

MOSHI CO-OPERATIVE UNIVERSITY

**IMPACT OF THE QUALITY OF NATIONAL HEALTH
INSURANCE FUND SERVICE ON CUSTOMERS'
SATISFACTION IN BUNGOMA COUNTY, KENYA**

BY

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**A DISSERTATION IS SUBMITTED IN FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS
MANAGEMENT OF MOSHI CO-OPERATIVE UNIVERSITY, TANZANIA**

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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 entitled “**Impact of the Quality of National Health Insurance Fund Services on Customers’ Satisfaction in Bungoma County, Kenya**” in partial fulfilment of the requirements for the award of a degree of Master of Business Management of Moshi Co-operative University.

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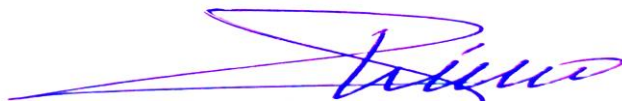
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DEDICATION

I dedicate this Dissertation almighty God and to my family members

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I am deeply grateful to the Almighty God for granting me strength, knowledge, capacity, and the invaluable opportunity to pursue a Master's program at Moshi Co-operative University. My heartfelt appreciation extends to my dedicated supervisors, Prof Baltazar Namwata and Dr. Rashid Chikoyo, whose unwavering guidance made this dissertation possible.

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FIGURE

Figure 1: Conceptual framework on assessing the impact of NHIF service quality on
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LIST OF ABBREVIATIONS

A	: Agree
CFA	: Confirmatory Factor Analysis
CVI	: Content Validity Index
D	: Disagree
EDT	: Expectancy Disconfirmation Theory
FRQ	: Frequency
JIT	: Just-In-Time
KII	: Key Informant Interview
MHCS	: Management Health Care System
MLR	: Multiple Linear Regression
MOH	: Ministry of Health
N	: Neutral
NCD	: Non-Communicable Disease
NHIF	: National Health Insurance Fund
NHS	: National Health Service
NSSF	: National Social Security Fund
PhD	: Philosophy of Doctorate
SA	: Strongly Agree
SD	: Strongly Disagree
SDG	: Sustainable Development Goals
SPSS	: Statistical package for social sciences
TQM	: Total Quality Management
UK	: United Kingdom
VIF	: Variance Inflation Factor

ABSTRACT

Subscribers frequently experience difficulties in receiving services from the National Health Insurance Fund. This study focused on establishing the relationship between service quality dimensions and customers' satisfaction at the National Health Insurance Fund in Bungoma county, Kenya. The study was guided by four specific objectives that were centred on employee empathy, service responsiveness, service reliability and service assurance. The study used Expectancy Disconfirmation Theory to create a framework for evaluating how NHIF members' prior expectations of service quality connect to their actual experiences and overall satisfaction. A cross sectional study approach was used, with a sample size of 364 respondents. Data were collected using Questionnaires, interview guides and documentary review. SPSS version 21 was used to analyse raw data collected from the field ranging from descriptive to inferential. In addition, the study also used thematic analysis to interpret qualitative data. Descriptive statistics involved frequencies, percentages and mean, while inferential statistics involved the use of Pearson's product moment correlation and ordered logistic regression model presenting results using tables. Results indicated that assurance, reliability and responsiveness and employee empathy were all statistically significant but assurance unlike reliability and responsiveness and employee empathy had stronger positive relationships with customer satisfaction. On the other hand, employees' empathy exhibited the least positive significant relationship with customer satisfaction. The study concluded that the quality of NHIF services has a strong and positive impact on customer satisfaction. The study put forth the need for regular auditing at the NHIF department to ensure that employees are accountable for their services. NHIF management should promote public participation and regular feedback to enhance customer satisfaction with service delivery.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background Information of the Study

The wide and pervasive idea of quality service has a big impact on the competitiveness of the company Volkers (2019). Many businesses have implemented improvement principles including just-in-time (JIT), six sigma, total quality management (TQM), and others with the intention of raising income or cutting expenditures. According to Raza *et al.*, (2020), the company can only gain a competitive advantage via quality if its performance in each of the various quality dimensions is equal to the weight that the markets give to those particular dimensions. Rehmani *et al.*, (2020) added that it is time to investigate the nature of the causal links between the many aspects of quality and performance given the widespread acceptance of the quality management paradigm.

Globally, intensified competition due to globalisation has compelled businesses, including health insurance companies, to prioritise service quality in order to gain a competitive advantage (World Health Organization, 2020). In Germany, the health insurance sector has experienced increased competition, coinciding with a shrinking customer base and challenging economic conditions. To establish themselves as the preferred choice, companies must understand and meet customer expectations by delivering excellent service. Studies show that customer satisfaction significantly influences the decision to remain with a particular insurer (Ndebele *et al.*, 2021).

Additionally, it is worth noting that globally, 1.3 billion people lack access to high-quality and affordable medical care. Germany's health insurance system, which dates back to 1883, has expanded over time. However, despite its historical significance, the quality of service provided by the National Health Scheme (NHS) in Germany is perceived to be not satisfactory, leading individuals to opt for private health insurance (Focacci and Perez, 2022). The creation of the NHS in the UK in 1948 aimed to provide universal healthcare funded through general taxation, but issues regarding service quality remain a concern for policyholders (Bowles *et al.* 2023). To address this issue, companies in these countries need to focus on dimensions of service quality, such as responsiveness, reliability, assurance, empathy, and tangibles, to meet customers' expectations and improve the overall service quality of medical insurance schemes.

In many Sub-Saharan African nations, health insurance initiatives primarily focus on a small percentage of the population employed in the formal economy (Mbau *et al.* 2020). Providing health insurance to the informal sector remains challenging due to factors like poverty and the logistical difficulties in collecting payments from geographically dispersed individuals. However, a few African countries have made progress in expanding access to medical care through health insurance. For instance, in Ghana, the National Health Insurance Scheme (NHIS) provides coverage for approximately 95% of the disease burden among its citizens (Nketiah-amponsah *et al.* 2019).

Nonetheless, the scheme does not cover chronic illnesses such as cancer and renal diseases, which require substantial financial resources for treatment. As a result, Ghanaians are left with significant medical bills to pay. This situation raises concerns about service quality dimensions and satisfaction, particularly when considering the SERVQUAL model. Factors such as responsiveness, reliability, assurance, empathy, and tangibles become crucial in assessing the quality of healthcare services provided by the NHIS and addressing the satisfaction levels of beneficiaries (Gavahi *et al.* 2022). Efforts should be made to bridge the gaps in coverage and improve service quality to ensure that health insurance schemes effectively meet the needs of the population in Ghana and other Sub-Saharan African countries.

Kenyan National Hospital Insurance Fund is one of the earliest public insurance programs in Africa which was established in 1966 by an Act of Parliament. NHIF was established as a department within the health ministry in accordance with Kenya statute section 255. The NHIF Act of 1998 was amended to become the NHIF legislation of 2012, replacing it from being under the ministry of health to a government corporation. The fund was created as an autonomous state business under this new law.

The main goal of the National Health Insurance fund (NHIF) is to guarantee that all Kenyans have access to affordable, high-quality medical care. All workers in the formal sector are required to join NHIF, hence the statute requires all employers to automatically collect and return the required amount through payroll. But contributory membership is available to those who work by themselves or in the informal sector (Kazungu *et al.*, 2023).

According to the National Hospital Insurance Fund (NHIF) website, as of 2021, there were over 8,000 healthcare facilities accredited by NHIF in Kenya. Public, private, and mission hospitals that are dispersed across the 47 counties are among the accredited service providers. NHIF Services includes: outpatient, inpatient insurance coverage, Comprehensive which covers both inpatient and outpatient care, NHIF Civil Servants package (enhanced package which covers high limits, inpatient, outpatient, civil servant family package and those who are beyond certain job groups) which is specifically designed for civil servants and covers both inpatient and outpatient care, SUPA cover package which is available to all NHIF members, including those in the formal and informal sectors, and *Linda Mama program* which is a government-funded initiative with the goal of ensuring that pregnant women have access to cost-effective and high-quality medical treatment (Barasa *et al.*, 2018). NHIF and the cabinet secretary responsible for education signed the Edu Afya services agreement in (2018) in order to provide medical care to secondary school students in public schools while they are enrolled in classes. Additionally, point-of-sale systems, swipe cards, electronic cash transfers like M-PESA and other technologies have improved the efficiency of finances. Technology has helped NHIF strengthen its credit controls, which has shortened the time it takes to process claims.

Despite the assurances provided by the National Health Insurance Fund to minimise out-of-pocket expenses for medications and consultations, clients with medical insurance continue to express concerns about persistent co-payments (Phyllis and Evh, 2022). Additionally, NHIF customers frequently encounter challenges as healthcare providers and insurance personnel lack empathy, resulting in dissatisfaction and negatively impacting health insurance service experiences. This lack of empathy is associated with lower customer satisfaction, hesitancy in seeking timely medical care, and a negative view of the health insurance provider. Moreover, delays in responding to inquiries and service requests that indicate low level of service responsiveness among employees lead to frustration, potential financial strains for policyholders, and a gradual loss of trust in the health insurance system. These factors collectively diminish confidence and increase financial risks for individuals relying on medical insurance (Montevecchi, 2017). The National Health Insurance Fund has also faced criticism for limiting clients' negotiating power with healthcare providers. It's crucial to emphasise that these assertions lack empirical research to

support their validity. Many authors have deliberated on the constituents of service quality, underscoring elements such as procedural quality (related to the quality of processes and methods used in service delivery), result quality (evaluating the technical quality of the product post-service delivery), physical quality (pertaining to product support and ancillary items associated with products and services), interpersonal quality (concerning the interactions between customers and service providers), and corporate quality (relating to the brand image and overall perception of the organisation) (Asghari and Babu, 2017). In the case of NHIF in Bungoma County, the healthcare system faces challenges due to the high prevalence of malaria and a limited number of accredited hospitals, making it difficult for residents to access quality services (Wafula,2020).

The county government acknowledges the challenges in healthcare service delivery since the inception of devolution in 2013, with shortages of staff in healthcare establishments. While the county government has made investments in healthcare infrastructure and encourages residents to subscribe to NHIF services, more efforts are needed to improve accessibility to high-quality services in Bungoma County. Therefore, the aim of the study is to assess the impact of NHIF service quality on customer satisfaction in Bungoma County, Kenya.

1.2 Statement of the Problem

The study is prompted by the prevailing issue of poor service quality perception among NHIF customers, leading to diminished satisfaction levels. The National Health Insurance Fund has not given sufficient emphasis on delivering high-quality services, resulting in customer concerns regarding additional charges, limited coverage, and inadequate staff etiquette within the health insurance sector (Akute, 2022). The study by Chesire (2021) on the relationship between service quality and customer satisfaction in Kenya, specifically in Langata sub county, revealed that customer satisfaction with health insurance increased with the cost of the service, albeit insignificantly. The study by Oyando *et al.*, (2022) on service responsiveness indicated that NHIF's benefit package inadequately covered the necessary services for individuals with non-communicable diseases (NCDs), with a lack of emphasis on preventive and promotive services. According to (Chege *et al.* 2019), a customer who

perceives empathy from their insurer's employees is more likely to experience higher satisfaction.

Despite various government initiatives aimed at enhancing NHIF services, such as digitalization, increased budget allocations, expanded coverage, and measures for quality control and governance (Barasa *et al.*, 2018), concerns persist about the quality-of-service delivery. Significant financial commitments, including substantial budget allocations for Universal Health Coverage Ksh 18.4 billion, Managed Equipment Services Ksh 5.9 billion, Free Maternity Health Care Ksh 4.1 billion, and Medical Cover for the Elderly and Severely Disabled Ksh 1.7 billion, underscore the government's dedication to improving healthcare (National budget, 2023). However, lingering concerns could lead to customer dissatisfaction, increased complaints, or customer migration to competing providers (Nandokov *et al.*, 2017).

This study aimed to systematically address and substantiate ongoing concerns and complaints related to NHIF service quality in Bungoma County, Kenya. By presenting empirical evidence and evaluating the effectiveness of policies, the research seeks to enhance the understanding of the dynamics of health insurance service quality and its profound impact on customer satisfaction. The ultimate goal is to inform policy and decision-making processes, contributing to the resolution of existing challenges and the overall improvement of service quality of NHIF within the county.

1.3 Objectives of the Study

1.3.1 General objective

The general objective of this study was to assess the effect of NHIF service quality on Customer Satisfaction in Bungoma county, Kenya.

1.3.2 Specific objectives

Specifically, the study aimed to:

- i. Examine the influence of employees' empathy on customers' satisfaction.
- ii. Determine the effect of service responsiveness on customers' satisfaction.
- iii. Investigate the influence of service reliability on customers' satisfaction.
- iv. Examine the effect of service assurance on customers' satisfaction.

1.4. Research Hypotheses

To solve the research problem, the following null hypotheses were formulated and tested:

- i. **H01:** There is no significant relationship between employees' empathy and customer satisfaction.
- ii. **H02:** There is no significant relationship between service responsiveness and customer satisfaction.
- iii. **H03:** There is no significant relationship between service reliability and customer satisfaction.
- iv. **H04:** There is no significant relationship between service assurance and customer satisfaction.

1.5 Justification of the Study

This research helps to achieve the sustainable Development Goals (SDGs) and Africa vision 2063, such as enhanced healthcare delivery, inclusive growth, regional integration data -driven decision making. However, it is worth noting that, in terms of providing universal health care in Kenya, the cost of healthcare is a critical component in improving affordability and, as a result, accessibility of health care services. Several research has examined the factors influencing health services in diverse geographic locations (Sugimoto *et al.*, 2019; Williams *et al.*,2019). According to the findings of these studies, having health insurance is a crucial factor of health care utilisation. This emphasises the significance of health insurance coverage in spreading the burden of health-care costs

By realising and comprehending how their services affect members' happiness, NHIF management at both the local and national levels will greatly benefit from this study. They will have a better understanding of how the members see their services. By submitting the management and organisational employees to a culture of strict service standards and responsibility, they will also be able to develop the policies and strategies that will direct them towards reaching the targeted service standards. The study will also help the administration of the NHIF at all levels comply with the service providing regulations, ensuring that the members receive first-rate customer service.

Additionally, the administration of many NHIF-accredited public and private hospitals will gain from this research in examining the expectations they have on the services that are rendered by NHIF. Other interested parties and policymakers will benefit from this research's explanation of how offering top-notch services boosts client happiness. Generally, the study may provide critical information to researchers on the Health Care service industry that may assist to identify gaps that need to be filled in order to improve service quality in the health sector.

Scholars who might be interested in a related issue can benefit from this study's insightful analysis by learning more about the subject at hand. Additionally, the study will add knowledge that needs to be filled in order to improve service quality in the health sector.

1.6 Limitations of the Study

The study had a significant limitation because it was conducted only in Bungoma County, Kenya. This means that the results cannot be applied to developed countries or other African nations because of differences in their socio-economic status, legal systems, political environments, and technology levels. However, the findings can be extended to all 47 counties within Kenya.

Collecting data for the study was challenging because the key informants had busy schedules. It was tough to arrange meetings with them at their offices. To overcome this, we arranged meetings at places where they felt more comfortable.

1.6 Organization of the Study

The study comprised five distinct chapters. Chapter One addressed foundational aspects such as background information, the research problem, research objectives, hypotheses, and the study's justification. Chapter Two involved an extensive literature review, categorised into Theoretical and Empirical sections, along with an exploration of research gaps and the creation of a conceptual framework. Chapter Three provided a comprehensive insight into the research methodology, covering aspects such as research design, target population, sample size determination, sampling techniques, data types and sources, data collection methods, and considerations of validity and reliability in data collection and analysis. Chapter Four was dedicated to presenting and discussing the research findings. Finally, Chapter Five served as the conclusion, summarising key points, drawing conclusions based on the results, offering recommendations, and identifying areas for potential further research.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Definitions of the Key Terms

2.1.1 Service quality

According to Uzir *et al.* (2021), is the degree to which a customer's expectation of a service is met or exceeded. It is the difference between what the customer thinks they will receive and what they actually receive. If the customer's expectations are higher than the actual performance, the customer will be dissatisfied. When management is aware of an organisation's service quality, they may develop plans for long-term competition and improved organisational effectiveness (Özkan *et al.*, 2020; Sumardi and Fernandes, 2020).

In this study, Service quality means the measure of how an organisation delivers its services compared to the expectations of its customers in terms of different but relatively important dimensions that includes: reliability (Ability to perform the promised service dependably and accurately. In broad sense reliability means, service firms' promises about delivery, service provisions, problem resolutions and pricing), responsiveness (Willingness to help customers and provide prompt service. This dimension focuses in the attitude and promptness in dealing with customer requests, questions, complaints and problems), assurance (employee's knowledge, courtesy and the ability of the firm and its employees to inspire trust and confidence in their customers), and empathy (caring, individualised attention provides to the customers by their service firms). The omission of tangibility was made to maintain a manageable scope for the research, enabling a focused examination of dimensions closely tied to the psychological and relational aspects of customer-service provider interactions. This strategic choice is consistent with the findings in existing literature and prior research on service quality and customers' satisfaction.

2.1.2 Health insurance

Health insurance is defined as a mechanism for the financing of health care and whose purpose is to ensure that health care is made available to customers at any time without their having to endure out-of-pocket payments (Dake, 2018). Ampaw *et al.* (2020) recognized that there is a dearth of literature in developing African nations that examines consumer satisfaction in the context of health insurance schemes. Although

studies on service quality in public health insurance programs and healthcare facilities have been conducted, private health insurance settings are less well understood (Howard and Khalifeh, 2020; Javed *et al.*, 2019). Health insurance Companies have expanded into medical-related industries as a result of the Management Health Care System (MHCS) adoption in order to take advantage of market opportunities, control the expenses of physicians, specialists, and pharmacists, and raise industry standards (Mufudza and Naidoo 2018).

By assessing how customers are satisfied with service delivery in terms of reliability, responsiveness, assurance, and empathy, this study also looked into how well the management health care system can help medical insurance firms run their businesses. In this study, health insurance is a contract between an insurance company and a customer in which the insurance company agrees to pay for some or all of the customer's medical expenses in exchange for a monthly premium.

2.1.3 Customers' satisfaction

Customer satisfaction is a key factor in the success of any business including health insurance companies. It is defined as the extent to which a customer's expectation of a product or a service is met or exceeded. According to uzir *et al.*, (2020) and Haming *et al.*, (2019), customer satisfaction is the result of a comparison between what the customers expect and what they actually get from the goods and services used. arie *et al.*, (2023) defined customer satisfaction as the extent of differences between customers' expectations or desire and their perceptions of the actual quality of the service received. If the service performance outcome matches the customer's expectation, the customer will be satisfied. If the outcome is higher than expected, the customer will be delighted.

A satisfied or delighted customer is most likely to repurchase the goods or service and to become a loyal customer (wijaya *et al.*, 2022). However Brehan (2020) argues that customer satisfaction only plays a mediating role in the effect that service quality has on consumer loyalty. In other words customer satisfaction is a key factor in the formation of customer's expectations for future purchases. wantara and tambrin, (2019) state that satisfaction heightens customer loyalty. satisfied consumers may not only continue to use the services they are satisfied with, but may also extend good

word of mouth to others about their good experiences, which will in turn lead to more purchases by other consumers. In this study, customer satisfaction is defined from a process perspective. This means that the researcher believes that in the core insurance arena, customers' evaluation of core health insurance service quality takes place primarily during the service delivery process and continues, but is not just an outcome that customers strive to achieve.

2.2 Theoretical Literature Review

2.2.1 Expectancy Disconfirmation Theory

The expectancy disconfirmation theory was developed by Oliver R. John and John W. Robbins in 1979 and it explains how people assess and react to disparities between their expectations and actual social interactions. It provides a valuable framework for understanding customer satisfaction, particularly in assessing service quality. This theory is based on several key assumptions. First and foremost, it acknowledges that customers approach a service with certain expectations, which can be influenced by various factors. As customers experience the service, they form opinions about it, considering both tangible and intangible aspects. The theory's focal point is the concept of disconfirmation, which represents the difference between what customers expected and what they actually received. This difference can be positive (better than expected), negative (worse than expected), or neutral (as expected). Subsequently, customers assess their satisfaction, with better-than-expected experiences leading to higher satisfaction and worse-than-expected experiences resulting in reduced satisfaction. The theory also suggests that the larger the gap between expectations and reality, the stronger the effect on customer satisfaction (Abdelfadil 2021).

