 items/indicators by using principal component extraction and Varimax rotation. The eigen value for each aspect was above 1.00. Perceived behaviour control gave 3 indicators explaining a 53.67% of total variance whereas subjective norms 2 indicators explaining a 62.811% of total variance. For the internal business there are five indicators explaining a 52.262 % total variance whereas Attitude 2 indicators explain 52.554% total variance. The total variance explained is within the acceptable range of 50% for Aspiration. The entire factor loadings were above 0.50 which is acceptable (Hair *et al*, 2010), hence no item was deleted at this stage.

Table 11: Testing for Multicollinearity and Reliability of data.

Aspect	**Cumulative variance**	**Cronbach's Alpha**	**VIF**	**KMO**	**Bartlett's Test**
Perceived behaviour	53.67%	0.861	1.499	0.894	P<0.001
subjective norms	62.81%	0.839	1.75	0.854	P<0.001
Attitude	52.26%	0.847	1.655	0.875	P<0.001
Aspiration	50.55%	0.859	1.774	0.87	P<0.001
Overall reliability		0.939			

Construct validity was measured in two aspects that are convergent and discriminant validity. These examine the extent to which measures of a latent variable shared their variance and how they are different from others (Alarcón, Sánchez, and De Olavide,2015). The Composite Reliability (CR) was used in order to overcome some traditional CA deficiencies. The CRs in this study are in an acceptable range of above 0.80. Convergent validity was achieved since the factor loadings were above 0.6. (see Table 5.). The Average Variance Extracted (AVE) from this study as recommended by Buhi et al. (2007) was above 0.5 indicating that convergent validity was fit.

Table 12: Factor loadings, Average Variance Extracted and Composite reliability

Construct	Indicators	Factor loading	VIF	AVE	Cronbach's alpha	Composite reliability
PUS	PUS5	0.781	1.747	0.611	0.841	0.841
	PUS6	0.795	1.851			
	PUS4	0.815	1.942			
	PUS2	0.732	1.539			
	PUS1	0.783	1.673			
Asp	Aspiration7	0.721	1.627	0.573	0.851	0.89
	Aspiration8	0.767	1.773			
	Aspiration5	0.781	1.957			
	Aspiration6	0.758	1.709			
ENG	Engagement5	0.727	1.549			
	Engagement4	0.786	1.879			
	Engagement3	0.723	1.396	0.577	0.817	0.872
	Engagement2	0.71	1.543			
SN	SN7	0.766	1.701			
	SN6	0.774	1.758			
	SN5	0.819	1.879			
ATT	ATT5	0.723	1.633	0.56	0.842	0.884
	ATT6	0.812	2.127			
	ATT3	0.71	1.553			
PBC	PBC4	0.774	1.86			
	PBC5	0.712	1.667			
	PBC6	0.7	1.73			

PUS: perceived usefulness; ASP: Aspiration: ENG: engagement; SN: Subjective norm: ATT: Attitude; PBC: perceived behavioural control;

Discriminant Validity was tested according to Garson (2012) criteria that requires the square root of AVE to be greater than the correlations among the constructs. All square roots of AVE in Table 5. that appear in the diagonal for the model 's constructs are greater than the inter-construct correlations, hence indicate that there is no problem with discriminant validity.

4.3.4 Structural model on determinants of Members engagement in Ushirika afya scheme.

To assess the structural model, two measures were used namely: statistical significance (t- test) of the estimated path coefficient (β), and the coefficient of determination (R2) which explain the ability of the model to explain the variance in the dependent variable which Member engagement in Ushirika Afya scheme and the independent variable are

subjective norm, attitude, aspiration and perceived behavioural control. The hypothesis model was tested by using SPSS AMOS method to confirm the relationship between the constructs within the model. The paths in the model were tested to determine their significance. Therefore, in order to assess the model, the squared multiple correlation (R2) was examined in each construct. Then the significance of the paths was also evaluated, R2 was assessed according to Buhi et al. (2017) suggested that, values of approximately to 0.190 are weak, values of 0.333 are moderate and 0.35 are substantial.