However, it's important to recognize that the Expectancy-Disconfirmation Theory has its limitations. It simplifies the complex nature of customer satisfaction and primarily focuses on the comparison of expectations to perceived performance, potentially overlooking emotional factors. Additionally, it assumes a linear relationship between disconfirmation and satisfaction, which may not hold true for all customers, as individuals can react differently to similar levels of disconfirmation. The theory also lacks depth in explaining how expectations are formed and doesn't fully consider long-term loyalty-building factors like trust and ongoing interactions (Nazari and Abdekhoda, 2021).

Despite these limitations, the theory offers notable strengths. It presents a clear and intuitive framework that is accessible to both researchers and practitioners. It provides practical value to businesses seeking to enhance service quality and customer satisfaction by effectively managing and surpassing customer expectations.

Furthermore, the theory has earned credibility through empirical support across various industries and is adaptable to different service sectors, making it versatile. It establishes a straightforward cause-and-effect relationship between disconfirmation and satisfaction, aiding businesses in identifying areas for improvement. Moreover, it serves as a valuable tool for measuring service quality and encouraging a customer-centric approach while helping in issue identification (Pan and Ha, 2022). However, to operationalize the Expectancy Disconfirmation theory, the study adopted the service quality dimensions from the SERVQUAL model, namely empathy, responsiveness, reliability, and assurance, while excluding tangibility. This omission of tangibility was made to maintain a manageable scope for the research, enabling a focused examination of dimensions closely tied to the psychological and relational aspects of customer-service provider interactions. This strategic choice is consistent with the findings in existing literature and prior research on service quality and customers' satisfaction.

In this context, Expectancy Disconfirmation Theory (EDT) is highly relevant and applicable to this study, providing a structured framework for understanding how NHIF members assess their satisfaction with healthcare services. EDT emphasises that individuals arrive with specific expectations about aspects such as empathy, responsiveness, reliability, and assurance when dealing with NHIF. Subsequently, they compare these expectations with their actual experiences, leading to either positive disconfirmation and increased satisfaction if the experiences meet or exceed expectations or negative disconfirmation and potential dissatisfaction if they fall short. By employing EDT, the study systematically examined how each service quality dimension influences customers' overall satisfaction, offering valuable insights into NHIF's performance and customer contentment.

2.3 Empirical Literature Review

Since quality is a multidimensional phenomenon, it is impossible for a company to provide services of a high standard without identifying the key components of such services as quality dimensions (Usman *et al.*, 2022). Thus, the organisations should make sure that the services provided meet the customer needs.

2.3.1 Empathy and customer's satisfaction

Chege *et al.*, (2019) in the study which was guided with causal research design, on the Relationship between empathy dimension and customer satisfaction in the insurance industry in Kenya. The study was guided with causal research design whereby R-Gui was employed in undertaking three types of statistical analysis, that is, descriptive analysis, factor analysis and hierarchical regression. The study applied the linear mixed-effect models of structural equation model (SEM) considering the multi-level structure of the data collected to come up with the results that a client who perceives empathy from the insurer's employees is bound to have higher satisfaction than a customer who does not perceive empathy from their insurer. The study recommended first that; insurance firm managers should implement policies that will ensure all their employees adopt empathic behaviour during their interactions with customers because employees have direct interactions with customers and hence are the primary stakeholders.

These findings agree with the study findings of Bahadur *et al.*(2019) on the influence of employee empathy on customer retention through the intervening impact of trust and satisfaction with employees during service interactions in China which was guided by cross-sectional research design. The results revealed that there was a significant effect of empathy on trust in service employees and satisfaction during customer–employee interactions. Also, satisfaction with a service employee showed a significant effect on service loyalty during service interactions. This information is crucial for the study, as it supported the objective of examining the influence of empathy on customer satisfaction in the context of NHIF, and provided guidance for improving service quality in order to enhance customer satisfaction. Additionally, the study examined the influence of four dimensions of service quality on customer satisfaction unlike the reviewed study that used one dimension and more insurance

companies. However, this study provided valuable evidence that a client's perception of empathy from insurance employees leads to higher customer satisfaction.

Lal *et al.* (2019) conducted a study to investigate the prevalence, causes and the role of empathy and religious or spiritual beliefs on job stress, job satisfaction, coping mechanisms, burnout, and mental health in medical and surgical faculty of a teaching hospital. Objective of the study Systematically ascertained data on job stress and burnout and their antecedents and mediators in health professionals from low- and middle-income countries were scant which included to evaluate: 1) the prevalence and sources of job stress and job satisfaction, and the ways used to cope with stress; 2) the prevalence of burnout and mental distress; and 3) the influence of age, gender, empathy and religious or spiritual beliefs on job stress, satisfaction, mental health and burnout. The study adopted a cross sectional research design and targeted f 345 respondents. Findings of the study revealed that High job stress was associated with high scores for Emotional Exhaustion and Depersonalization. High scores on the Jefferson Scale of Physician empathy correlated with high scores of Emotional Exhaustions. Religious or spiritual beliefs strongly influencing attitudes to work were significantly associated with high levels of Personal Accomplishment.

Furthermore, these results are consistent with the study findings of the study by ye *et al.* (2017) on the long-term impact of empathy and responsiveness on customer satisfaction and profitability. The main objective of the study was to examine how empathy and responsiveness influence profitability over time. The findings of the study showed that downgrading empathy and responsiveness allows firms to lower costs, resulting in immediate productivity benefits. However, this strategy has an enduring negative effect on customer satisfaction and ultimately hurts profitability in the long run. The study by Lal focused on healthcare professionals' well-being and job-related stressors, the current study uniquely explored how service quality dimensions (empathy, responsiveness, reliability, assurance) directly impact customer satisfaction in the non-medical service industry. The current study offers valuable insights into the interplay between service quality and customer satisfaction in Bungoma County, contributing to a more comprehensive understanding of this relationship in a non-medical service-oriented setting.

Haming *et al.*(2019) Carried out a study to examine the application of SERVQUAL distribution in measuring customer satisfaction of retail companies in Makassar Municipality of Indonesia Country. The research used Parasuraman's 1985 unmodified SERVQUAL approach, the study was conducted by use of questionnaire using purposive random sampling with 150 housewife customers who were met during shopping. It was found out that the service quality dimension had the least contribution to satisfaction than the empathy dimension. This empathy had some indicators. Namely, the employee is patient in serving customers, sales clerk is passionate to help even when they are busy, sales clerk informs products to the customer other than what they buy, the cashier is patient and greets the queuing customers, and greets politely any customer entering the shop. Nonetheless, it is crucial to give priority to tangible aspects like product arrangement and lighting conditions. Additionally, special attention should be directed towards addressing the empathy dimension, particularly focusing on reducing the noticeable gap in areas such as peak load time conditions and problem-solving adjustments. While Gaming study focused on a retail setting in Indonesia and highlights the importance of empathy dimensions, current study extends this perspective by examining multiple service quality dimensions in a different geographic and organisational context.

2.3.2 Responsiveness and customer satisfaction

The rapid progress of artificial intelligence (AI) has transformed the customer experience and presented significant opportunities for businesses to interact with their customers through chatbots. Chen and Florence. (2021) conducted a study to explore the effects of the user-friendliness and promptness of AI chatbots on the online consumer experience in e-commerce. This research delved into the importance of AI in shaping the online customer satisfaction and experience role within e-commerce. It used a research framework based on the technology acceptance model to illustrate the relationships among chatbot adoption, the online customer experience, and customer satisfaction. This investigation employed a quantitative approach, gathering 425 valid online questionnaires. The findings of the study revealed that the usability of chatbots had a positive effect on the extrinsic aspects of customer experience, while chatbot responsiveness positively influenced the intrinsic aspects of customer experience. Moreover, the online customer experience showed a positive correlation with customer satisfaction and individual personality traits played a role in linking chatbot

usability to extrinsic customer experience aspects. This study is consistent with that of Sadegh *et al.* (2017), who investigated the relationship between eight service responsiveness factors and total patient satisfaction in Tehran, Iran, public and private hospitals. 500 patients were chosen as respondents for the study using a practical sample technique from two public and three private hospitals. It used a cross-sectional research design. Data were collected using a dependable questionnaire with four items to measure overall patient satisfaction and 32 items to evaluate hospital responsiveness across eight aspects. The findings showed that patient satisfaction levels were highly impacted by hospital responsiveness. According to the report, health care facilities should make an effort to improve responsiveness to their strategic objectives and allow patients to participate in their treatment plans, including the choosing of their own doctors. The study thoroughly analysed service delivery by taking into account four dimensions: empathy, responsiveness, reliability and assurance. In contrast to these earlier studies, which largely focused on responsiveness as a single factor of service quality.

Arie *et al.* (2023) conducted a study focusing on the perceptions of migrants regarding the health care system's responsiveness and customers' satisfaction with healthcare professionals in South Africa. The research objectives included assessing the effect of reliability on customer's satisfaction, examining the impact of responsiveness on customer satisfaction, investigating the effect of assurance on customer satisfaction, understanding the influence of empathy on customer satisfaction and exploring the impact of tangibility on customer satisfaction at BRI unit Unsrat Manado. The research employed a descriptive cross-sectional design, with a sample size of 50 respondents consisting of loan customers/ debtors of the BRI unit. Analysis of data was done using the multiple linear regression model utilising SPSS statistics version 28, and employing purposive sampling.

Furthermore, the results revealed that responsiveness, assurance, empathy, and tangibility dimensions exhibited a negative relationship and did not significantly affect customer satisfaction. In contrast, SERVQUAL demonstrated a positive correlation and had a significant impact on Customer Satisfaction at BRI Unit Unsrat Manado simultaneously. These results contradict the findings of an earlier exploratory research study conducted by D *et al.* (2019) on the relationship between customer

responsiveness, service performance, and satisfaction among Airline Passengers in Kenya. During data collection, 600 Passengers were randomly selected from the Eldoret International Airport lobby and provided with paper and pen questionnaires. A total of 426 usable questionnaires were collected. The outcomes of this study revealed that customers experience satisfaction when they are responsive to service workers. Furthermore, the study found that service quality plays a mediating role in the relationship between customer responsiveness and satisfaction, emphasising the critical role of the customer in the process of evaluating service quality. The current approach allowed for a more in-depth exploration of the influence of service quality dimensions on customer satisfaction in a different context and with a potentially different representative sample size unlike the studies above. Additionally, the current study used an ordinal logistic regression model unlike the above studies which used multiple linear regression models to analyse data.

2.3.3 Reliability and customer satisfaction

Sebastián *et al.* (2019) investigated the underlying effect of public transport reliability on users' satisfaction. The study used a descriptive research design. Both metro and bus customers were asked to participate in the poll, which collected data from 1150 respondents on five different aspects. The study findings revealed that the reliability of waiting times and congestion levels have a significant influence on how satisfied customers are. The aforementioned research findings concur with the study conducted by Javed *et al.* (2019) on Pakistan's patients' satisfaction and the quality of services offered by public and private sector health care providers. This study used grey decision analysis ways to arrive at conclusions. to accomplish the study's objectives, the following hypotheses were employed. H1: Patients substantially link contentment with empathy. H2: Patients substantially link contentment with tangibility. H3: Patients substantially link contentment with certainty. H4: The relationship between patient satisfaction and response is considerable. H5: Patients substantially link satisfaction with reliability. H6: There is a distinction between how people see healthcare facilities in the private and public sectors. According to the study, in the public and private health care sectors, reliability and responsiveness are the two factors that most significantly predict patient satisfaction. According to the Hurwicz criterion, patients are more likely to be happy with private medical services. In contrast to the above literature, the present study evaluated the relationship between the quality of service

and customer's satisfaction by taking into account the four dimensions of service quality. Moreover, none of the aforementioned research was carried out in Bungoma County, where the current study was done.

Tandwa and Dhai (2020) researched on the factors that influence the quality of health insurance. Considering South Africa's solid economic position, the standard of its health insurance system still seems to be poor compared to health insurance systems in other nations of comparable economic standing. In this research, it was discovered that beneficiaries were not well involved in the design of healthcare policies. This study helped to determine how much customers understand correctly about the services they are entitled to from health facilities based on the type of packages they are given since insurance recipients are important consumers that should be involved in policy development. Assessing how well health care providers understand NHIF packages and the services covered can help identify potential gaps in communication and knowledge. Addressing these gaps can lead to smoother interactions between beneficiaries and health facilities, ultimately contributing to higher levels of customer satisfaction thus this study provided relevant insights that contributed to the current study on impact of the quality of service on customer's satisfaction.

In a study conducted in the United States of America by Richesson *et al.* (2021) which employed a case study design to evaluate patients' views of health coverage, revealed that 75 % were reasonably pleased with the efficiency of health insurance programs. Even so, before the availability of civil rights, the challenge in America was unfair insurance service to racially and ethnically mixed populations, with white citizens being particularly affluent, Before the Civil Rights Act of 1965, which made several reforms. NHIF has different health packages that are offered to beneficiaries that have different costs and that is why most of the time lead to conflict between NHIF beneficiaries and accredited health facilities. Understanding patients' views and perceptions of health coverage, as well as the historical context of insurance service challenges, can provide valuable insights for the current study on NHIF service quality and its impact on customer satisfaction.

Hamisi (2018) conducted an investigation into the impact of service quality on customer retention within social security schemes, specifically the NSSF in the Mbeya region. The study focused on examining the influence of empathy, tangibility,

and responsiveness on customer retention. It assessed the satisfaction levels of active NSSF members based on three service quality dimensions: empathy, tangibility, and responsiveness. The greater the satisfaction with these service quality dimensions, the stronger the customer relationship becomes. Customer satisfaction acts as a catalyst for customer retention. The study's results indicated that customers were content with the services provided by NSSF, and it also revealed that service quality had a direct effect on customer retention. These findings diverge from a study conducted by Njau, (2020) on the effect of the quality of service on customer's satisfaction in the context of public transport in Tanzania. The research employed a case study design considering five service quality dimensions. It discovered that four of the predictive variables, including reliability, assurance, responsiveness, and empathy, had positive but statistically insignificant effects on customer satisfaction. However, tangibility was positively and significantly associated with customer satisfaction. Applying these findings to the context of the NHIF's impact on customer satisfaction in Kenya, where four dimensions (empathy, responsiveness, reliability, and assurance) were investigated, it is reasonable to expect that these dimensions also play a pivotal role in determining customer satisfaction.

Ali (2018) conducted research on customer perceptions of service quality in the Islamic bank Brunei Darussalam (BIBD) using a quantitative approach and self-administered questionnaires for data collection. The study applied a modified Carter model that introduced two new elements, corporate social responsibility and innovation, to investigate the relationship between quality of service and perception of customers. The findings established a strong connection between service quality and customer perception, affirming the suitability of the Carter model for Brunei's Islamic banking sector. Furthermore, the research findings carry practical implications for policymakers and managers seeking to assess consumer perception and adapt service quality in response to customer demands. These findings align with a study by Ampaw *et al.* (2020) on healthcare service quality and patient satisfaction in Ghana, which employed structural equation modelling to establish a significant link between perceived quality, patient satisfaction, and tangibility. The research revealed that there exists an insignificant relationship between perceived quality of service, safety and empathy dimensions. It revealed that patients were dissatisfied with hospital empathy and safety measures. Nonetheless, physical and perceived quality

emerged as crucial indicators of patient satisfaction. Both studies underscore the importance of various service quality dimensions, including empathy, tangibility, perceived quality, and safety, in shaping customer perception and satisfaction. By integrating insights from both studies, the study gained a more comprehensive understanding of the relationship between service quality dimensions (including empathy, responsiveness, reliability, and assurance) and satisfaction of customers.

Kironji *et al.*, (2019) investigated the influence of the perceived image of NHIF outpatient facilities on the utilisation of primary care services by private university employees in Nairobi County. The study determined that the perceived image of NHIF outpatient facilities did indeed affect the utilisation of primary care services. Respondents continued to use these facilities, indicating a significant need for improvements. This study employed a cross-sectional descriptive design with a mixed-methods approach. It underscores the role of tangibility factors in shaping customer perceptions, emphasising the importance of NHIF's efforts to enhance their facilities. Nevertheless, to enhance customer satisfaction and increase customer retention, NHIF should not neglect the four service quality dimensions.

Loth and Godwin (2018) examined satisfaction of customers with the insurance quality of service delivery in Temeke. Their findings indicated that most respondents expressed dissatisfaction with the services provided by selected hospitals under NHIF, primarily due to the low quality of services. The study also evaluated the potential for healthcare system management to enhance the operations of medical insurance businesses by assessing customer perceptions of tangibility, reliability, responsiveness, assurance, and empathy. These results highlight the critical role of service reliability in shaping customer satisfaction levels. Addressing the identified issues related to assurance, responsiveness, and empathy can potentially lead to improvements in NHIF service delivery and, consequently, higher levels of customer satisfaction.

2.3.4 Assurance and customer satisfaction

Chege *et al.* (2019) conducted a study on the effect of assurance on customer's satisfaction in insurance companies, Kenya. To measure the latent variable assurance, three factors were used: Employee Politeness, Provision of Appropriate Information on Service Sought, and Client Trust that is Generated by Employees in Insurance

Firms, Making Customers Feel Comfortable Transacting with the Organization. The study used a descriptive approach with a sample of 400 policyholders from 19 composite insurance firms in Kenya using a multi-stage sampling technique. According to the study, a customer who perceives Service Assurance from their insurance is more likely to be satisfied than a customer who does not perceive it. Employee assurance, on the other hand, was shown to have no meaningful effect on variances in customer satisfaction between insurance businesses. To attain optimum client satisfaction, the research advised that insurance companies engage in service assurance. These findings are consistent with the conclusions of Li *et al.* (2021) study on the role of cloud services, security, e-learning, and service quality in customer satisfaction with e-banking services. According to the research, four key elements impacting consumer satisfaction in utilising Internet banking services include cloud services, security, e-learning, and service quality. Based on the findings from the two studies it shows that investing in service assurance is crucial for insurance companies, such as NHIF, to achieve maximum customer satisfaction. Ensuring that customers feel confident and safe in their transactions, providing adequate information, and maintaining employee politeness are all important aspects of service assurance that can positively influence customer satisfaction. Additionally, security is a critical component of assurance and should be given significant attention to enhance customer satisfaction.

Venessa Chepchumba, (2020), investigated the effect of service quality on Guest satisfaction in the housekeeping department at the Westo Hotel in Nairobi, Kenya. The study aimed to accomplish the following objectives: assess the influence of reliability on guest satisfaction, determine the impact of assurance on guest satisfaction, evaluate the effect of empathy on guest satisfaction, explore the correlation between responsiveness and guest satisfaction, and scrutinise the influence of tangibility on guest satisfaction. This study employed a descriptive research design as it was best suited for the research topic. The research sample consisted of 68 respondents staying in guest houses. The study's findings indicated a statistically significant association between reliability and guest satisfaction. Furthermore, the study revealed an insignificant relationship between assurance and guest satisfaction, suggesting that assurance has no discernible impact on guest satisfaction. empathy was found to have a highly significant influence on guest satisfaction, and

responsiveness was significant in ensuring guest satisfaction. However, tangibility did not significantly affect guest satisfaction.

Oruko, (2019) conducted a study to investigate the impact of service quality on customer satisfaction among DT SACCO account holders in Nairobi City County, Kenya. The specific objectives were: to appraise the influence of tangibility on customer satisfaction, to establish the effect of reliability on customer satisfaction, to assess the impact of responsiveness on customer satisfaction, to examine the effect of assurance on customer satisfaction, and to determine the influence of empathy on customer satisfaction. The study employed a descriptive design and had a sample of 100 respondents. The research indicated a strong connection between service quality and customer satisfaction. It also determined that empathy significantly affected customer satisfaction, rejecting the null hypothesis. However, tangibility, reliability, responsiveness, and assurance did not exert a significant effect on customer satisfaction. The study recommended the enhancement of the four service quality dimensions to enhance customer satisfaction and suggested that future research should focus on corporate image and its impact on customer satisfaction. While Oruko's study provided insights into the impact of service quality dimensions on customer satisfaction in the context of a SACCO in Nairobi, the current study extends this inquiry to a different location and employs a more extensive sample size and varied analytical methods.

An overall review of the aforementioned literature on customer satisfaction indicates limited studies on NHIF service quality, particularly in the setting of Bungoma county. As a result, it was timely to perform this study in order to fill a research gap and add value to the current knowledge of service quality. This study investigated the influence of NHIF service quality on customer's satisfaction in Bungoma County, Kenya, based on current literature and to fill the gap.

2.4 Conceptual Framework

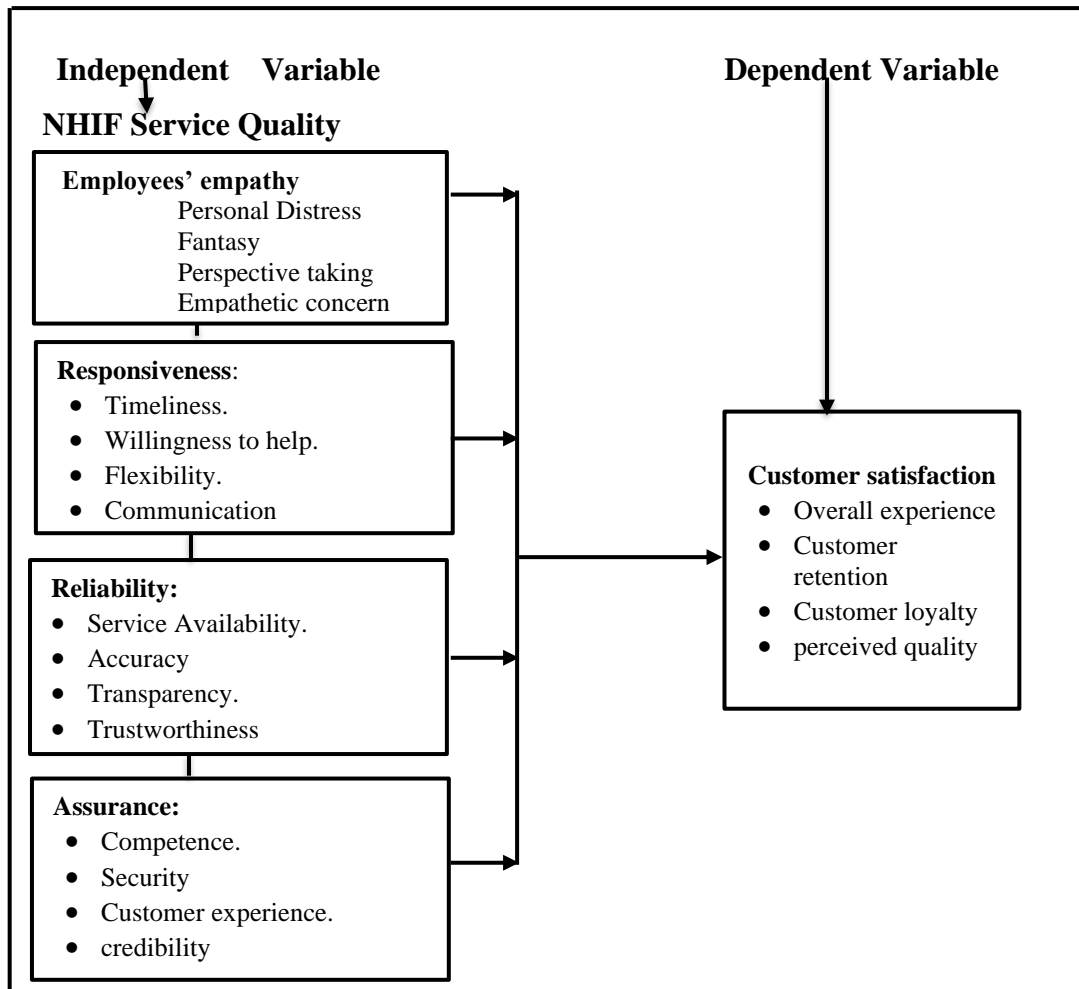


Figure 1: Conceptual framework on assessing the impact of NHIF service quality on customer satisfaction.

Source: Researchers' construct (2023).

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Research Design

A cross section research design was used in this study, in which data were gathered from diverse respondents at one time. Cross-sectional design employed in this study reflects a methodological integration of both quantitative and qualitative approaches. Quantitative approaches were applied to systematically collect data on quantifiable variables, affording numerical precision in the analysis of measurable aspects. Concurrently, qualitative approaches were strategically employed to uncover and explore factors that elude statistical measurement. The design allowed collection of data on multiple variables from respondents across 45 wards in Bungoma County simultaneously and analysed them to see if there exist statistically significant relationships. Additionally, cross-sectional study design was chosen for its cost-effectiveness, minimal resource requirements, and the ability to collect data simultaneously from all respondents (Kesmodel, 2018).

3.2 Description of the Study Area

The study was conducted in Bungoma county with NHIF customers under SUPA package as the focus of this investigation. Selecting Bungoma County as the research location for studying the influence of NHIF service quality on customer satisfaction is supported by scientific rationale. To begin with, the county's substantial population, exceeding 1.6 million, serves as a representative sample of Kenya, offering valuable insights applicable to comparable areas (KNBS 2021). The large population size facilitates the identification of patterns and variations in the relationship between service quality dimensions and customer satisfaction, offering valuable insights into the factors that may contribute to positive or negative experiences among NHIF customers. Secondly, Bungoma County's diverse demographics, including various ethnic groups and socioeconomic backgrounds, provide a robust dataset for studying NHIF service quality's influence across different demographic categories, enhancing the generalizability of findings. Thirdly, its rural and semi-urban characteristics present unique healthcare access challenges, making it a relevant area to address disparities in healthcare. Potential variations in NHIF service quality within the county offer opportunities to understand factors driving quality improvement. Additionally, researching within the local context allows for a nuanced understanding

of cultural and local dynamics impacting perceptions of NHIF services. This research has broader policy implications at both county and national levels and can benefit from community engagement for accurate and comprehensive data collection.

3.3 Population, Sample and Sampling Procedure

3.3.1 Population of the study

The study target population was 3999 respondents who were customers of the SUPA package (KNBS, 2021). In order to ensure that the findings accurately reflect the opinions of both the general population and its subgroup, the respondents were chosen at random and a simple random sample method was used.

3.3.2 Sample size determination

The study employed Slovin's, (1960) mathematical formula which allowed the researcher to sample the population with a desired degree of accuracy Bambang *et al.* (2021).

$$n = \frac{N}{1 + Ne^2} \quad N / (1 + Ne^2)$$

Where; n is the desired sample size

N is the target population that is 3999

e is the margin of error at 95.0% confidence interval. Therefore, the desired sample size is 364 respondents.

3.3.3 Sampling procedure

The study's relevant respondents were chosen using stratified and simple random sampling techniques. The initial step involved the strategic stratification of Bungoma County into 45 wards, with each ward considered as a distinct stratum, prioritising the incorporation of geographical variations. This approach aimed at achieving a proportional representation of NHIF customers enrolled in the SUPA package within each ward, ensuring a comprehensive understanding of the target population. The sampling process was initiated by obtaining a subscriber list from NHIF, which facilitated the systematic selection of customers enrolled in the SUPA package within each ward. To ensure fairness, proportional arrangements were implemented, favouring the selection of more participants in areas with higher populations compared to those with lower populations. Subsequently, a random number generator was employed to assign unique identifiers to policyholders, implementing a simple

random sampling technique within each ward. This method was deliberately chosen to provide every subscriber under SUPA cover within a ward an equal opportunity for selection, minimising the potential for bias and ensuring the scientific rigour of the sampling process (Etikan and Babatope, 2019). Despite these systematic efforts, the study acknowledges challenges such as accessibility issues and the voluntary nature of participation, recognizing the inherent complexities in achieving a completely unbiased sample. By employing a combination of stratified and simple random sampling, this procedure ensured that the study captures a representative sample of respondents on the SUPA package from various wards in Bungoma County, allowing for generalisation of the findings to the target population (Rahi, 2019).

3.4 Data and Data Collection Methods

3.4.1 Types of data

The study used both qualitative and quantitative data. The two types of data were utilised to complement each other since there were some questions that required both types of data.

3.4.2 Sources of data

The study utilised both primary and secondary sources of data from the respondents under study area to achieve objectives and answer the research questions. Primary data were obtained from NHIF customers in Bungoma county using questionnaires. Primary data increased the reliability of the collected data since it was collected directly from the respondents and specifically for this study's objectives. The secondary data were acquired by examining existing literature on the relationship between NHIF service quality and customer satisfaction, drawing from published articles, magazines, insurance-related books, and websites. Secondary data were preferred for their cost-effectiveness.

3.4.3 Data collection methods

The study used a well-structured questionnaire and interview guide as tools for gathering primary data from respondents. Data collection preparation involved organising and numbering questionnaires to ensure efficient distribution. An introduction letter was designed to clarify the study's purpose, ensure confidentiality, and provide contact details. Respondents were pre-scheduled and received a concise study overview during delivery. Face-to-face interaction emphasised the study's

purpose and addressed immediate concerns, providing clear instructions and contact details. A confirmed pickup was arranged, and for delayed completion, questionnaires were securely left with explicit retrieval instructions. A reminder message preceded pickup, and upon return, a confirmation and potential on-site review were conducted.

Furthermore, an interview guide was used for eight key informants to facilitate in-depth collection of information from the respondents. Scheduling interviews required careful planning to ensure that key informants were available and willing to participate. Key informants were contacted through email and phone calls to introduce the researcher, explain the study's purpose, and request their participation, with a clear outline of the time commitment required for the interview. Options for interview times were provided, considering the availability of informants and accounting for time frames since they were located in different places. Preferences and constraints regarding interview timing were noted, and scheduling platforms were used to streamline the process. A reminder email was sent a few days before each scheduled interview, confirming the time and reiterating the importance of their participation, along with any additional information needed. Flexibility was maintained to accommodate changes in the schedule due to unexpected circumstances. Secondary data were gathered from sources such as journals, magazines, research publications, insurance-related books, and websites.

In this study, all 364 individuals who were sampled for the research completed the questionnaires provided to them, resulting in a remarkable 100% response rate. According to Oruko,(2019) response rates of 50% are deemed adequate, 60% are considered good, and anything exceeding 70% is classified as very good. Therefore, it is evident that the response rate in this study not only met but significantly surpassed the threshold set by Oruko,(2019), indicating a very high level of participant engagement. Consequently, with this exceptional response rate in mind, the researcher proceeded to analyse the collected data, as detailed in the subsequent sections of this report.

3.5 Data Validity and Reliability

3.5.1 Reliability

According to Taherdoost, (2018), reliability is characterised by the consistency of results over time and its ability to accurately represent the entire study population. If

similar results can be obtained using the same methods, the instrument is deemed reliable. The study undertook a pilot test to pretest the tools for data collection to present the tools for data collection to ensure that the items in the questionnaire were stated clearly and that they had the same meaning to all the respondents. It also gave an idea of approximately how long it would take to complete the questionnaire. Two wards were sampled for pilot testing from the neighbouring Busia County. In each ward, fifteen respondents were selected to answer the questionnaire, making a total of thirty respondents for the pilot. The respondents were farmers, business people, drivers, private school teachers, retirees, security guards in private sectors, casual workers in different companies and institutions, school and hospital subordinate staff and private institutions employees. The questionnaires were reviewed after the pilot study. The content, wording, sequence, form and layout, question difficulty and instructions were examined. The feedback obtained was used to revise the questionnaire before administering it to the study respondents. The questionnaire was restructured and corrections made for clarity.

Piloting of the study helped in gauging the availability of the respondents by finding out the most appropriate time they would most likely be available. It was realised that farmers, private school teachers, security guards and business people were readily available unlike other groups who seemed to be engaged throughout. They therefore required to be booked in order to administer to them the research instruments. Their willingness to cooperate was also evaluated at this time. Reaction of subordinate staff in different institutions signalled that they were not very willing to divulge a lot of information freely. From how respondents reacted to the questions, sensitivity, repetitiveness and acceptability of the items were gauged and revised. The procedure for data processing and analysis was evaluated. Finally piloting helped in assessing the overall time required in the field for data collection. This was relevant as it informed on budgeting for time, resources and staffing needs and activities of the research team.

Cronbach test with a threshold of ≥ 0.7 . as indicated in table 1 was also done prior to the actual study. For all the scales, the Cronbach Alpha value was above 0.7 implying that the questionnaire was reliable.

Table 1: Reliability Test Results

Variable	Items	Cronbach Alpha
Empathy	4	0.830
Responsiveness	4	0.854
Reliability	4	0.779
Assurance	4	0.809
Customer Satisfaction	4	0.846

3.5.2 Data validity

Validity refers to the degree to which the instrument measures the concept the researcher wants to do. According to Scott *et al.*, (2020). The Content Validity Index was utilised to determine quantified content validity. Content validity, as described by Kubai in (2019), is an evaluation of the alignment between a set of scale items and the pertinent content area of the construct being measured

$$\text{Content validity index (CVI)} = \frac{\text{Number of items declared valid}}{\text{total number of items in questionnaire}}$$

Findings from the expert's ratings of items' relevance showed that out of 37 constructs 33 items were valid; hence the content validity index was 0.89 which is considered valid. As a result, the contents related to the field of the study were sufficient and relevant to the intended study.

3.6 Data Analysis

The study used Statistical Package for Social Science (SPSS) to analyse the data in line with the study's objectives. Descriptive statistics were employed to examine the socio-demographic characteristics of the respondents and provide a comprehensive overview of the study variables in order to meet all of the study's objectives. The parameters such as frequency distribution and percentage were used to show the results. Thematic analysis was employed to analyse qualitative data in conjunction with quantitative data, enhancing the overall comprehensiveness of the analysis.

Inferential statistics including the relationship between NHIF service quality and customer satisfaction in Bungoma County was determined using a bivariate analysis of Pearson Product Correlation Index tests and ordered logistic regression at a 5% level of significance. This is because the correlation technique measures the degree

and the direction of the relationship between variables and the regression measures the extent of the relationship (Xu *et al.* 2022). Ordered logistic regression model was considered since the dependent variable was ordinal in nature (had distinct categories with meaningful order). This model was employed to analyse the study's objectives each of which focused on the influence of different quality dimensions on customer satisfaction. The first objective investigated the effect of empathy on customer satisfaction, the second the influence of service responsiveness on customer satisfaction, the third the effect of service reliability on customer satisfaction, and the fourth the influence of service assurance on customer satisfaction. The model was adopted and improved from Parry (2016).

Dependent variables had four indicators (expectation fulfilment, staff knowledge and helpfulness, recommendation to others, and overall contentment of customers) which were measured using a five-point Likert Scale. A new variable for customer satisfaction was created from the four indicators to obtain the mean score. The mean scores were defined in five categories: 4.0 to 7.2 represented very dissatisfied, 7.3 to 10.4 represented dissatisfied, 10.5 to 13.6 represented neutral, 13.7 to 16.8 represented satisfied and 16.9 to 20 represented very satisfied. Therefore, the dependent variable (customer satisfaction) was in the form of five orders. In this context, the Ordinal Logistic regression model was employed.

Table 2: Customer Satisfaction Categories

Range	Category
4.0 – 7.2	Very dissatisfied
7.3 – 10.4	Dissatisfied
10.5 – 13.6	Neutral
13.7 -16.8	Satisfied
16.9 – 20.0	Very Satisfied

Before delving into the interpretation of the regression analysis results, a test was conducted to ascertain whether the assumptions necessary for applying the ordered logit regression model were met. One of the assumptions, known as the proportional odds or parallel regression assumption, states that the coefficients describing the relationships between say, the lowest category of the dependent variable versus all higher categories should be consistent with those describing the relationship between the subsequent lower category and all higher categories and so forth. The result of a parallel line test for the model revealed that the general model was significantly better

fit, thus accepting the null hypothesis since the p-value for the Chi-Square test was greater than 0.05. Another assumption was that there should be no multicollinearity. Multicollinearity test was performed by using Variance Inflation Factor (VIF). For the assumption to be met, it is recommended VIF should be below 10. VIF for all independent variables was below 5, indicating that there was no multicollinearity.

The goodness-of-fit test was conducted for ordinal logistic regression model to evaluate its performance in explaining customer satisfaction. The large deviance chi-square statistic, with a p-value of 1.000, suggested that the observed and expected values did not significantly differ indicating that the model was good fit for the data. The regression model had Pseudo R-Square statistics of 0.530 for Cox and Snell, 0.563 for Nagelkerke, and 0.267 for McFadden. These values imply that the model accounts for around 53-56% of the variance in customer satisfaction, with Nagelkerke's measure indicating a slightly superior fit compared to Cox and Snell, while McFadden's measure suggests a 26.7% explanation, indicating the need for further analysis to discern specific relationships. Additionally, In the model fitting information, revealed a substantial improvement in explaining customer satisfaction by including service quality as a predictor, as evidenced by a significantly lower log-likelihood (751.803 vs. 1025.579) with 19 degrees of freedom. This underscores the statistical significance of service quality's impact on customer satisfaction in the final model compared to the baseline Intercept Only model.

Ordered Logit Model Specification

With regard to objectives of the study, an ordered logit explanatory model was estimated based on the following specification (City, 2020).

$$Z_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \varepsilon_i$$

$$Y_i = \begin{cases} 1, & \text{if } Z_i < a_i \\ r, & \text{if } ar - 1 \leq Z_i < ar \\ 5, & \text{if } Z_i > ar \end{cases} = \begin{cases} 1, & \text{if } Z_i < a_i \\ r, & \text{if } ar - 1 \leq Z_i < ar \\ 5, & \text{if } Z_i > ar \end{cases}$$

Where:

$Z_i = Y_i$ is an unobserved, latent, continuous dependent variable.

β_1 is a coefficient that relate empathy to customer satisfaction

β_2 is a coefficient that relate responsiveness to customer satisfaction

β_3 is a coefficient that relate reliability to customer satisfaction

β_4 is a coefficient that relates assurance to customer satisfaction.

X_{1i} represents observed value of empathy

X_{2i} represents observed value of responsiveness

X_{3i} represents observed value of reliability

X_{4i} represents observed value assurance

ε_i is the error term

Y_i denotes customer satisfaction as a function of Z_i ,

Y_i particularly takes values from 1 to 5 r represents numbers from 2 to 4 α

r represents cut points ranging from α 1 to α 4

Table 3: Description of Model Variables

Variables	Name	Definition of variables	Unit of measurement
Dependent variable			
Y	Customer satisfaction	Is a measure of how a customer is with a company's services and capabilities.	Likert scale (Very dissatisfied = 1, Dissatisfied = 2, Neutral = 3, Satisfied = 4, Very satisfied = 5)
Independent variables			
X_1	Gender	Gender of the respondent	Male = 1, Female = 2
X_2	Age	Number of years of the respondent	Below 20 =1, 21 to 35 = 2, 36 to 50 =3, 51 to 65 = 4, 66 to 80 = 4, 81 and above = 5
X_3	Level of Education	Highest Level of education of the respondents	Primary = 1, Sec = 2, T, cert = 3, Dip = 4, Degree = 5, Masters = 6, PhD = 7
X_4	empathy	Caring and personalised attention that the firm provides to its customers	Likert scale (1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)
X_5	Responsiveness	Organization's willingness to help customers and provide prompt services.	Likert scale (1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)
X_6	Reliability	Employees' potential of performing the promised service dependably and accurately.	Likert scale (1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)
X_7	Assurance	Something that inspires or tends to inspire confidence	Likert scale (1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

Table 4: Summary of Data Analysis

Objectives	Data collection Tools	Data source	Analysis
To examine the influence of empathy on customer's satisfaction.	-Questionnaire -Interview guide -Documentary checklist	Primary and Secondary	Descriptive Statistics Bivariate Analysis of Pearson Product Correlation Index tests ordered Logistic Regression (OLR) model Thematic Analysis
To determine the effect of service responsiveness on customer satisfaction.	-Questionnaire -Interview guide - Documentary checklist	Primary and Secondary	Descriptive Statistics Bivariate Analysis of Pearson Product Correlation Index tests Ordered Logistic Regression OLR) model Thematic Analysis
To investigate the impact of service reliability on customer satisfaction.	-Questionnaire -Interview guide - Documentary checklist	Primary and Secondary	Descriptive Statistics Bivariate Analysis of Pearson Product Correlation Index tests Ordered logistic regression model (OLR) model Thematic Analysis
To examine the influence of Assurance on Customer's satisfaction.	-Questionnaire -Interview guide - Documentary checklist	Primary and Secondary	Descriptive Statistics Ordered logistic regression model analysis Bivariate Analysis of Pearson Product Correlation Index tests Thematic analysis

3.7 Ethical Consideration

Conducting research that is ethical requires a commitment that lasts not only throughout the research endeavour, but also afterwards, at the dissemination stage and even beyond. Clearance was obtained from Moshi Co-operative University before commencement of the study. Thereafter, the Kenya National Commission for Science, Technology and Innovation granted its permission to undertake this study. Informed consents obtained from all respondents before the interviews in which none of the respondents refused to participate. Strict confidentiality was granted to respondents and participants had liberty to withdraw at any stage.

CHAPTER FOUR

4.0 FINDINGS AND DISCUSSION

This chapter analyses the data on the impact of NHIF service quality on customer satisfaction in Bungoma county Kenya. The study used descriptive statistics, Pearson correlation, ordered logistic regression along with thematic analysis to accomplish the study's objectives.

4.1 Respondents Socio-demographic Characteristics

The study sample was 364 NHIF customers in the informal sector. Respondent's demographics included gender, age, and education level. The respondents included farmers, business people, drivers, private school teachers, retirees, security guards in private sectors, casual workers in different companies and institutions, schools and hospital subordinate staff and private institutions employees.