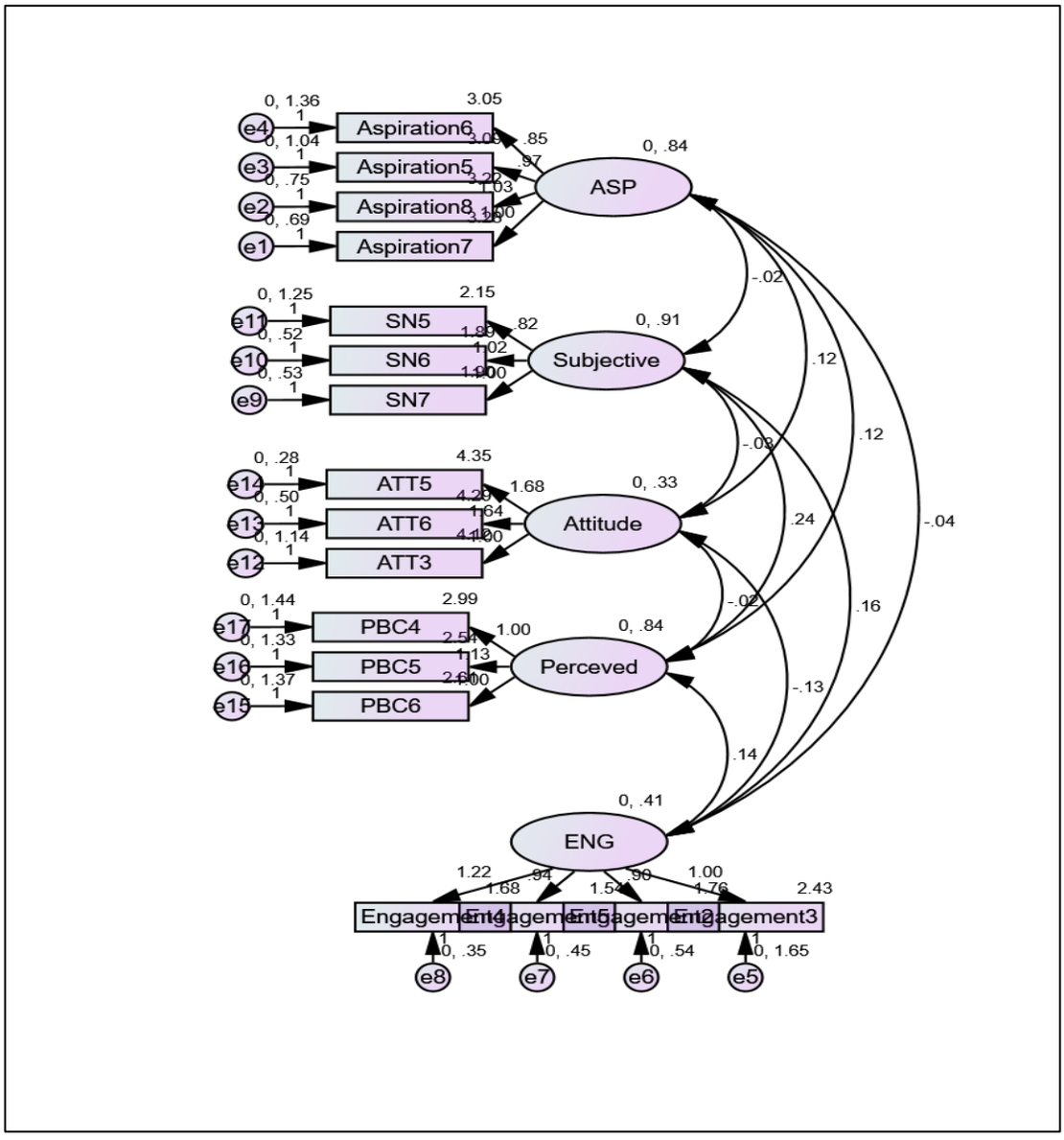


Figure 6: The AMOS SEM results.

4.3.7 Discussion on the determinant of member engagement in Ushirika Afya Scheme

The results showed that there was a significant effect of subjective norm on member engagement on use of the ushirika Afya scheme. The effect of subjective norm on insurance was shown on the PCA and the figure 3 above shows that factor loading of cooperative member engagement was due to influence of other members who have power to influence the decision of members to join Ushirika Insurance and family members believe on the importance of Ushirika Insurance. The findings in this study were supported by previous research conducted by Teo & Lee (2010) who found that attitudes toward usage and subjective norm were significant attribute for individual to engage on use of health insurance. These finding is supported by Asfaw and Johannes (2014) on the study of impacts of Community Health Insurance Schemes on Health Care Provision in Rural Tanzania showed that community insurance schemes member were influenced by community development officer to join insurance so as to advocated community health insurance was important means to reach the poorest of the poor.