Table 5: Distribution of the respondents by Socio-demographic characteristics (n = 364)

Characteristic	Frequency	Percentage
Gender	201	55.2
Male	163	44.8
Female	364	100
Total		
Age-group (yrs.)		
Below 20	11	3.0
21-35	100	27.5
36-50	129	35.4
51-65	81	22.3
66-80	39	10.7
81+	4	1.1
Total	364	100
Academic qualification		
Primary	19	5.2
Secondary	51	14.0
Tertiary/College	78	21.4
Diploma	96	26.4
Degree	87	23.9
Masters	23	6.3
PhD	10	2.7
Total	364	100.0

In regard to gender of the respondents, a large percentage of respondents 201 that represents 55.2% of the total respondents were male while 163 that represents 44.8% of total respondents were female. The findings indicate that there were more male customers than women. These findings are consistent with the study findings by Asghari and Babu, (2017) who found out that a large percentage of the respondents were male as compared to female customers of health insurance in India. These

findings implied that there were more male NHIF customers on SUPA package than female in Bungoma county, The high percent of male respondents is as a result of the variations in healthcare utilisation patterns between genders, including preferences for specific healthcare services and providers. Additionally, men in most communities are expected to be the primary breadwinners and prioritise healthcare coverage to ensure their ability to provide for their families unlike female gender who are dependents in most cases.

The distribution of respondents by age revealed that 3% of NHIF customers under SUPA package were aged below 20 years, 27.5% between 21 and 35 years, 35.4% between 36 and 50 years, 22.3% between 51 and 65 years, 10.7% between 66 and 80 years while only 1.1% was aged 81 years and above. This indicates that most of the respondents under the study were aged between 36 and 50 years. This suggests that individuals in this age bracket were more likely to subscribe to NHIF under the SUPA package within the informal sector. These findings aligns with the study findings by Wantara and Tambrin, (2019) on the effect of Price and Product Quality Towards Customer Satisfaction and Customer Loyalty who found that most of the respondents were middle aged than other categories. This Socio-demographic pattern may have implications for understanding the preferences, needs, and expectations of this age group in relation to healthcare services. In addition, Middle-aged individuals often have a mix of responsibilities, including family care and potential health concerns.

Furthermore, the study sought to find out the level of education of NHIF customers under the SUPA package. The respondents were requested to provide their academic qualification. Majority, 26.4% had attained diploma as their highest level of education, 23.9% having attained degrees, 21.4% having tertiary certificate, 14.0% secondary level, 6.3% master holders, 5.2% Primary level and 2.7% having attained PhD as their highest level of education (Table 5). This suggests that a substantial portion of NHIF customers in the informal sector had completed vocational or specialised training beyond secondary education implying that most NHIF customers under SUPA package in Bungoma county have Diploma qualification. This group likely possesses a practical understanding of healthcare needs and may expect efficient, affordable and accessible services from NHIF.

The combined percentage of PhD, masters, bachelor's degree, diploma and tertiary certificate holders (80.7%) signifies that a substantial proportion of NHIF customers within the informal sector possess post-secondary qualifications. This suggests that individuals with educational backgrounds beyond secondary schooling are more inclined to engage in health insurance services, possibly due to their better access to health-related information and a deeper understanding of the advantages of insurance coverage.

Moreover, individuals with primary-level education displayed a lower percentage 5.2%, indicating that a majority of them may not participate in NHIF policies. These findings are in consistency with the study findings by Brehan, (2020) on the effects of service quality on customer satisfaction who found that most of the respondents were secondary school certificate holders and above compared to those with primary level of education. These findings imply that the monthly subscription fees for NHIF may be burdensome for many informal sector individuals, especially primary certificate holders, compelling them to rely on out-of-pocket healthcare payments or seek alternative healthcare solutions such as herbal remedies compared to those that are diploma holders who might have diverse income to maintain monthly subscription.

Table 6: Distribution of respondents by their level of satisfaction in the national health insurance fund (n = 364)

Item	SA Freq (%)	A Freq (%)	N Freq (%)	D Freq (%)	SD Freq (%)	Mean	*SD
Quality expectation fulfilment.	70(19.2)	157(43.1)	80(22.0)	39(10.7)	18(4.9)	3.61	1.07
Overall satisfaction	74(20.3)	135(37.1)	81(22.3)	48(13.2)	26(7.1)	3.50	1.16
Staff knowledge	77(21.2)	152(41.8)	88(24.2)	35(9.6)	12(3.3)	3.68	1.02
Recommending NHIF to others.	76(20.9)	157(43.1)	85(23.4)	31(8.5)	15(4.1)	3.67	1.03
Mean						3.62	

Note: SD = *Strongly Disagree*, D = *Disagree*, N *Neutral*, A *Agree*, SA = *Strongly Agree*, *SD = *Standard Deviation*

The findings of the study on whether the respondents agreed that their expectations were fulfilled or not revealed that 19.2% of the respondents strongly agreed with the statement, 43.1% of the respondent agreed with the statement, 22.0% of the respondents selected neutral indicating a neutral stance. These individuals neither agree nor disagree with the statement. Small portion of respondents 10.7% disagreed

with the statement while 4.9% of the respondents strongly disagreed that the NHIF services met their expectations in terms of quality. The findings revealed a significant level of agreement 62.3% (SA and A combined) among respondents, who are primarily customers from the informal sector, indicating that they generally had a positive perception regarding NHIF services meeting their quality expectations. This is particularly noteworthy, as this group typically consists of individuals who are not employed in the formal sector. Connecting this to the Expectancy Disconfirmation Theory, the results suggest that NHIF is effectively meeting the expectations of a considerable portion of its voluntary contributors.

However, it's equally important to acknowledge the 15.6% (combined SD&D) who disagreed, suggesting there are dissatisfied customers within this socio-demographic. The mean average rating of 3.61, slightly above the midpoint of the scale, indicates that, on average, respondents leaned towards agreement with the statement, underscoring the overall positive sentiment among this unique group of NHIF customers. Nevertheless, the study highlights a critical issue, a disconnect between NHIF's promises and the actual benefits received, which led to dissatisfaction, mainly due to unexpected out-of-pocket expenses. These findings resonate with Haming, *et al.*, (2019) research on SERVQUAL dimensions, indicating that NHIF's empathetic approach and responsiveness might be contributing positively to customer satisfaction. The findings implied that respondents generally perceive NHIF as having made progress in enhancing its services. However, it is evident that NHIF has not put in effort to fully gain the trust and positive perception of customers in the informal sector shown by a small portion of the respondents who disagreed that they are not satisfied with the services given.

The study's findings indicate that a majority of respondents, specifically 57.4% (combining those who strongly agree and agree), expressed satisfaction with the services provided by NHIF. This suggests that NHIF generally meets the expectations of its customers, which is positive for its reputation and customer relations. However, 22.3% of respondents chose the Neutral option, indicating some ambivalence in their views. While the disagreement rate was relatively low at 20.3% (combining those who strongly disagree and disagree), It highlights that a notable portion of respondents is not fully satisfied with the services provided by NHIF. This group

represents a concern as they may have experienced issues or shortcomings in their interactions with NHIF.

Furthermore, the calculated mean value of 3.50 indicates an overall positive sentiment among respondents, but it also emphasises the ongoing importance of striving to better meet the diverse needs of customers. These findings are consistent with a study by Almansour and Elkrghli, (2023) on customer satisfaction in Libya, which found that factors like perceived usefulness, perceived ease of use, perceived credibility, and customer attitude significantly influence customer satisfaction with services. Study's results suggest that NHIF generally satisfies the majority of its customers, but there is room for improvement in enhancing satisfaction, especially among those who are neutral or dissatisfied. Customers generally view NHIF's service delivery positively in some aspects, but there are concerns. Many individuals struggle to afford the monthly subscription due to life's hardships. Furthermore, NHIF sometimes fails to fulfil its initial promises, such as pledging to cover all medical expenses, as customers often find that only hospital bed expenses are covered, leaving other medical bills unattended.

Findings of the study on whether NHIF is helpful and knowledgeable revealed that 21.2% strongly agreed, 41.8% agreed, 24.2 % selected neutral, 9.6% Disagreed and 3.3% strongly disagreed. These findings indicate that the majority of the respondents 63% agreed that the NHIF staff were helpful and knowledgeable. This indicates a relatively positive perception of the NHIF staff's abilities among the respondents. Additionally, a significant portion 24.2% responded Neutrally, neither agreeing or disagreeing with the statement. A smaller percentage 12.9% (combined SD&D) of respondents disagreed.

The mean rating of the responses was 3.68 indicating that most of the respondents had a positive perception on the staff abilities and hence having confidence in their services. These results agree with the research findings of Venkatakrishnan *et al.*, (2023) who found out that customer satisfaction and customer loyalty is as a result of conveying trust and confidence in clients. By rating a high response on knowledge and helpfulness implies that customers have trust in NHIF staff. In addition, the fact that over six out of every ten respondents expressed satisfaction with the helpfulness

and knowledge of NHIF staff is a positive sign for the organisation, as it indicates that they are viewed favourably by a significant portion of their clients.

Findings on whether the respondents would recommend NHIF to others based on their experience or not revealed that 20.9% strongly agreed, 43.1% agreed, 23.4% Neutral, 8.5% Disagreed, and 4.1% strongly disagreed. In addition, the mean score was 3.67. The combined percentage of respondents 64% implies that the majority of respondents (almost two-thirds) have a positive perception of NHIF service quality and are likely to recommend it to others. The fact that the agreement level is higher than the disagreement level suggests a generally favourable impression of NHIF's service quality among the respondents. These results align with the results of the study by Ginting *et al.*, (2023) who found out that word of mouth increased the repurchase intention by the customers in Indonesia.

The findings suggest that a significant number of NHIF customers are inclined to positively advocate for the organisation, aiming to encourage others to register and subscribe. This willingness to engage in word-of-mouth promotion likely arises from heightened concerns among respondents about the high incidence of malaria and diabetes in the county. These concerns underscore the importance of insurance as a means to mitigate health-related risks. However, the combined percentage of respondents who disagreed and strongly disagreed 12.6% indicates a relatively small proportion of respondents who have a negative perception of NHIF's service quality and are unlikely to recommend it to others.

Additionally, the mean score of 3.67 suggests that, on average, the respondents leaned towards agreement with the statement. This further suggests that the majority of respondents have a positive impression of NHIF's service quality and would recommend it to others. The average mean response rating on service quality satisfaction in NHIF Bungoma County was 3.62 indicating that customers tend to lean towards the positive end of the scale. Findings of the study were in agreement with those of Hamisi (2018) who found out that customers were pleased with the level of services provided by NSSF in Mbeya region and that they would recommend others based on their experience. This suggests that the high rate of agreement among respondents regarding customer satisfaction levels reflects their contentment with the service quality provided by NHIF. Nevertheless, there is room for improvement

within the organisation to decrease the number of respondents who expressed disagreement with the satisfaction levels, indicating areas where NHIF can enhance its services.

4.2 Influence of Responsiveness on Customers' Satisfaction

The respondents were requested to rate the level of agreement on NHIF service delivery experienced in terms of service responsiveness on a Likert scale of 1-5, where 5 represented strongly agree, 4 Agree, 3 Neutral, 2 Disagree and 1 Strongly Disagree. Responsiveness dimensions included: willingness to help, prompt action, prompt service delivery, flexibility on service delivery. The question intended to know the influence of each of these indicators on customer satisfaction at NHIF. Descriptive statistics were used to analyse the data. The results were presented in terms of frequencies and percentage in Table 7 below.

Table 7: Distributive results on the influence of responsiveness on customer satisfaction.

Item	SA Freq (%)	A Freq (%)	N Freq (%)	D Freq (%)	SD Freq (%)	Mean	*SD
Prompt Action.	78(21.4)	167(45.9)	71(19.5)	31(8.5)	17(4.7)	3.71	1.04
Willing to help	75(20.6)	184(50.5)	74(20.3)	15(4.1)	16(4.4)	3.79	0.96
Prompt services.	68(18.7)	176(48.4)	71(19.5)	34(9.3)	15(4.1)	3.68	1.01
Flexibility on service delivery.	76(20.9)	160(44.0)	75(20.6)	30(8.2)	23(6.3)	3.65	1.09
Mean						3.71	

*Note: SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree and *SD = Standard Deviation.*

Findings of the study on whether employees at NHIF take action promptly when they make a complaint revealed that 21.4% of respondents strongly agreed, 45.9% of respondents selected agree, 19.5% of respondents selected Neutral, 8.5% disagreed and 4.7 respondents strongly disagreed. The results indicate that a significant proportion of respondents, 67.3% (SA&A), agreed that employees at NHIF take prompt action when they make a complaint. These findings imply that a considerable number of customers perceive NHIF employees as being responsive and taking prompt action when addressing their complaints. On the other hand, there is a noticeable proportion of respondents who are either neutral 19.5%, and 13.2% (SD&D) disagreed with the statement. These respondents feel that NHIF employees do not consistently take prompt action when they lodge complaints.

The mean response rating of 3.71 indicates that, on average, the respondents' opinions lean towards agreement with the statement. These findings are in consistence with the study findings of Zailani *et al.*, (2023) who found that the time needed for SP Municipal Council management to work on customers' complaints was less than the expected time given to the customer due to use of Plan-Do-Check-Act Cycle Method to Improve Customer Satisfaction at Municipal Council in Malaysia. The findings implies that NHIF boosted customer satisfaction by consistently addressing complaints promptly, as a substantial portion of respondents gave high ratings, reflecting a positive perception of the organisation's reputation. However, there is still room for improvement in ensuring consistent and timely complaint resolution to further enhance overall customer satisfaction, despite the positive perception held by a significant portion of NHIF's customers regarding their responsiveness.

Findings on the employee willingness to help when customers have problem with service provided indicated the following distribution of responses, 20.6% strongly agreed, 50.5% agreed, 20.3% Neutral, 4.1% Disagreed, and 4.4 strongly Disagreed. Based on these findings, it shows that a significant portion of the respondents 71.1% (SA&A) perceive NHIF employees as being willing to help them if they have problems with the services provided. This indicates a positive perception of service responsiveness among most of the respondents. When customers believe that employees are readily available to help and resolve problems, it fosters a sense of trust and reliability, which are essential for customer satisfaction. However, it is worth noting that a considerable proportion of the respondents 28.8% (SD&D) have mixed feelings or negative perceptions about the willingness of NHIF employees to assist them. This indicates that there is a portion of customers who do not feel that the organisation is responsive to their needs. These customers may have had experiences where their issues were not adequately addressed or resolved, which can lead to dissatisfaction and potentially affect their loyalty to NHIF. This shows that NHIF had not put in more emphasis on service responsiveness to satisfy all its customers.

The mean score of 3.79 indicates a positive leaning towards agreement, suggesting that NHIF has been successful to a certain extent in demonstrating their willingness to help customers but there is still room for improvement to ensure a higher level of customer satisfaction. The results are consistent with the research conducted by Kurdi

et al., (2020), which explored the practical link between employee satisfaction and customer satisfaction. Their study also identified a causal relationship between customer satisfaction and employee satisfaction, underscoring the significant role that understanding employee satisfaction plays in this particular context. This implies that, on average, NHIF has been somewhat successful in demonstrating their commitment to assisting customers in resolving issues. However, it is essential to recognize that there is still room for improvement to ensure an even higher level of customer satisfaction.

The findings on the statement whether the NHIF employees give prompt services to its customers revealed that 18.7% strongly agreed. These respondents strongly believe that NHIF employees provide quick and efficient services. The majority of the respondents, 48.4%, agreed that NHIF employees provide prompt services while they may not have the same level of conviction as the strongly agreed group, they still hold a positive view of the promptness of NHIF services. Small portion of 19.5% selected neutral indicating that they neither agree nor disagree hence they do not have a strong opinion or are unsure about whether NHIF employees provide prompt services. A small portion of respondents 9.3% disagreed with the statement that NHIF employees give prompt services. These respondents expressed disagreement with the promptness of NHIF services since they believe that the employees do not provide services in a timely manner. Small number of respondents 4.1% strongly disagreed with the statement believing that NHIF employees do not provide prompt services. From the provided percentages it implies that a significant portion of the respondents 67.1% (SA and A combined) believe that NHIF employees provide prompt services. This indicates a positive perception of the promptness of the services among the majority of the respondents thus showing favourable signs for customer satisfaction.

However, there is a notable portion 13.4% (SD and D combined) who hold a negative view regarding the promptness of NHIF services. These respondents believe that NHIF employees do not provide services in a timely manner implying that they have had problems with NHIF on service delivery. Additionally, 19.5% of the respondents expressed a neutral stance, indicating uncertainty or lack of strong opinion. It was also noted that most of the respondents who rated neutral had given up with the services thus having other alternatives when it comes to treatment. The mean

response rating of 3.68 indicates the average rating given by all respondents combined suggests that, on average, the respondents leaned towards agreement with the statement that NHIF employees give prompt services indicating positive perception of NHIF service quality. The results are consistent with the research conducted by Koay *et al.*, (2022) which revealed that prompt service delivery by an organisation plays a crucial role in boosting customer satisfaction and fostering loyalty, particularly in the context of online food delivery. This result implies that respondents generally believe that NHIF offers reasonably prompt services. The fact that the mean score leans towards agreement suggests that most respondents are satisfied with the speed and efficiency of NHIF's service delivery. This can be seen as a positive sign for NHIF in terms of customer satisfaction because prompt service is often a critical factor in determining customer satisfaction.

The findings of the study on whether the Employees at NHIF are flexible on service delivery revealed that 20.9% strongly agreed with the statement. This implies that these respondents had a high level of satisfaction with the service responsiveness of NHIF. Forty four percent of the respondents agreed with the statement, this highest percentage implies that a significant portion of respondents had a positive perception of the service responsiveness although it was not as strong as those who strongly agree. The respondents 20.6% chose a neutral rating indicating neither agreement nor disagreement with the statement. These respondents likely have an ambiguous or uncertain opinion regarding the flexibility of NHIF employees in service delivery. A small percent of respondents 8.2% disagreed with the statement. This suggests that a small portion of the respondents have a negative perception of the service responsiveness at NHIF indicating that they believe the employees are not flexible with service delivery. The small portion 6.3% of the respondents strongly disagreed with the statement that NHIF employees are flexible on service delivery. These individuals hold a strong negative opinion about the responsiveness of the employees, implying a significant dissatisfaction with the service provided by NHIF.

The mean average rating was 3.71. This suggests that the majority of the respondents leaned towards agreement regarding the flexibility of service delivery. These findings indicate that most of the respondents agreed with the statements and thus service responsiveness had a positive effect on customer satisfaction. These results are

consistent with the research conducted by Chen and Florence. (2021). Their study revealed that the usability of the chatbot had a positive impact on the extrinsic aspects of the customer experience, while chatbot responsiveness positively influenced intrinsic aspects of the customer experience. Additionally, they found a positive connection between online customer experience and customer satisfaction. Moreover, the study showed that personality played a role in shaping the relationship between chatbot usability and extrinsic aspects of customer experience.

Furthermore, these findings align with the research conducted by Sadegh *et al.* (2017), which demonstrated that hospital responsiveness significantly influenced overall patient satisfaction in both public and private hospitals in Tehran, Iran. The consistency with these studies underscores the crucial role of service responsiveness in enhancing overall satisfaction and creating favourable customer experiences. These results implied that most of the respondents in the informal sector perceives that employees at NHIF are very fast to adhere to any concern raised by customers irrespective of their scheduled task of the day thus enhancing flexibility in service delivery.

Nonetheless, the study sought to establish the relationship between service responsiveness and customer satisfaction. In order to establish this, Pearson's Product Moment correlation was performed at 0.05 level of confidence. Study findings were as illustrated in Table 8 below:

Table 8: Relationship between Responsiveness and Customer Satisfaction

		Responsiveness	Customer Satisfaction
Responsiveness	Pearson Correlation	1	.637**
	Sig. (2-tailed)		.000
	N	364	363
Customer Satisfaction	Pearson Correlation	.637**	1
	Sig. (2-tailed)	.000	
	N	363	363

Pearson Product moment correlation was carried out to establish the relationship between responsiveness and customer satisfaction. The test statistic was performed at 0.05 level of confidence. Study findings indicated that there was a strong positive

correlation between responsiveness and customer satisfaction. This implied that improvement in responsiveness results in a positive change in customer satisfaction.

In addition, to investigate the influence of service responsiveness dimensions on customer satisfaction, the study conducted an ordered logistic regression analysis. In this analysis, customer satisfaction served as the dependent variable, while four independent variables were examined: prompt action, willingness to help, prompt service delivery and flexibility, all of which were considered determinants of customer satisfaction at NHIF in Bungoma County. Since customer satisfaction was assessed using a 5-point Likert scale, it was treated as a discrete variable with five categorical values, where higher values represented greater satisfaction, ranging from 1 (very dissatisfied) to 5 (very satisfied). The results of the ordered logit regression analysis are presented in Table 9 below.

Table 9: Regression results on the Effect of service responsiveness on customer Satisfaction

		Estimate	Std. Error	Wald	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Threshold	[CS = 1.00]	1.912	0.664	8.294	0.004	.611	3.214
	[CS = 2.00]	3.989	0.665	36.031	0.000	2.687	5.292
	[CS = 3.00]	5.628	0.701	64.494	0.000	4.254	7.001
	[CS = 4.00]	7.723	0.745	107.503	0.000	6.263	9.183
	Gender	0.121	0.201	.361	0.548	-0.273	0.515
	Age	0.141	0.097	2.086	0.149	-0.050	0.331
	Education	-0.066	0.072	.845	0.358	-0.208	0.075
Location	Prompt action	0.243	0.136	3.218	0.073	-0.023	0.509
	Willingness	0.415	0.158	6.920	0.009	0.106	0.723
	Prompt service	0.709	0.141	25.355	0.000	0.433	0.985
	Service Flexibility	0.250	0.119	4.402	0.036	0.016	0.484

Link function: Complementary Log-log

Analysis was performed to assess the relationship between several independent variables (Gender, Age, Education, prompt action, willingness to help, prompt service delivery, flexibility) and customer satisfaction, which is categorised into five levels. The thresholds, representing the cut-off points between different satisfaction levels, were evaluated. All threshold coefficients displayed p-values below 0.05, indicating statistically significant differences between these levels. Socio-demographic variables of Gender, Age, and Education were examined. Their associated p-values from the Wald statistics suggested that Gender, and Education do not have statistically

significant relationships with customer satisfaction. While Age showed a marginal relationship, it did not reach statistical significance at the conventional threshold. When all other model variables remain unchanged, the ordered logit odds of falling into a higher customer satisfaction category would rise by 0.243 if prompt action by NHIF were to increase. Holding all other model variables constant, an increase in NHIF's willingness to help would translate into a 0.415 increase in the ordered log-odds of being in a higher customer satisfaction level category. When all other model variables remain unchanged, the ordered logit odds of falling into a higher customer satisfaction category would rise by 0.243 if prompt action by NHIF were to increase. Holding all other model variables constant, an increase in NHIF's willingness to help would translate into a 0.415 increase in the ordered log-odds of being in a higher customer satisfaction level category.

The Wald test statistic for predictor variables, prompt action is 3.218 associated with a p-value of 0.073, slightly above 0.05, implying a weak indication of a relationship but not statistical significance. In contrast, Wald test statistic of the predictor willingness to help was 6.920 associated with p-value 0.009 at a significant level of 1%, prompt service delivery is 25.355 associated with p-value <0.001 at significance level of 1%, and flexibility in service delivery is 4.402 associated with a p-value 0.036 at a significance level of 5% which demonstrated p-values below 0.05, indicating statistically significant relationships with customer satisfaction. Specifically, higher values in willingness to help, prompt service delivery, and flexibility in service delivery were associated with increased levels of customer satisfaction. The higher coefficient value of prompt service delivery as compared to the others implies that predicting power of prompt service delivery is the best of all. This was supported by two of the key informants during interview who stated that:

“We do organise focus groups and user panels comprising NHIF members to engage in direct discussions about their experiences, needs, and concerns to get a deeper understanding of customer perspective. This helps us to provide services promptly. We also established a dedicated customer service team that specialises in handling customer inquiries, complaints, and feedback” (KII 3, 6th July, 2023).

The findings above indicate that engagement of NHIF with members through focus groups and user panels demonstrates a commitment to understanding customer needs. Their use of feedback for prompt service improvements and a dedicated customer service team highlights responsiveness and effective communication, fostering trust and satisfaction. These efforts underscore NHIF's commitment to enhancing the customer experience and satisfaction.

Willingness to help had the next highest coefficient value (0.415), suggesting a strong positive relationship between customer satisfaction and willingness to help. Flexibility in service delivery has a coefficient value that indicates how well it predicts the degree of customer satisfaction. Prompt action and service delivery flexibility have coefficient values of 0.250 and 0.243, respectively, indicating that they are positively and statistically correlated with customer satisfaction. As pointed out by some of the key informants during interview, who stated that:

“In our corporation, we established a robust system to record and track customer complaints and suggestions. We analyse the data collected from these channels to identify recurring issues and areas for improvement” (KII 2, 8th July, 2023).

“Our institution implemented systems to monitor customer inquiries and complaints in real-time. This enables NHIF to address urgent issues promptly and prevent escalation. We also conduct thorough root cause analysis of recurring issues and complaints to identify the underlying problems such as lack of flexibility in service delivery since we believe that addressing the root causes leads to more sustainable improvements in responsiveness” (KII 8, 9th July, 2023).

The above findings implied that NHIF is committed to actively listening to its customers, promptly addressing issues, and making sustainable improvements. It aligns with the goal of enhancing service responsiveness, ultimately leading to greater customer satisfaction and loyalty.

Regarding hypothesis testing, that there is no relationship between service responsiveness (prompt action, willingness to help, prompt services, flexibility) and

customer satisfaction, the null hypothesis was not rejected for prompt action due to its p-value slightly above 0.05. However, the null hypothesis was rejected for willingness to help, prompt service delivery, and flexibility in service delivery, as their p-values were below 0.05, signifying significant relationships with customer satisfaction. The study therefore rejected the null hypothesis and concluded that there is a significant relationship between service responsiveness and customer satisfaction. These findings disagreed with the findings of the research study by Arie *et al.*(2023) in South Africa who established that element Responsiveness, assurance, empathy and tangibility had a negative correlation and did not have a significant effect on Customer Satisfaction. The findings imply that, most of the respondents believe that NHIF has focused on improving dimensions of service responsiveness, such as willingness to help, prompt service delivery, and flexibility, have a positive influence on customer satisfaction.

4.3 Influence of Employee Empathy on Customers' Satisfaction

The respondents were requested to rate the level of agreement on NHIF service delivery experienced in terms of employee empathy on a Likert scale of 1-5, where 5 represented strongly agree, 4 Agree, 3 Neutral, 2 Disagree and 1 Strongly Disagree. empathy dimensions included: personal attention, convenient operating hours, understanding of customer needs, and caring attitude. The question intended to know the influence of each of these indicators on customer satisfaction at NHIF. Descriptive statistics were used to analyse the data. The results were presented in terms of frequencies and percentage (Table 10).

Table 10: Influence of employee empathy on Customers' Satisfaction

Items	SA Freq (%)	A Freq (%)	N Freq (%)	D Freq (%)	SD Freq (%)	Mean	*SD
Personal attention	97(26.6)	178(48.9)	48(13.2)	34(9.3)	7(1.9)	3.89	0.97
Convenient Operating hours	78(21.4)	174(47.8)	63(17.3)	41(11.3)	8(2.2)	3.75	0.99
Understanding the needs of their customers.	75(20.6)	161(44.2)	77(21.2)	39(10.7)	12(3.3)	3.68	1.02
Caring attitude toward its customers.	72(19.8)	165(45.3)	73(20.1)	38(10.4)	16(4.4)	3.66	1.05
Mean							3.75

Note: SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree and

**SD = Standard Deviation*

Study findings on whether NHIF employees give customers personal attention revealed that 97 (26.6%) strongly agreed with the statement, 178(48.9%) agreed, 48 (13.2%) were neutral, 34(9.3%) disagreed, 7 (1.9%) strongly disagreed with the statement. The mean response rating on the item was 3.89 indicating that the majority of the respondents were in agreement with the statement. These findings showed a positive relation between personal attention and customer satisfaction since a substantial proportion of customers perceive that they receive personal attention when interacting with NHIF employees. This finding aligns with prior research in the literature as observed in studies such as Raza *et al.*, (2020) further emphasising the importance of empathy in building customer loyalty.

It is a reasonable expectation that when NHIF responds attentively to customers' complaints and addresses their concerns while offering personalised services tailored to their specific needs, it increases the likelihood of customers being satisfied with the services provided. The study's results confirm this expectation, showing a positive relationship between employee empathy and customer satisfaction, which is considered as a comprehensive measure of this customer-oriented approach, and customer loyalty, thus supporting Personal attention as a critical component of customer service and can significantly influence customer satisfaction. When customers feel heard, valued, and attended to, it can enhance their overall experience and satisfaction with an organisation. However, there were also minimal instances where employees were not giving customers personal attention needed.

Findings on whether NHIF employees have operating hours convenient to all its customers, revealed that 78 (21.4%) of the respondents strongly agreed with the statement, 174 (47.8%) agreed, 63 (17.3%) were neutral, 41 (11.3%) disagreed and 8 (2.2%) strongly disagreed with the statement. The mean response rating on the item was 3.75 indicating that the majority of the respondents agreed with the statement. These findings are in line with a study conducted by Mainardes and Freitas, (2023). The research suggested that the impact of employees' empathy, as a dimension of customer-perceived value, has a more substantial influence on customer loyalty within traditional banks compared to fintech companies. Findings of the study therefore implied that operating hours at NHIF offices were convenient to most of

their clients. This implied that most respondents are content with the operating hours thus the dimension showing positive relationship with customer satisfaction.

The findings of the survey on whether NHIF have employees who understand the customer needs or not revealed that 20.6% strongly agreed indicating that they strongly believe NHIF has employees who understand their needs, 44.2% of the respondents Agreed with the statement 21.2 % chose the neutral, 10.7% of the respondents disagreed and 3.3% of the respondents chose Strongly Disagree. The mean rating response was calculated to be 3.68, which indicates a slightly positive learning overall, as the mean falls between Agree and Neutral on the Likert scale implying that most of the respondents have a positive perception that employees understand the needs of customers whenever they interact. The results of this survey are consistent with another research conducted in Indonesia by Akbar *et al.*, (2023) who found that empathy dimension in rural areas has a high impact on patients' satisfaction. The interaction between patients and dental healthcare providers is significant and impacts the quality of health services regarding care to patients. Based on these findings, it indicates that a significant percentage of respondents in Bungoma county perceive NHIF employees as understanding their needs. The combined percentage of the respondents who rated the NHIF employees as Agree and strongly Agree 64.8% is higher than the combined percentage of respondents who rated NHIF as Disagree and strongly Disagree 14%. This reflects a positive perception among a significant portion of the survey participants perceiving that NHIF employees understand customer needs.

The findings of distribution of responses on whether National Health Insurance Fund has employees who have a caring attitude towards its customers indicated that 19.8% respondents strongly agreed, 45.3% Agree, 21.2% respondents selected Neutral, 10.4% respondents selected Disagree, and 4.4% of the respondents selected strongly Disagree. The majority of the respondents 65.1% (combined SA&A) expressed positive sentiments regarding NHIF employees' caring attitude, as either they strongly agreed or agreed with the statement. This suggests a significant portion of the respondents perceive NHIF employees to have a caring attitude towards customers. On the other hand, 14.8% (combined SD&D) of respondents expressed negative sentiments, either disagreeing or strongly disagreeing with the statement. The mean

response score of 3.66 falls closer to the Agree category on the Likert scale, indicating an overall positive inclination towards NHIF employees having a caring attitude towards customers. The findings are in consistency with the study findings by Smith, (2020) who found that customers who are agreeable, neurotic and open to new experiences are more likely to be satisfied with mobile services than other personality types. In addition, the satisfaction loyalty link is fully mediated by attitude-to-brand. Based on these findings, it can be inferred that NHIF in Bungoma County is generally doing well in terms of customer service, as a substantial portion of respondents perceive its employees as having a caring attitude. This is likely to positively impact customer satisfaction, which in turn leads to higher levels of loyalty and trust.

Overall, the combined mean of 3.75 indicates a positive influence of employee empathy on NHIF customer satisfaction in Bungoma County. It implies that when customers perceive that NHIF employees genuinely care about their needs and concerns, they are more likely to be satisfied with the services provided. The findings of the study agrees with the findings of Chege *et al.*, (2019) who found that a client who perceives empathy from the insurer's employees is bound to have higher satisfaction than a customer who does not perceive empathy from their insurer in insurance companies in Kenya. The study also agrees with Bahadur *et al.*(2019) who established that there was a significant effect of employee empathy on trust in service employees and satisfaction during customer–employee interactions in China . This implies that customer satisfaction is not solely based on the technical quality of services but also on the emotional and interpersonal aspects of customer-provider interactions. This underscores the importance of employee empathy and caring attitudes in customer service interactions since the findings has shown a positive disconfirmation among the respondents whereby the actual service delivery exceeded the expectations of the respondents. Expectancy Disconfirmation Theory states that customers assess their satisfaction, with better-than-expected experiences.

To establish the relationship between employee's empathy and customers' satisfaction, the study performed Pearson's Product Moment correlation analysis at 0.05 level of confidence. Study findings were as illustrated in Table 11 below:

Table 11: Relationship between employees' empathy and Customer Satisfaction

		Empathy	Customer Satisfaction
Empathy	Pearson Correlation	1	.552**
	Sig. (2-tailed)		.000
	N	364	363
Customer Satisfaction	Pearson Correlation	.552**	1
	Sig. (2-tailed)	.000	
	N	363	363

Study findings illustrated in Table 11 revealed that there was a positive correlation between employee empathy and customer satisfaction. This implied that an increase in the level of employee empathy results in an increase in the level of customer satisfaction.

In order to assess whether variations in customer satisfaction can be attributed to specific aspects of employee empathy, the study conducted an ordered logistic regression analysis. The analysis utilised customer satisfaction as the dependent variable and four independent variables: Personal attention, convenient operating hours, customer needs, and caring attitude, to determine their impact on the level of customer satisfaction at NHIF in Bungoma County. Since customer satisfaction was measured on a 5-point Likert scale, it was treated as a discrete variable with five distinct categorical values. These values increased in a sequential manner, ranging from 1 for very dissatisfied to 5 for very satisfied, establishing an ordered nature of the variable. The results of the ordered logistic regression analysis are found in Table 12 below

Table 12: Regression results on the influence of employees' empathy on Customer Satisfaction

		Estimate	Std. Error	Wald	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Threshold	[CS = 1.00]	1.368	0.703	3.782	0.052	-0.011	2.746
	[CS = 2.00]	3.203	0.679	22.247	0.000	1.872	4.534
	[CS = 3.00]	4.623	0.701	43.502	0.000	3.249	5.996
	[CS = 4.00]	6.618	0.742	79.548	0.000	5.164	8.073
	Gender	0.073	0.200	0.131	0.717	-0.320	0.465
	Age	0.182	0.097	3.509	0.061	-0.008	0.373
	Education	-0.020	0.072	0.082	0.775	-0.161	0.120
Location	personal attention	0.365	0.123	8.786	0.003	0.124	0.606
	Convenient hours	0.048	0.129	0.138	0.710	-0.205	0.301
	Customer needs	0.406	0.140	8.382	0.004	0.131	0.681
	Caring attitude	0.464	0.134	11.971	0.001	0.201	0.727

Link function: Logit.

The independent variables were assessed in respect to five customer satisfaction levels. The response variable, which is a dependent variable, is expected to change by its corresponding regression coefficient in the ordered logit odds in response to an increase in the predictor, an independent variable, while the other variables in the model remain constant. An increase in personal attention would raise the ordered logit probability of falling into a higher customer satisfaction group by 0.365 when all other model variables remain constant. Holding all other model variables fixed, an increase of NHIF's convenient operating hours would lead to a 0.048 rise in the ordered log-odds of falling into a higher customer satisfaction level category. Holding all other model variables constant, an increase in NHIF customer needs would translate into a 0.406 increase in the ordered log-odds of being in a higher customer satisfaction level category. When all other model variables are maintained constant, an increase in the NHIF employees' caring attitude would result in an increase of 0.464 in the ordered log-odds of being in a higher customer satisfaction level.

The p-values corresponding to the Wald statistics of each variable were also used to evaluate the significance of these relationships. The thresholds, which represent changes in satisfaction levels, showed different levels of significance. Gender, age, and education are sociodemographic variables that typically show non-significant associations with p-values above the standard cutoff of 0.05. A statistical analysis revealed that the following predictors of customer satisfaction had p-values less than 0.05: personal attention (8.786, associated p-value of 0.003 at a significant level of 1%), customer needs (8.382, associated p-value of 0.004 at a significant level of 1%), and caring attitude (11.971, associated p-value of 0.001 at a significant level of 1%). Convenient operating hours, however, did not show statistical significance (Wald test statistic of 0.138). The caring attitude's higher coefficient value when compared to the others suggests that it has the best predictive power of all. This was supported by KII3 and KII4 during interview who said that;

“We encourage NHIF staff to establish personal connections with customers by taking the time to understand their payment history, concerns, and aspirations through empathetic engagement and building trust with customers” (KII 5 10th July, 2023).

The findings of the key interview above revealed that NHIF's proactive efforts to promote empathetic customer-staff interactions indicate a strategic approach to enhancing overall customer satisfaction and fostering enduring relationships with their customers.

The coefficient value of personal attention also reveals a strong correlation with the level of customer satisfaction. The values of the coefficients for customer needs and personal attention were 0.406 and 0.048, respectively, indicating that they are positively and statistically predicting customer satisfaction. The next higher coefficient value was found in customer needs, which indicates a strong relationship between customer needs and customers' satisfaction. The results were supported by one of the key informants during interview who said that;

“We conduct regular training and sensitization programs for NHIF staff to emphasise the importance of employees' empathy. These training sessions focus on effective communication, active listening, and understanding the unique needs and concerns of patient” (KII I 15th July, 2023).

These findings implied that understanding customer needs leads to tailored solutions, effectively increasing customer satisfaction as seen in the findings above. Moreover, NHIF emphasises effective communication to build trust as customers feel genuinely heard and understood.

An increase in these variables was associated with higher customer satisfaction levels. Therefore, the null hypothesis was rejected for personal attention, customer needs, and caring attitude, while it was not rejected for convenient operating hours. These findings suggest that employee's empathy-related factors, such as personal attention, addressing customer needs, and a caring attitude of NHIF employees, significantly influence customer satisfaction. These findings were supported by statements from interviewees, highlighting the importance of building trust and understanding customer concerns thus showing a significant relationship between empathy and customer satisfaction. The findings of the study agreed with the findings of Chege et al., (2019) who found that a client who perceives empathy from the insurer's employees is bound to have higher satisfaction than a customer who does not perceive empathy from their insurer in insurance companies in Kenya. The findings implies

that NHIF has tried to prioritise training and strategies that promote empathetic interactions with customers. This could include customer service training programs that focus on effective communication, active listening, and understanding customer concerns.

4.4 Influence of Reliability on Customers' Satisfaction

The influence of service reliability on customer satisfaction was evaluated. Dependability and accuracy, accurate record keeping, promise keeping, and timekeeping on customer satisfaction are some of the specific aspects reviewed. Respondents were asked to score their degree of agreement on four aspects, as indicated in table 13, on a Likert scale of 1-5, with 5 representing strongly agree, 4 Agree, 3 Neutral, 2 Disagree, and 1 Strongly Disagree. The data was analysed using descriptive statistics. The data was presented in the form of frequencies and percentages.

Table 13: Distributive results on the Influence of Reliability on Customers' Satisfaction.

Items	SA Freq (%)	A Freq (%)	N Freq (%)	D Freq (%)	SD Freq (%)	Mean	*SD
Dependability and accuracy	80(22.0)	160(44.0)	81(22.3)	32(8.8)	11(3.0)	3.73	1.00
Accurate record keeping	92(25.3)	164(45.1)	81(22.3)	22(6.0)	5(1.4)	3.87	0.91
Keeping the promise.	57(15.7)	146(40.1)	94(25.8)	40(11.0)	27(7.4)	3.46	1.11
NHIF provides services at the promised time.	60(16.5)	142(39.0)	86(23.6)	48(13.2)	28(7.7)	3.43	1.14
Mean						3.62	

*Note: SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree and *SD = Standard Deviation.*

The combined percentages of customer perceptions regarding NHIF performance in delivering promised services accurately reveal significant insights. A substantial majority, accounting for 66.0% of respondents (22.0% strongly agreed and 44.0% agreed), hold positive views, signifying their belief in NHIF consistent dependability and accuracy in service delivery, which fosters trust and confidence. It implies that NHIF has successfully met their expectations, and they can continue to rely on its services with confidence. However, 22.3% of respondents maintained a neutral stance, neither agreeing or disagreeing, possibly due to mixed experiences or need for further information indicating that NHIF did not provide clearer communication and

addressing issues that may have caused uncertainty. A smaller number of respondents 11.8% (8.8% disagreed and 3.0% strongly disagreed) expressed negative perceptions, suggesting concerns about NHIF service reliability. These findings imply that NHIF is not paying special attention to this group, addressing their concerns, improving service quality, and working to rebuild trust. The average mean rating of 3.73, slightly above the midpoint of the Likert scale, indicates that, on average, customers lean towards agreement but also highlights room for improvement in enhancing reliability and accuracy in delivering promised services. The results align with those of Lingxin *et al.*, (2020) who found that reliability of service has a positive and significant influence on customer satisfaction. The results implied that customers have positive perceptions of reliability and accuracy hence likely to have greater trust and confidence in NHIF's ability to provide essential services when needed.