The result shows that attitude influenced Co-operative members' engagement on ushirika afya because of ushirika Afya insurance was favourable on health care utilisation and benefit obtained from using Ushirika Afya scheme.

The result found that perceived Control was contributed on member engagement on Ushirika Afya scheme through on improve health benefit of the members and protect and reduce worries on health issue and also to improve their performance on farming activity. The findings in this study were supported by previous research conducted by Teo & Lee (2010) study showed that all three factors attitude, subjective norm, and perceived control had a statistically significant effect on member engagement on Ushirika Afya scheme

5.0 Conclusion and Recommendations

The study concluded that socio and economic demographic characteristics of co-operative members in Ushirika Afya including age, level of education, economic activity, gender marital status and income brought to the fore and adds to the surging studies about Ushirika Afya insurance. The study presents that elder’s enrolment in

Ushirika Afya scheme is higher compared to youth because of low engagement for youth in Cooperative activities. Majority of the household heads were married, Christians, had tertiary education with monthly income of less than Tsh 100 000 and farming was a major income activity.

Regarding the Perception of Co-operative members towards Ushirika Afya scheme, the study revealed that member in ushirika afya scheme think the insurance is for elder people, for sick people, and for poor people therefore there is need of awareness and mind transforming training Among cooperative members and promotion for youth engagement in the co-operative society activities to foster stronger Co-operative society among farmers.

Concerning the determinants of members engagement into Ushirika Afya scheme, the study demonstrated that the co-operative member engagement in Ushirika afya insurance was because of their health status, services when using Ushirika Afya, to covers medical expenses ,reduce financial burden on health services and to reduce worries on health issues. AMCOS and NHIF should thus emphasise the importance of health insurance to cooperative members and these insurance literacy will enable member to know importance of Ushirika Afya scheme.

5.3 Recommendations

The study recommends that AMCOS should tailor their strategies on youth and services based on their need specially by design the mode of payment that will enable them to access the Ushirika Afya scheme because there are also on health risk, AMCOS should consider implementing targeted programs and initiatives that cater to the specific needs and preferences of youth and female groups. Moreover, TCDC as regulator of cooperative society should conduct regular promotion roles specific for youth for the survival of Cooperative society whose majority of members are elders. The government through NHIF should make insurance through Cooperative that is flexible to reflect the socio-demographic features and economic conditions prevailing in farmers who are in Co-operative society so as to contribute to achieve UN development goals.

The study recommends that AMCOS and NHIF should invest in providing high-quality training and educational programs for cooperative members in the Ushirika Afya

scheme. Given that mind transformation training was found to have the most substantial positive effect on perception of cooperative members towards Ushirika Afya scheme, AMCOS should allocate resources to develop comprehensive and favourable own health insurance based on their value and principal of co-operative society and effective training modules on various aspects of agriculture and cooperative management. Additionally, AMCOS should collaborate with other insurance companies and institutions to ensure quality insurance services that can fit the needs of all members regarding age, sex and religion.

TCDC needs to have an organised co-operative Health insurance program that will meet the needs of all cooperative members and non-cooperative members. This program should be designed to meet the needs of each cooperative member to enhance growth and development of cooperative society in Tanzania.

Data collected from this study suggest that more focus should be made in educating or even simply exposing young adults to health insurance earlier in their lives. Introducing health insurance information earlier can help to increase the health insurance literacy rates among young adults and thus increase their confidence when choosing a health insurance plan. The exposure of health insurance information can be done in a general meeting of the cooperative society or in the village meeting and area where youth are available. Focusing on health literacy education and advocacy will not only increase the health insurance literacy levels of cooperative members, it will also allow them to make health decisions that are best for them and their families.

By implementing these recommendations, AMCOS can enhance their relationship with non-cooperative members, especially youth, improve cooperative services, and contribute to the overall engagement of cooperative members in the Ushirika Afya scheme. These measures will not only benefit individual cooperative members but also strengthen the cooperative's position in the community

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