Findings on the accuracy of NHIF records revealed that 25.3% strongly agreed, 45.1% agreed, 22.3% neutral, 6.0% disagreed and 1.4% strongly disagreed. These findings indicate that majority of the respondents 70.4% agreed or strongly agreed that NHIF keeps its record accurately. This indicates a positive perception of the NHIF's service reliability regarding record keeping. However, it is noted that a significant portion of respondents 22.3% expressed neutral stance neither agreeing nor disagree with the statement indicating some level of dissatisfaction with the accuracy of NHIF records. The mean rating of 3.87 suggests an overall positive perception of NHIF's record keeping accuracy. This indicates that on average, the respondents tend to agree that the NHIF maintains accurate records. The findings are consistent with the research findings by Pakurár *et al.*, (2019) showed that reliability items are significantly and positively associated with the dependent customer satisfaction. The findings imply that NHIF has generally succeeded in maintaining a positive image in terms of record-keeping accuracy among its customers. The majority of respondents perceive NHIF as reliable in this aspect, which can contribute to higher levels of trust and satisfaction with NHIF's services. However, the neutral responses indicate that there is still room for improvement and the need to address any uncertainties or mixed experiences that some customers may have regarded NHIF's record-keeping practices.

Findings of the study on whether NHIF does what it says it will do or not revealed that 15.5% strongly agree, 40.1% agree, 25.8% rated Neutral, 11.0 disagreed and 7.4 strongly disagreed. This indicates that the majority of the respondents 55.8% have a positive perception of NHIF's service reliability. This suggests that a significant proportion of customers trust and believe that NHIF fulfils its promises and delivers on its commitments. While the majority agrees or strongly agrees with the statement, a notable portion of respondents 25.8% remained neutral. This indicates a level of ambivalence or uncertainty among this group regarding NHIF's ability to consistently deliver on its promises. It suggests that NHIF may have some areas that need improvement to enhance service reliability and win over these customers. However, a smaller percentage of respondents 18.4%(DandSD) expressed dissatisfaction with NHIF's service reliability. These customers disagreed with the statement, indicating a lack of confidence in NHIF's ability to fulfil its commitments.

Additionally, the average mean rating of 3.46 falls closer to the agreed category. This indicates an overall positive sentiment among the respondents. The average mean suggests that NHIF's service reliability is perceived positively but there is still room for improvement to further enhance customer satisfaction. These findings are consistent with the research findings by Swallehe, (2021), which indicated that enhancing multiple items related to SERVQUAL dimensions, including tangibility, reliability, and assurance, such as improving working facilities and personnel skills, leads to an increase in customer satisfaction with the services offered by public organisations. The findings of the study implied that, in general, a significant portion of the respondents have a positive perception of NHIF's service reliability. This suggests that a considerable number of customers trust and believe that NHIF consistently fulfils its promises and delivers on its commitments.

The findings of the study whether the respondents agree with the statement that NHIF provides its services at the promised time or not revealed that 16.5% of the respondents strongly agreed that NHIF provides its services at the promised time, 39.0% agreed, 23.6% of the respondents were Neutral and did not lean towards agreement or disagreement, 13.2% disagreed with the statement, while 7.7% of the respondents strongly disagreed that NHIF provides its service at the promised time. Based on the findings, it can be inferred that a significant portion of respondents

55.5% (SA and A combined) agree that NHIF provides its services at the promised time. Considering the Expectancy Disconfirmation Theory, the actual performance of NHIF was slightly above the expectations of its customers meaning that, the time they expected to receive the services is the time they were attended to. This suggests a generally positive perception of service reliability among these respondents. On other hand a considerable portion of respondents 21.7% (D and SD combined) expressed some level of disagreement regarding NHIF timely service delivery indicating that they are not satisfied with the services since it does not deliver services within the promised time frame. Nonetheless, the 23.6% of neutral responses signify a considerable portion of respondents who lack a strong opinion or express uncertainty. This implies that they may either be uninformed about NHIF's complete range of services or have yet to form a clear perception regarding it.

Additionally, the average mean of 3.43 obtained from the ratings ranges from neutral and agree indicating a positive perception by the respondents on service quality. The study's outcomes are in alignment with the research conducted by Suzer in 2022, which demonstrated that the dimensions of reliability and assurance, representing perceived service quality in e-commerce settings, exhibit a statistically significant and favourable impact on customer satisfaction. The observed findings suggest that NHIF has a generally positive perception of service reliability among a significant portion of respondents. However, there is room for improvement to meet customer expectations and deliver services within the promised time frame, as a substantial portion expressed disagreement. The presence of neutral responses indicates that NHIF has not put in place more strategies for communication or information dissemination regarding NHIF's services.

The overall mean of the statements measuring reliability is 3.62. On average, the respondents have a high level of agreement regarding NHIF's service reliability. The mean falls closer to the agreed category indicating that respondents generally perceive NHIF's services to be reliable, but there is room for improvement to enhance customer satisfaction. The study findings are in agreement with findings of the study by Sebastián *et al.*(2019) who established that waiting time reliability and crowding levels have a very strong impact on users' satisfaction evaluation in public transport. The research findings also agree with the study done by Javed *et al.* (2019) who

discovered that reliability and responsiveness are most strongly predicting patient satisfaction in public and private health care sectors. The study findings implies that NHIF generally enjoys positive perceptions of service reliability among a significant portion of respondents. However, the small portion of customers expressed negative perception towards the satisfaction level of service delivered showing that their concerns were not addressed well by the employees.

Furthermore, to show the degree and direction of relationship between service reliability and customer satisfaction, Pearson Product Moment correlation analysis was conducted at a significance level of 0.05. The results of this analysis are presented in Table 14, and further details elaborated upon below.

Table 14: Relationship between Reliability and Customer satisfaction

		Reliability	Customer Satisfaction
Reliability	Pearson Correlation	1	.647**
	Sig. (2-tailed)		.000
	N	364	363
Customer Satisfaction	Pearson Correlation	.647**	1
	Sig. (2-tailed)	.000	
	N	363	363

The study sought to establish the relationship between reliability and customer satisfaction. In order to establish this relationship, a Pearson Product Moment correlation was performed at 0.05 level of confidence. Findings of the study revealed that there was a positive correlation between reliability and customer satisfaction. This implied that improvement in reliability results in an improvement in customer satisfaction.

Nonetheless, ordered logistic regression analysis was performed to determine how service reliability dimensions influence customer satisfaction at NHIF Bungoma County. The results in Table 15 show that of the seven explanatory variables, which were tested, only four variables education, dependability and accuracy, promise keeping and time keeping were statistically significant. The education of the respondents had a beta coefficient of -0.185 indicating a negative or inverse relationship and was statistically significant (p-value = 0.013). This implies that education of the respondents had more likelihood of having a negative perception on service reliability at NHIF. Customer satisfaction was measured using a 5-point Likert

scale, it was a discrete variable that took five categorical values. Its value was ordered because it increased from 1 = strongly disagree to 5 = strongly agree. Consequently, an ordered logit regression model was estimated based on the categorical nature of the dependent variable. The regression analysis's result predicted the likelihood of having higher customer satisfaction as a function of the seven variables.

Table 15: Regression results on the influence of service reliability on customer satisfaction

		Estimate	Std. Error	Wald	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Threshold	[CS = 1.00]	1.906	0.720	7.013	0.008	0.495	3.316
	[CS = 2.00]	3.841	0.702	29.941	0.000	2.465	5.217
	[CS = 3.00]	5.429	0.729	55.510	0.000	4.001	6.858
	[CS = 4.00]	7.658	0.783	95.770	0.000	6.125	9.192
	Gender	0.152	0.204	.552	0.457	-0.248	0.551
	Age	0.163	0.098	2.750	0.097	-0.030	0.356
	Education	-0.185	0.074	6.226	0.013	-0.329	-0.040
Location	Dependability	0.657	0.129	25.795	0.000	0.403	0.910
	Record keeping	0.184	0.122	2.277	0.131	-0.055	0.424
	Promise keeping	0.363	0.120	9.095	0.003	0.127	0.599
	Time keeping	0.521	0.117	19.677	0.000	0.291	0.751

Link function: Complementary Log-log

Dependable and accurate service was found to have a statistically significant positive effect (Coefficient = 0.657, $p < 0.001$) at a significant level of 1%, indicating that higher dependable and accurate services increase the odds of higher satisfaction. Accurate record keeping, on the other hand, was not statistically significant (Coefficient = 0.184, $p = 0.131$), implying it doesn't strongly affect satisfaction. Promise keeping showed a significant positive effect (Coefficient = 0.363, $p = 0.003$) at a significant level of 1%, suggesting that higher promise keeping is associated with increased odds of higher satisfaction. Similarly, time keeping had a significant positive effect (Coefficient = 0.521, $p < 0.001$) at a significant level of 1%, indicating that higher timekeeping corresponds to greater odds of higher satisfaction. Overall, these results suggest that improving dependable and accurate service promise keeping and timekeeping can potentially enhance customer satisfaction, while record keeping may not significantly impact satisfaction levels. In support of the findings above, the responses from key informant interviews stated that:

“NHIF established Service Level Agreements (SLAs) with service providers to define the expected service standards. These SLAs include

measures such as response times, resolution times, and uptime guarantees” (KII 7, 20th July, 2023).

“We do conduct thorough capacity planning to ensure that our resources are adequately sized to handle current and anticipated future demands. This helps prevent overloads and service outages. We implemented continuous monitoring of critical systems and services to identify potential issues before they escalate into disruptions” (KII 6, 30th July, 2023).

The study findings above showed that NHIF has established Service Level Agreements (SLAs) with service providers which underscores their dedication to setting clear service standards, including response times, resolution times, and uptime guarantees. These well-defined SLAs are pivotal in ensuring the reliability and consistency of services provided to NHIF customers. When NHIF consistently meets these standards, it fosters confidence and trust among customers, significantly enhancing their overall satisfaction. Moreover, NHIF's proactive approach to service reliability through capacity planning, resource allocation, and continuous monitoring of critical systems demonstrates their commitment to preventing overloads, service outages, and disruptions.

The null hypothesis in each case tests whether the respective predictor variable had no effect on customer satisfaction. For dependable and accurate service, promise keeping, and time keeping the null hypothesis is rejected ($p < 0.05$), suggesting that these variables have a statistically significant effect on customer satisfaction. For record keeping, the null hypothesis is not rejected ($p > 0.05$), suggesting that record keeping has no statistically significant effect on customer satisfaction. The higher coefficient value of dependable and accurate services as compared to the others implies that predicting power of dependable and accurate services is the best of all. This was supported by one of the key informants during the interview who stated that:

“NHIF invested in a robust and modern infrastructure, including IT systems, communication networks, and healthcare facilities, to support the efficient delivery of services and implemented rigorous quality assurance processes to monitor the accuracy and effectiveness

of our services. Regular audits and evaluations are conducted to identify and rectify any issues promptly” (KII 1, 15th July, 2023).

The key informant's statement implies that NHIF recognizes the paramount importance of reliability in its services. By investing in modern infrastructure and implementing quality assurance processes, NHIF aims to ensure that its services are not only efficient but also dependable and accurate. This commitment to reliability aligns with the higher coefficient value observed, suggesting that customers value and prioritise services they can depend on and trust to be accurate.

Time keeping had the next highest coefficient value, indicating a strong correlation between time keeping and customer satisfaction. The degree of customer satisfaction is strongly predicted by the coefficient value of promise keeping. Promise keeping and accurate record keeping have coefficient values of 0.184 and 0.361, respectively, suggesting that they are positively and statistically predictors of customer satisfaction. The findings indicate that service reliability, particularly in terms of dependable and accurate service, promise keeping, and time keeping, plays a crucial role in influencing customer satisfaction at NHIF in Bungoma County, Kenya. The findings align with the findings from the key informant interviews. The study therefore rejected the null hypothesis and concluded that there is a significant relationship between reliability and customer satisfaction. The study findings are in agreement with findings of the study by Sebastián *et al.*(2019) who established that waiting time reliability and crowding levels have a very strong impact on users' satisfaction evaluation in public transport. The findings implied that respondents from the informal sector in Bungoma county have a positive perception on the reliability of NHIF services. To mitigate the risks of high medical expenses, most of the people from the informal sector are subscribing to NHIF to avoid out-of-pocket payment which is very expensive.

4.5 Influence of Assurance on Customers' Satisfaction

The influence of service assurance on customer satisfaction was assessed. Specific areas investigated include, Employee's courteousness and knowledge, Employee's competence and experience, Employee's Cordial attitude and finally Ability to convey trust and confidence, towards customer satisfaction. The respondents were requested to rate the level of agreement on four items as shown in table 16 below on a

Likert scale of 1-5, where 5 represented strongly agree, 4 Agree, 3 Neutral, 2 Disagree and 1 Strongly Disagree. Descriptive statistics were used to analyse the data. The results were presented in terms of frequencies and percentages

Table 16: Distributive results on the Influence of Assurance on the customer Satisfaction

	SA Freq (%)	A Freq (%)	N Freq (%)	D Freq (%)	SD Freq (%)	Mean	*SD
Employee's courteousness and knowledge	78(21.4)	195(53.6)	56(15.4)	28(7.7)	7(1.9)	3.85	0.91
Employee's competence and experience	73(20.1)	176(48.4)	74(20.3)	29(8.0)	12(3.3)	3.74	0.98
Employee's Cordial attitude.	76(20.9)	128(35.2)	96(26.4)	50(13.7)	14(3.8)	3.55	1.08
Ability to convey trust and confidence.	77(21.2)	152(41.8)	78(21.4)	36(9.9)	21(5.8)	3.63	1.10
Mean						3.69	

*Note: SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree and *SD = Standard Deviation.*

Findings of the study on the level of agreement whether NHIF employees are courteous and knowledgeable or not revealed that 21.4% strongly agreed indicating a significant portion of respondents who holds a very positive view of the service quality, 53.6% of the respondents agreed that NHIF employees are courteous and knowledgeable indicating the majority of customers who have a favourable opinion of the service provided by NHIF employees, 15.4% of the respondents had a neutral stance regarding the statement. These customers neither agree nor disagree with the statement suggesting a lack of strong opinion or a need for further clarification. A small number 7.7% of the respondents disagreed with the statement which represents a very small percentage of customers who were dissatisfied with the service quality.

The respondents 1.9% strongly disagreed with the statement, this represents a very small percentage of customers who had a highly negative perception of the services provided by NHIF employees. In general, it can be concluded that a substantial 75% of total respondents expressed agreement (Strongly Agreed or Agreed) that NHIF employees are courteous and knowledgeable, indicating a prevailing favourable view of the service quality provided by NHIF employees. Conversely, a relatively small fraction of respondents, totalling just 9.6%, expressed disagreement (Strongly Disagreed or Disagreed), suggesting a minor portion with a negative perception of NHIF employees in terms of courtesy and knowledge. However, the average mean

rating of 3.85 suggests that, on average, respondents tended to agree with the statement, signifying an overall positive perception of the service assurance provided by NHIF employees. These findings collectively indicate that NHIF has succeeded in maintaining a predominantly positive image of courteous and knowledgeable employees, with only a minority expressing dissatisfaction. In line with these results, Noor *et al.*, (2023) on the study, the influence of service quality dimensions on customer satisfaction in Indonesia found that there is a positive influence of guarantee variables on consumer satisfaction. This implies that employees at NHIF conveys trust to customers in the business, and of course, the business must provide a sense of security to its customers, namely the feeling that they are safe from physical danger, risk, and uncertainty.

The findings of the study on the statement NHIF employees are competent and experienced with procedural steps for service revealed that 20.1% strongly agree with the statement, 48.4% agreed, 20.3% Neutral, 8.0% Disagree while 3.3% strongly disagreed. The combined percentage of respondents who either strongly agree or agree 68.5% indicates that a significant majority of the respondents believe that NHIF employees are competent and experienced with the procedural steps for services. This shows that there is a positive perception of the employees' ability by NHIF customers. The percentage of respondents who selected neutral option 20.3% indicates that a portion of the respondents neither agree nor disagree with the statement which implies that they are not sure or have mixed opinions about the competence and experience of NHIF employees. However, the combined number of respondents who either disagreed or strongly disagreed 11.3% indicates that there is a small but notable portion of customers who have negative perceptions regarding the employees' abilities.

Additionally, the average mean of 3.74 indicates that on average, the respondents leaned towards agreement with the statement. This suggests that, overall, NHIF customers have a positive view of the competence and experience of NHIF employees in handling procedural steps for services. The results of this research are in line with research conducted by Zulganef and Hodijah, (2023) that there is a positive effect of assurance on consumer satisfaction. The observed results suggest that NHIF has a predominantly positive image among its customers when it comes to employee

competence and experience with procedural steps for services. This favourable perception can contribute to enhanced trust and satisfaction levels among customers. However, NHIF has not invested much in employee training and development to maintain and further improve these positive perceptions. It also failed to address the concerns of the small portion of customers with negative perceptions which may be making the respondents dissatisfied with the quality of service.

The findings regarding NHIF employees' cordial attitude and commitment to keeping promises show a spectrum of perceptions among respondents. A combined figure of 56.1% (SA and A) indicates that a significant majority had a positive view of NHIF employees in terms of their cordial attitude and promise-keeping. This suggests that most respondents perceived NHIF employees as being friendly and reliable in fulfilling commitments. In contrast, a notable percentage of respondents, 26.4%, opted for the neutral option, indicating a lack of strong opinion or mixed feelings about this aspect of NHIF employee behaviour. This group may require further exploration to understand their specific concerns or uncertainties. On the negative side, a combined figure of 17.5% (disagreed and strongly disagreed) reflects a minority of respondents with a negative perception of NHIF employees' cordial attitude and commitment to keeping promises.

The average mean score of 3.5 suggests that, on average, respondents leaned towards agreement with the statement. However, this average also indicates that there is room for improvement in enhancing NHIF employees' cordial attitude and commitment to promise-keeping. These discoveries are in accordance with the discoveries of Peter and Batonda, (2022) in Tanzania who uncovered that service assurance has a positive and significant influence on customer satisfaction. The findings imply that a majority of respondents perceive NHIF employees as having a positive and reliable cordial attitude with a commitment to keeping promises. However, a significant portion remained neutral, indicating some uncertainty or lack of strong opinion. The presence of a minority with negative perceptions highlights the need for improvement, despite an average leaning towards agreement, suggesting room for enhancing NHIF employees' behaviour in these areas to further enhance customer satisfaction.

The findings of the study on whether NHIF has the ability to convey trust and confidence to customers or not showed that 21.2% of the respondents strongly agreed

which suggests that a significant portion of respondents strongly believes in the trustworthiness and reliability of NHIF. The respondents 41.8% agreed that NHIF conveys trust and confidence to customers. This indicates a positive perception of NHIF's ability to inspire trust and confidence among a significant portion of respondents. a small portion of respondents 21.4% which is approximately one-fifth of the respondents remained neutral in their opinion regarding NHIF ability to convey trust and confidence. The respondents 9.9% disagreed with the statement indicating that they do not perceive NHIF as having the ability to convey trust and confidence to their customers which raises concern about lack of trust among this group of respondents. However, the smallest percentage of respondents, 5.8% strongly disagreed that NHIF conveys trust and confidence which indicates that they have a negative perception of NHIF's credibility.

The average mean of 3.63 indicates that, on average, respondents leaned towards agreement with the statement that NHIF has the ability to convey trust and confidence to customers. The overall mean response rating on service assurance to enhance customer satisfaction by NHIF employees was 3.69 which indicates that service delivery in NHIF Bungoma County is generally at a satisfied level. The findings implied that most of the respondents have a positive perception regarding employee's actions and NHIF in general in terms of service assurance. The results were consistent with the research conducted by Chege *et al.* (2019), which indicated that a customer who perceives Service Assurance from their insurer is more likely to experience higher satisfaction compared to a customer who does not perceive it. The findings however, disagreed with the study findings by Oruko,(2019) who established that tangibility, reliability, responsiveness and assurance did not have a significant effect on customer satisfaction. The study's findings reveal a generally positive customer perception of NHIF employees' courtesy, knowledge, competence, and experience in handling services. A significant majority of respondents viewed NHIF employees favourably in terms of courtesy and knowledge, reflecting the organisation's success in creating a positive image of its staff, which is essential for bolstering customer satisfaction.

Additionally, customers have confidence in NHIF employees' competence and experience, signifying effective training and development efforts. While NHIF

generally conveys trust and confidence to many customers, there are pockets of distrust that the insurance has not put more attention. The average mean ratings suggest a positive leaning but also indicate room for improvement, with the overall service delivery in NHIF Bungoma County rated as satisfied but not strongly satisfied. These findings in general show that the NHIF customers in the Informal sector within Bungoma county experiences what they expected thus enhancing their satisfaction with service assurance as postulated by Expectancy Disconfirmation Theory.

However, the study aimed to investigate the relationship between service assurance and customer satisfaction. To explore this relationship, Pearson's Product Moment correlation analysis was conducted with a confidence level of 0.05 (Table 17)

Table 17: Correlation between Assurance and Customer satisfaction

		Assurance	Customer Satisfaction
Assurance	Pearson Correlation	1	.671**
	Sig. (2-tailed)		.000
	N	364	363
Customer Satisfaction	Pearson Correlation	.671**	1
	Sig. (2-tailed)	.000	
	N	363	363

Pearson Product Moment correlation results indicated in Table 17 revealed that the r-value was 0.671 implying that there was a positive correlation between assurance and customer satisfaction. Study findings implied that there is a strong association between assurance and customer satisfaction.

Furthermore, an ordered logistic regression analysis was conducted to assess the influence of service reliability dimensions on customer satisfaction. Among the seven explanatory variables tested, five were found to be statistically significant: Age, employee's knowledge, competence, cordial attitude, and trust. Notably, customer satisfaction, measured on a 5-point Likert scale with discrete values ranging from 1 (strongly disagree) to 5 (strongly agree), was treated as an ordered categorical variable in the regression model. The results of the analyses provide insights into the predicted likelihood of higher customer satisfaction based on these seven variables.

Table 18: Regression analysis results on the effect of assurance and customer satisfaction.

		Estimate	Std. Error	Wald	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Threshold	[CS = 1.00]	3.720	0.751	24.526	0.000	2.247	5.192
	[CS = 2.00]	5.768	0.750	59.142	0.000	4.298	7.238
	[CS = 3.00]	7.442	0.791	88.570	0.000	5.892	8.992
	[CS = 4.00]	9.857	0.859	131.550	0.000	8.172	11.541
Location	Gender	0.297	0.207	2.065	0.151	-0.108	0.702
	Age	0.206	0.100	4.294	0.038	0.011	0.402
	Education	-0.022	0.074	0.090	0.764	-0.168	0.123
	Employees' knowledge	0.444	0.139	10.152	0.001	0.171	0.717
	Employee's competence	0.527	0.141	13.937	0.000	0.250	0.804
	cordial attitude	0.560	0.125	19.938	0.000	0.314	0.806
	Trust	0.480	0.121	15.677	0.000	0.242	0.718

Link function: Complementary Log-log

The analysis provided estimates, standard errors, Wald statistics, significance levels (p-values), and confidence intervals for each predictor variable. The thresholds were identified to demarcate satisfaction levels, unrelated to predictor variables. Among the demographic characteristics, only Age exhibited significance ($p = 0.038$) at a significant level of 5%, implying that higher Age is associated with increased log odds of greater customer satisfaction. All four service assurance dimensions (employee courteousness and knowledge, employee's competence and experience, cordial attitude, employee trust) were found to be statistically significant predictors of customer satisfaction, with estimated coefficients indicating positive associations. Specifically, an increase in employee's courteousness and knowledge led to a 0.444 increase in log odds ($p = 0.001$) at a significant level of 1%, employee's competence and experience resulted in a 0.527 increase ($p < 0.001$) at a significant level of 1%, cordial attitude showed a 0.560 increase ($p < 0.001$) at a significant level of 1%, and employee's trust exhibited a 0.480 increase ($p < 0.001$) at a significant level of 1% in log odds of higher customer satisfaction.

The higher coefficient value of employees' cordial attitude as compared to the others implies that predicting the power of prompt service delivery is the best of all. These findings were supported by key informant interview who stated that:

“NHIF employees undergo comprehensive training on data security, attitude and positive care when handling customers, confidentiality, and the importance of protecting beneficiary

information. Regular awareness campaigns are also conducted to reinforce the significance of maintaining privacy and confidentiality” (KII 2, 8th July, 2023).

The results suggest that customer satisfaction is significantly influenced by how NHIF employees interact with beneficiaries. A cordial attitude involves being friendly, respectful, and helpful towards customers. This finding highlights the importance of interpersonal skills in delivering a positive customer experience. It is supported by comprehensive training and awareness campaigns aimed at ensuring a positive customer service culture, as well as a focus on data security and confidentiality.

The next higher coefficient value 0.415 is found in employees’ competence and experience, which indicates a strong relationship between employees’ competence and experience and customer satisfaction. The coefficient value of employees’ ability to convey trust which also reveals strong relationships with customer satisfaction. The coefficient values of employees’ ability to convey trust, and employees’ courteousness and knowledge are 0.48 and 0.444 respectively, which indicate positively and statistically predicting customer satisfaction. The results were supported by the key informant during interview who said that;

“NHIF conducts regular security audits to identify vulnerabilities and potential threats to our systems. This proactive approach allows us to address any weaknesses promptly and ensure that our systems remain secure” (KII 1, 15th July, 2023).

“All NHIF staff members are required to sign confidentiality agreements, which legally bind them to protect the privacy of beneficiaries' information. Breaching these agreements may lead to disciplinary actions or legal consequences” (KII 5, 10th July, 2023).

“NHIF has integrated secure payment systems to ensure that beneficiaries' financial information, such as credit card details or bank accounts, are handled safely during premium payments and reimbursement processes” (KII 6, 30th July, 2023).

“NHIF ensures strict adherence to data protection laws and regulations in Kenya, such as the Data Protection Act, to maintain the confidentiality and privacy of beneficiary data. NHIF also continuously updates its systems and applications to stay ahead of potential security threats. Patch management is diligently undertaken to address known vulnerabilities promptly”
(KII 8, 9th July, 2023).

The findings from key informant interviews indicates that NHIF's proactive approach to security, confidentiality agreements for staff, secure payment systems, adherence to data protection laws, and continuous system updates enhances positive perception of customers towards its service delivery.

These findings suggest that service assurance dimensions, particularly employee courtesy, competence, cordial attitude, and trust, are critical factors influencing customer satisfaction. NHIF has focused on enhancing these dimensions to improve overall customer satisfaction. Additionally, recognizing the influence of customer age on satisfaction highlights the importance of segment-specific strategies to meet diverse customer expectations. The null hypothesis for each predictor variable tests whether it has no effect on customer satisfaction, meaning the coefficient is equal to zero. In all cases, the null hypothesis is rejected ($p < 0.05$) for employee courteousness and knowledge, employee's competence and experience, cordial attitude and employee's trust, indicating that service assurance has a positive and statistically significant effects on customer satisfaction. These findings disagreed with the results of a research study by Chepchumba, (2020) who found out that there existed an insignificant relationship between assurance and guest satisfaction meaning assurance had no impact whatsoever on the satisfaction of guests. The study findings indicate that, in line with Expectancy Disconfirmation Theory (EDT), surpassing customer expectations in employee courtesy, knowledge, competence, and experience positively influences satisfaction, underscoring the crucial role of perceived cordiality and trustworthiness in enhancing overall customer satisfaction beyond initial expectations. The implication of this result is that meeting or exceeding customer expectations in service assurance dimensions positively influences customer satisfaction.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Overview

This chapter presents a summary of the research, including its key findings. The chapter also draws the conclusions of the study based on the objectives and the findings. It also makes recommendations for policy and practice as well as identifying areas that need further research on the topic of study.

5.2 Summary of the Major findings

5.2.1 Customer satisfaction

In assessing the level of satisfaction among NHIF customers regarding the quality of services, a five-point Likert scale was employed. The results demonstrated a significant consensus, particularly among respondents primarily hailing from the informal sector, where 61.7% expressed satisfaction (comprising both highly satisfied and satisfied individuals). This finding suggests an overall positive perception of NHIF services meeting their quality expectations. The mean average rating, calculated at 3.61, slightly above the midpoint of the scale, indicates that, on average, respondents leaned towards agreement with the statement, underscoring the generally positive sentiment within this distinct group of NHIF customers. This implies that customers, as a whole, are satisfied with the quality of services provided by NHIF in Bungoma County.

5.2.1.2 Influence of employees' empathy on customer satisfaction

The Study findings on employees' empathy revealed that the mean response rating was 3.75 which implied that most of the respondents agreed that employee empathy has a positive influence on customers' satisfaction. This meant that empathy as a service was rated high by respondents. In order to establish the relationship between empathy and customer satisfaction, Pearson Product Moment correlation and ordered logit regressions were performed. Correlation results revealed that there was a positive correlation between empathy and customer satisfaction.

The ordered logistic regression analysis aimed to determine the significance of the relationship between empathy and customer satisfaction, considering predictor variables such as personal attention, convenient operating hours, understanding

customer needs, and a caring attitude. The study's key findings revealed that personal attention exhibited a statistically significant positive relationship with customer satisfaction ($\beta = 0.363$, $p = 0.003$, significant at 1% level), addressing customer needs also emerged as a significant predictor of customer satisfaction ($\beta = 0.406$, $p = 0.004$, significant at 1% level), and a caring attitude among NHIF employees was found to be significantly associated with customer satisfaction ($\beta = 0.464$, $p = 0.001$, significant at 1% level). However, convenient operating hours did not show statistical significance ($\beta = 0.048$, $p = 0.710$, not significant) In general, the findings indicated that empathy significantly predicts customer satisfaction thus the null hypothesis that there is no relationship between employees' empathy and customer satisfaction was rejected.

5.2.1.3 Influence of service responsiveness on customers' satisfaction

The study aimed to assess the impact of service responsiveness on customer satisfaction. The analysis revealed that the mean response rating for service responsiveness was 3.72, indicating that respondents rated it highly, signifying good service responsiveness among NHIF employees. To determine the relationship between service responsiveness and customer satisfaction, the study utilised Pearson product-moment correlation and ordered logistic regression. The findings showed a positive correlation between service responsiveness and customer satisfaction. Ordered logistic regression was performed to assess the statistical significance of the relationship between various aspects of service responsiveness (prompt action, willingness to help, prompt service delivery, flexibility) and customer satisfaction.

The findings indicate that while Prompt action showed a weak indication of a relationship with customer satisfaction ($\beta = 0.243$, $p = 0.073$, slightly above the 0.05 threshold), it did not reach statistical significance. However, Willingness to help exhibited a significant positive influence on customer satisfaction ($\beta = 0.415$, $p = 0.009$, significant at the 1% level). Prompt Service Delivery had the most substantial impact, showing strong statistical significance at the 1% level ($\beta = 0.709$, $p < 0.001$), while Flexibility in Service Delivery demonstrated statistical significance at the 5% level ($\beta = 0.250$, $p = 0.036$). These results emphasise that willingness to help, prompt service delivery, and flexibility in service delivery significantly enhance customer

satisfaction. Based on the results above, the null hypothesis that there is no relationship between service reliability and customer satisfaction was rejected.

5.2.2 Influence of Reliability on customers' satisfaction

The study's objective aimed to assess the impact of service reliability on customer satisfaction. Descriptive statistics indicated that the mean response rating for reliability was 3.62, suggesting that a majority of respondents rated reliability as good. Pearson Product Moment correlation analysis showed a positive association between reliability and customer satisfaction. Subsequently, ordered logistic regression was conducted to determine the significance of the relationship between different dimensions of reliability (dependable and accurate service, accurate record-keeping, promise-keeping, time-keeping) and customer satisfaction. It was found that dependable and accurate service had a strong and statistically significant positive effect ($\beta = 0.657$, $p < 0.001$), indicating that higher levels of dependable and accurate services significantly increase the likelihood of higher customer satisfaction. Conversely, accurate record-keeping did not exhibit statistical significance ($\beta = 0.184$, $p = 0.131$), suggesting it does not strongly influence customer satisfaction. However, promise-keeping displayed a significant positive effect ($\beta = 0.363$, $p = 0.003$), as did time-keeping ($\beta = 0.521$, $p < 0.001$), both at a significant level of 1%, implying that higher levels of promise-keeping and punctuality are associated with increased odds of higher customer satisfaction. In general, the findings indicated that reliability significantly predicts customer satisfaction thus the null hypothesis was rejected.

5.2.3 Influence of service assurance on customers' satisfaction

The study aimed to determine the impact of service assurance on customer satisfaction. Descriptive statistics showed that the mean response rating for service assurance was 3.69, indicating that respondents rated assurance as good among NHIF employees. Ordered logistic regression analysis was conducted to assess the significance of the relationship between service assurance and customer satisfaction. The results revealed that service assurance significantly predicted customer satisfaction. All four dimensions of service assurance: employee's courteousness and knowledge, employee's competence and experience, cordial attitude, and employee's trust were highly significant predictors of customer satisfaction at a 1% significance level. Specifically, an increase in employee's courteousness and knowledge,

competence and experience, cordial attitude, or trust resulted in meaningful increases in the log odds of achieving higher levels of customer satisfaction, with respective symbols of $\beta = 0.444$, $\beta = 0.527$, $\beta = 0.560$, and $\beta = 0.480$. In general, service assurance was a strong predictor of customer satisfaction. Based on the analysis above, the null hypothesis that there is no relationship between assurance and customer satisfaction was rejected.

5.3 Conclusions

Quality of service literature postulates that there exists a relationship between service quality dimensions and customer satisfaction which this study supports. Furthermore, the findings indicate that the various dimensions of service quality have distinct effects on shaping customer satisfaction. Assurance was found to have the highest impact followed by reliability, followed by Responsiveness and lastly employees' empathy. all the four dimensions were highly rated and it was concluded that NHIF offers high quality of services in all the four major areas.

The following are conclusions made as per objectives of the study:

The findings showed that employee empathy as a service is a predictor of customer satisfaction. This was evidenced by findings from descriptive statistics which revealed that the mean response rating was 3.75 which indicated that empathy has a positive influence on customer satisfaction. Furthermore, ordinal logistic regression results showed that empathy, as measured through personal attention, addressing customer needs, and fostering a caring attitude among NHIF employees, significantly influences customer satisfaction. Specifically, personal attention, customer needs, and a caring attitude were all strong and statistically significant predictors of customer satisfaction. However, the availability of convenient operating hours did not show a significant impact on customer satisfaction. The study therefore concluded that an improvement in employees' empathy results in a positive change in customer satisfaction.

The findings of the relationship between responsiveness and customers' satisfaction showed that responsiveness as a service is a predictor of customer satisfaction. This was evidenced by findings from descriptive statistics which revealed that the mean response rating for service responsiveness was 3.72, indicating that respondents rated it highly, signifying good service responsiveness among NHIF. Additionally, ordinal

logistic regression results showed that service responsiveness (prompt action, willingness to help, prompt service delivery, flexibility) has a positive relationship with customer satisfaction. Willingness to help, prompt service delivery, and flexibility exhibited a significant positive influence on customer satisfaction while Prompt action showed a positive relation though statistically insignificant the study findings revealed that service responsiveness influences customer satisfaction. The study therefore concluded that an improvement in service responsiveness results in a positive change in customers' satisfaction.

The findings on the relationship between service reliability and customers' satisfaction showed that reliability as a service is a predictor of customer satisfaction. This was evidenced by findings from descriptive statistics which revealed that the mean response rating for service responsiveness was 3.62, indicating that respondents rated it highly, signifying respondents perceives that NHIF services are dependable. Additionally, ordinal logistic regression results showed that service reliability as measured by dependability and accurate services, accurate record keeping, promise keeping, and time keeping had a positive relationship with customer satisfaction. While dependability and accurate service, promise keeping and time keeping showed a positive significant relationship, record keeping had a positive insignificant relation with customer satisfaction. The study therefore concluded that improvement in reliability as a service dimension will result in improved customer satisfaction at NHIF department.

Furthermore, the findings on the relationship between service assurance and customer satisfaction established that, service assurance positively influences customer satisfaction at NHIF department. This was Confirmed by findings from descriptive statistics which revealed that the mean response rating was 3.69 which indicated that assurance has a positive influence on customer satisfaction. Moreover, ordinal logistic regression results showed that assurance, as measured through employee's courteousness and knowledge, competence and experience, cordial attitude, or trust, positively and significantly influences customer satisfaction. Specifically, personal attention, customer needs, and a caring attitude were all strong and statistically significant predictors of customer satisfaction. The study therefore concluded that an improvement in assurance dimensions results in a positive change in customer

satisfaction. The study thus concluded that improvement in assurance as a service will result in a positive change in customer satisfaction.

5.4 Recommendations

Based on the findings and conclusions of the study, the following recommendations were made: Since employees' empathy as a service positively influences customer satisfaction, the study recommended that NHIF employees should prioritise empathy in their interactions with clients. This entails nurturing qualities like patience and active listening skills to better comprehend and address clients' needs effectively. To further bolster this aspect, NHIF management should consider organising seminars and workshops to provide training for employees in empathy-driven service delivery. Additionally, initiatives aimed at educating customers about their rights and responsibilities concerning NHIF services should be implemented to empower them in their interactions with the healthcare system.

The study highlights the pivotal role of service responsiveness in shaping customer satisfaction. Hence, NHIF employees should consistently exhibit high levels of responsiveness by promptly attending to client inquiries and adapting to their specific requirements. Cultivating a strong rapport between NHIF employees and customers is of paramount importance. Administrative oversight mechanisms should be in place to ensure that services are delivered in a timely manner. Furthermore, NHIF should establish effective feedback mechanisms to continuously improve service delivery and meet evolving customer expectations.

As reliability significantly influences customer satisfaction, government agencies should maintain regular oversight to ensure the effectiveness of service delivery within NHIF. Robust measures should be implemented to address any violations of established guidelines, promoting a culture of accountability among NHIF employees. Regular monitoring, evaluation, and auditing procedures should be conducted to ascertain compliance with service standards. NHIF management must champion transparency, promote public participation, and encourage feedback to enhance customer satisfaction. When allocating resources, assurance dimension should be given more allocation since it has the highest impact on customer satisfaction. Similarly, the status of communication materials should also be emphasised since it's the main factor influencing customer satisfaction.

NHIF should employ systematic assessments, in line with the Expectancy Disconfirmation Theory, to gauge customer expectations and perceptions and engage in proactive customer communication to manage and align their expectations effectively. Government should periodically review and update the regulatory framework to ensure it operates within a well-defined legal structure to enhance transparency, accountability, and overall service delivery effectiveness, all in harmony with the principles of the Expectancy Disconfirmation theory.

Additionally, customers should actively engage with NHIF by providing feedback, communicating expectations, staying informed about their rights, and advocating for their needs collectively. This collaborative effort between NHIF and its customers is crucial for fostering a more empathetic, responsive, and reliable healthcare system.

5.5 Recommendations for Further Research

Based on the conclusions drawn from the study above, the following areas can be explored in further research to deepen our understanding and potentially improve service delivery. Here are some recommended areas. First, we collected cross sectional data which has the limitation of making causal inferences. Future studies are recommended to collect longitudinal data. Second, our data was collected from the existing users of NHIF services in Bungoma county and the majority of them were from the Luhya community. Future scholars should consider replicating the research model using samples from other counties. The study also recommends comparative studies between NHIF and other health insurance providers to understand how different service quality factors impact customer satisfaction in various contexts. To Explore customer expectations regarding service quality in the healthcare and insurance industries.

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APPENDICES

Appendix I: Questionnaire

Dear respondent,

My name is **Ambrose Khisa**, a student at Moshi Co-operative University pursuing a Master's Degree in Business Management. This questionnaire is designed to gather information for academic research titled "*The impact of NHIF service quality on the customer satisfaction in Bungoma County*". Your responses will be used solely for the purpose of this research and will remain confidential. Please answer the questions as accurately and honestly as possible. Thank you for taking time to participate in this research, your feedback and input are valuable to the success of this study.

SECTION A:

SOCIO-DEMOGRAPHIC CHARACTERISTICS

Instructions:

Please tick (√) the appropriate answer

- 1) Gender of the respondent

Male	
Female	

- 2) Age range of the respondent

20	21-35	36-50	51-65	66-80	81 and above

- 3) Education level

Primary	Secondary	Tertiary certificate	Diploma	Degree	Master Degree	PHD

SECTION B: EMPATHY

- 4) For each statement Please tick (√) to indicate the degree to which you agree or disagree with the statement.

Phrase	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The NHIF employees gives customers personal attention					
The NHIF employees have operating hours convenient to all its customers					
The NHIF has employees who understand the needs of their customers.					
The NHIF has employees who have a caring attitude toward its customers.					

SECTION C: RESPONSIVENESS

- 5) For each statement Please tick (√) to indicate the degree to which you agree or disagree with the statement.

Phrase	Strongly agree	Agree	Neutral	Strongly disagree	Disagree
Employees take action promptly when I make a complaint.					
Employees in NHIF are always willing to help me if I have problems with services provided					
Employees in NHIF give prompt services.					
Employees at NHIF are flexible on service delivery.					

SECTION D: RELIABILITY

- 6) For each statement Please tick (√) to indicate the degree to which you agree or disagree with the statement.

Phrase	Strongly agree	Agree	Neutral	Strongly disagree	Disagree
The NHIF performs the promised services dependably and accurately					
NHIF keeps its records accurately.					
NHIF does what it says it will do.					
NHIF provides its services at the promised time.					

SECTION E: ASSURANCE

- 7) For each statement Please tick (√) to indicate the degree to which you agree or disagree with the statement.

Statement	Strongly agree	Agree	Neutral	Strongly disagree	Disagree
Employees at NHIF are courteous and knowledgeable					
Employees in NHIF are competent and experienced with procedural steps for services.					
NHIF employees have Cordial attitude and keeps their promises					
NHIF has the ability to convey trust and confidence to customers					

SECTION F: CUSTOMER SATISFACTION

- 1) 8. For each statement Please tick (√) to indicate the degree to which you agree or disagree with the statement.

Phrase	Strongly agree	Agree	Neutral	Strongly Disagree	Disagree
The NHIF service met my expectations in terms of quality.					
Overall, I am satisfied with the service provided by NHIF.					
I found the NHIF staff to be helpful and knowledgeable.					
I would recommend NHIF to others based on my experience with their service quality.					


Appendix II: Interview Guide

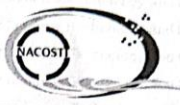
1. How does NHIF ensure that its services are delivered with empathy towards customers?
2. How does NHIF measure its responsiveness to customer needs and concerns, and what steps are taken to improve this?
3. How does NHIF ensure that its services are reliable, and what mechanisms are in place to address any service disruptions?
4. What steps does NHIF take to assure customers that their personal and medical information is secure and confidential?
5. Can you provide an example of a time when NHIF went above and beyond to provide exceptional customer service?
6. How does NHIF gather feedback from customers to identify areas for improvement?
7. How does NHIF ensure that all staff are trained to deliver high-quality customer service, and what ongoing training is provided?
8. How does NHIF address customer complaints, and what steps are taken to prevent similar issues from occurring in the future?
9. How does NHIF ensure that its services are accessible and inclusive for all customers, including those with disabilities or language barriers?
10. How does NHIF balance the need for cost-effective services with the goal of providing high-quality customer service?

Appendix III: Document Checklist

Document	Information Required	Findings	Remarks
NHIF annual reports (2019-	Level of NHIF customer Retention		
Ministry of health annual reports (2019-2022)	Number of people subscribed to NHIF and accredited hospitals		


Appendix IV: Research Permit


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Appendix V: Plagiarism report

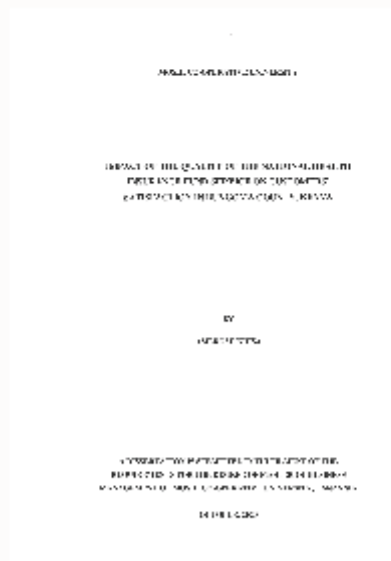


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IMPACT OF THE QUALITY OF THE NATIONAL HEALTH INSURANCE FUND SERVICE ON CUSTOMERS' SATISFACTION IN BUNGOMA COUNTY, KENYA

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**INFLUENCE OF EMPLOYEES' EMPATHY ON CUSTOMERS'
SATISFACTION IN THE NATIONAL HEALTH INSURANCE FUND IN
BUNGOMA COUNTY, KENYA**

By

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Abstract

The purpose of the study was to establish the influence of empathy dimension on customer satisfaction in Bungoma county, Kenya. The study was guided by the following research objective: to examine the influence of employees' Empathy on customers' satisfaction. The study was anchored on the expectancy disconfirmation theory and adopted a cross section research design. The target population of the study was 3999 respondents who were NHIF subscribers under SUPA cover in 45 wards within Bungoma county. A total of 364 respondents were sampled of which all participated in the study giving a response rate of 100 percent. Data was collected using Questionnaires, interview guide and documentary review. Validity of data collection instruments was determined by principal component analysis technique. In addition, the instrument was given to a panel of experts and peers for examination and the tool modified accordingly after a pilot study in the neighbouring Busia County. Reliability and Validity indices were determined using Cronbach alpha. Both descriptive and inferential statistics were used in data analysis with the help of SPSS program version 25. In addition, the study also used thematic analysis to interpret qualitative data. Descriptive statistics involved frequencies, percentages and mean, while inferential statistics involved the use of Pearson's product moment correlation, ordered logistic model while thematic analysis used themes. Data was presented using tables and graphs. Results indicated that empathy was a significant predictor of customer satisfaction. The study recommended that there should be regular auditing at the NHIF department to ensure that employees are accountable for their services. NHIF management should promote public participation and regular feedback to enhance customer satisfaction with service delivery.

Key words: Kenya, Customer Satisfaction, National Health Insurance Fund, Bungoma County

1.0 Introduction

The global insurance industry is characterised by inconsistency in service delivery and customers have continued to demand the same level of service every time a service has been rendered. The industry's recent objective is to increase its market share but can only achieve this objective if they are able to recruit new customers as well as retain the old one (I.R.A, 2022). Only insurance companies that dedicate their effort in delivering high quality services will survive and achieve sustainable growth and profitability (Agha et al., 2017). In Germany, the health insurance sector has experienced increased competition, coinciding with a shrinking customer base and challenging economic conditions. Studies show that customer satisfaction significantly influences the decision to remain with a particular insurer (Ndebele *et al.*, 2021). Germany's health insurance system, which dates back to 1883, has expanded over time. However, despite its historical significance, the quality of service provided by the National Health Scheme (NHS) in Germany is perceived to be not satisfactory, leading individuals to opt for private health insurance (Focacci and Perez, 2022). The creation of the NHS in the UK in 1948 aimed to provide universal healthcare funded through general taxation, but issues regarding service quality remain a concern for policyholders (Bowles *et al.* 2023). To address this issue, companies in these countries need to focus on dimensions of service quality, such as responsiveness, reliability, assurance, empathy, and tangibles, to meet customers' expectations and improve the overall service quality of medical insurance schemes.

In Ghana, the National Health Insurance Scheme (NHIS) provides coverage for approximately 95% of the disease burden among its citizens (Nketiah-amponsah *et al.* 2019). Nonetheless, the scheme does not cover chronic illnesses such as cancer and renal diseases, which require substantial financial resources for treatment. As a result, Ghanaians are left with significant medical bills to pay. This situation raises concerns about service quality dimensions and satisfaction, particularly when considering the SERVQUAL model. Efforts should be made to bridge the gaps in coverage and improve service quality to ensure that health insurance schemes effectively meet the needs of the population in Ghana and other Sub-Saharan African countries.

Kenya National Hospital Insurance Fund is One of the earliest public insurance programs in Africa which was established in 1966 by an Act of Parliament. NHIF was established as a department within the health ministry in accordance with Kenya

statute section 255. The main goal of the National Health Insurance fund (NHIF) was to guarantee that all Kenyans have access to affordable, high-quality medical care. All workers in the formal sector are required to join NHIF, hence the statute requires all employers to automatically collect and return the required amount through payroll. But contributory membership is available to those who work by themselves or in the informal sector. While the county government of Bungoma has made investments in healthcare infrastructure and encouraged residents to subscribe to NHIF services, improvement is needed to enhance customer satisfaction. Therefore, the aim of the study is to examine the Influence of Empathy on customer satisfaction in Bungoma County, Kenya.

The National Health Insurance Fund (NHIF) is a vital pillar in extending essential healthcare coverage and financial security to subscribers across Kenya. However, a pronounced issue has recently emerged, highlighting a significant deficiency: a notable lack of empathy displayed by NHIF employees towards their valued customers. This empathy gap has resulted in a tangible decline in the quality of service provided, consequently intensifying customer dissatisfaction. This unfavourable chain of events casts an apprehensive shadow over the overall efficiency and success of the NHIF scheme. NHIF members, who rely on this system not only for comprehensive healthcare but also for financial protection, are grappling with a concerning disconnect attributed to the evident lack of empathy, compassion, and understanding exhibited by NHIF staff. This marked deficiency in empathy acts as a catalyst, inevitably leading to reduced customer satisfaction and undermining the very bedrock of NHIF's service quality. Chesire, (2021) in the study on the NHIF service quality and satisfaction in Kenya, Langata sub county found that subscribers' health insurance satisfaction level increased with the cost of the service though insignificant. The study by Oyando *et al.*, (2022) on service Responsiveness found out that NHIF benefit package inadequately covered the range of services needed by people living with non-communicable diseases (NCD) and the benefits package did not prioritise preventive and promotive services. A client who perceives empathy from his/ her insurer's employees is bound to have higher satisfaction than a customer who does not perceive empathy from their insurer (Chege *et al.* 2019). These studies shed light on the pressing need for a healthcare service approach that encompasses not only comprehensiveness but also empathy. Despite governmental initiatives to

enhance NHIF services—digitization, increased budget allocation, expanded coverage, and stringent quality control measures for accredited healthcare facilities—concerns regarding service quality persist. These concerns encompass potential customer disillusionment, grievances, and the looming prospect of customers seeking alternative options. At the heart of this study lies an exploration of the intricate interplay between empathy and customer satisfaction within NHIF's operational framework. By delving into the nuances of how customers perceive empathy from NHIF personnel and its subsequent influence on their satisfaction levels, this research positions itself to bridge a pivotal gap that marks the existing body of knowledge. It is noteworthy that this study aims not only to pinpoint this gap but also to address it strategically through recommendations rooted in theoretical robustness and practical feasibility. The projected outcomes of this research, along with the ensuing recommendations, carry profound implications for key stakeholders—including NHIF, policymakers, healthcare providers, and subscribers. As the study unveils the pivotal role of empathy in enriching customer satisfaction, its ultimate aspiration is to cultivate a harmonious synergy between theoretical insights and pragmatic implementation. In doing so, it endeavours to facilitate an improved provision of services, nurturing a more content and engaged subscriber base. The objective of the study was to establish the influence of Empathy on customer satisfaction at National Health Insurance in Bungoma County, Kenya. The study tested the following null hypothesis:

H₀: Empathy does not have a significant influence on customer satisfaction at National Health Insurance in Bungoma County, Kenya.

The study aligns with Sustainable Development Goal 3 and Africa's Vision 2063 by enhancing healthcare, inclusivity, regional integration, and data-driven decisions. In Kenya, affordable healthcare is vital for universal coverage. Health insurance is key, as studies show it affects service use. The study benefits NHIF management, guiding service standards, strategies, and compliance. NHIF-accredited hospitals and policymakers also gain insights into improving service quality and client satisfaction. The research contributes to healthcare knowledge and consumer satisfaction research.

2.0 Theoretical Framework

In assessment of the service quality, the expectancy disconfirmation theory serves as a valuable framework for comprehending customer satisfaction and assessing service

quality. It operates on the premise that customers enter a service interaction with certain expectations, which can be influenced by a range of factors, and then gauge their satisfaction based on the disparity between these expectations and their actual experiences. This theory not only identifies the positive, negative, or neutral disconfirmation that occurs but also highlights the direct correlation between the extent of disconfirmation and customer satisfaction (Nazari and Abdekhoda, 2021). While the theory simplifies the multifaceted nature of customer satisfaction and may overlook emotional elements, it offers practical utility and clarity to both researchers and practitioners. Its adaptability across diverse industries, supported by empirical evidence, makes it versatile, allowing businesses to manage service quality, identify areas for improvement, and promote a customer-centric approach. In this study, the Expectancy-Disconfirmation Theory provided a structured framework for examining how NHIF members' initial expectations regarding empathy, responsiveness, reliability, and assurance aligned with their actual experiences, shedding light on their overall satisfaction with NHIF services.

Chege *et al.*, (2019) in the study which was guided with causal research design, on the Relationship between empathy dimension and customer satisfaction in the insurance industry in Kenya. The study was guided with causal research design whereby R-Gui was employed in undertaking three types of statistical analysis, that is, descriptive analysis, factor analysis and hierarchical regression. The study applied the linear mixed-effect models of structural equation model (SEM) considering the multi-level structure of the data collected to come up with the results that a client who perceives empathy from the insurer's employees is bound to have higher satisfaction than a customer who does not perceive empathy from their insurer.

The study recommended first that; insurance firm managers should implement policies that will ensure all their employees adopt empathic behaviour during their interactions with customers because employees have direct interactions with customers and hence are the primary stakeholders. These findings agree with the study findings of Bahadur *et al.*(2019) on the Effect of Employee Empathy on Service Loyalty through the intervening effect of trust and satisfaction with service employees during service interactions in China which was guided by cross-section research design. The results revealed that there was a significant effect of employee empathy

on trust in service employees and satisfaction during customer–employee interactions. Also, satisfaction with a service employee showed a significant effect on service loyalty during service interactions. This study provided valuable evidence that a client's perception of empathy from insurance employees leads to higher customer satisfaction.

Lal *et al.* (2019) investigated the prevalence, determinants, and the role of empathy and religious or spiritual beliefs on job stress, job satisfaction, coping, burnout, and mental health in the medical and surgical faculty of a teaching hospital. Objective of the study Systematically ascertained data on job stress and burnout and their antecedents and mediators in health professionals from low- and middle-income countries were scant which included to evaluate: 1) the prevalence and sources of job stress and job satisfaction, and the ways used to cope with stress; 2) the prevalence of burnout and mental distress; and 3) the influence of age, gender, empathy and religious or spiritual beliefs on job stress, satisfaction, mental health and burnout. The study adopted a cross sectional research design and targeted f 345 respondents. Findings of the study revealed that High job stress was associated with high scores for Emotional Exhaustion and Depersonalization. High scores on the Jefferson Scale of Physician Empathy correlated with high scores of Emotional Exhaustions. Religious or spiritual beliefs strongly influencing attitudes to work were significantly associated with high levels of Personal Accomplishment. These findings align with the study results of the study by Ye *et al.* (2017) on the long-term impact of service empathy and responsiveness on customer satisfaction and profitability. The main objective of the study was to examine how empathy and responsiveness influence profitability over time. The findings of the study showed that downgrading empathy and responsiveness allows firms to lower costs, resulting in immediate productivity benefits; however, this strategy has an enduring negative effect on customer satisfaction and ultimately hurts profitability in the long run. This study provided data that informed the design and implementation of interventions to improve retention and customer satisfaction.

Haming *et al.*(2019) Carried out a study to examine the application of SERVQUAL Distribution in Measuring Customer Satisfaction of Retails Company in Makassar Municipality of Indonesia Country. The research used Parasuraman's in 1985 unmodified SERVQUAL approach whereby it was conducted using a questionnaire

by purposive random sampling with 150 housewives' customers who are met while they are shopping. It was found out that the service quality dimension that had the least contribution to satisfaction is the Empathy dimension. This empathy had some indicators. Namely, the employee is patient in serving customers, and sales clerk is passionate to help even when they are busy, sales clerk informs products to the customer other than what they buy, the cashier is patient and greets the queuing customers, and greets politely any customer entering the shop. However, tangible and empathy dimensions such as product layout and lighting condition should be prioritised, and the empathy dimension whose gap value is too prominent such as peak load time condition and problem-solving adjustment.

3.0 Research Methodology

3.1 Research design

A descriptive cross sectional research design was used in this study, which means that data were gathered from diverse respondents at one time. The design calls for the use of both quantitative and qualitative approaches, which is complementary in areas where one strategy in particular falls short. To gather data on characteristics that were assessed quantitatively, quantitative approaches were employed, whilst qualitative methodologies were used to find factors that cannot be quantified statistically. The descriptive cross-sectional study approach was favoured since it uses little resources, is affordable, and allows for the simultaneous data collection from all respondents. Additionally, it helps the researcher to confirm data from surveys and interviews, providing greater depth on the issue.

3.2 Description of the study area

The study was conducted in Bungoma county with NHIF policy holders under SUPA package as the focus of this investigation. Bungoma County is a representative region of Kenya, both in terms of its demographic composition and healthcare infrastructure. Therefore, findings from this study can provide insights into the larger Kenyan context and potentially be generalised to other counties or regions in the country. However, the availability of two NHIF offices to enable Accessibility and availability of services in the county enabled the researcher to get respondents easily.

3.3 Population, sample, and sampling procedures

The study target population was 3999 respondents who were policyholders of the SUPA package. To ensure that the findings accurately reflect the opinions of both the general population and its subgroup, the respondents were chosen at random, and a simple random sample method was used.

The study employed Slovin's, (1960) mathematical formula which allowed the researcher to sample the population with a desired degree of accuracy *Bambang et al., (2021)*.

$$n = \frac{N}{1 + Ne^2} \frac{N}{1 + Ne^2}$$

Where; n is the desired sample size

N is the total population that is 3999

e is the margin of error at 95.0% confidence interval. Therefore, the desired sample size is 364 respondents.

The study's relevant respondents were chosen using stratified and simple random sampling techniques. Bungoma County was divided into 45 wards of which each ward served as a stratum for the sampling process. A simple random sampling technique was used to select respondents to ensure proportional representation of policyholders within each ward. This method gives every member of the population a chance to be chosen to participate in the study thus minimising the level of bias (Etikan and Babatope, 2019). Additionally, By employing a combination of stratified and simple random sampling, this procedure ensured that the study captures a representative sample of policyholders on the SUPA package from various wards in Bungoma County, allowing for generalisation of the findings to the target population (Rahi, 2019).

3.4 Data sources and data collection methods

The study used both qualitative and quantitative data. The two types of data were utilised to complement each other since there were some questions that required both types of data. The study utilised both primary and secondary sources of data from the respondents under study area to achieve objective and answer the research question. Primary data were obtained from NHIF subscribers in Bungoma county using questionnaires. Primary data increased the reliability of the collected data since it was collected directly from the respondents and specifically for this study's objective. The

secondary data were obtained through reviewing existing literature on the influence of Empathy dimension on customer satisfaction in published articles, magazines, and from insurance related books and websites. Secondary data were used due to its cost-effective nature. The well-structured questionnaire and Interview guide were the basic data collection tools for collection of primary data from respondents. Interview guide was used for key eight informants to facilitate in-depth collection of information from the respondents.

3.5 Data analysis

Quantitative data were analysed using descriptive statistics by use of Statistical Package for Social Sciences (SPSS 25). The descriptive statistics which include frequencies, percentages and mean were used to examine the socio-economic characteristics of the respondents. The relationship between NHIF service quality and customer satisfaction in Bungoma County was determined using a bivariate analysis of Pearson Product Correlation Index tests at a 5% level of significance. This is because the correlation technique measures the degree and the direction of the relationship between variables and the regression measures the extent of the relationship (Xu *et al.* 2022). An ordered logistic regression model was used to analyse the influence of empathy dimensions on customer satisfaction. The ordered regression model was chosen because it is useful in modelling the relationship between an ordinal response variable and one or more explanatory variables (Parry 2016). For qualitative data, messages gathered from Key Informant Interviews were analysed using thematic analysis and were transcribed, coded, themed, and contextualised under the study's specific objective.

Pearson correlation was used to examine the relationship between study variables. Correlation coefficient varies between +1 and -1. While a coefficient of +1 indicates perfect positive correlation, -1 shows negative perfect correlation. A correlation coefficient of 0, however, designates that there is no correlation between the variables.

Correlation. $(X, Y) = \frac{\sum(x-x')(y-y')}{\sqrt{[\sum(x-x')^2 \sum(y-y')^2]}}$

Where X' and Y' are the sampling means

3.6 Reliability Test

Reliability is the consistency test of a measurement or measuring instruments. The inter reliability of variables were tested using Cronbach's alpha. The Cronbach's alpha Value which is equal or greater than suggested criterion 0.7 is accepted, otherwise rejected. The ordered logistic regression statistical model was used in the study to examine the relationship between empathy and customer satisfaction. As a result, the ordered logistic regression formula below helped in describing the link between several independent variables (empathy) and a dependent variable (customer satisfaction).

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_p x_p + \epsilon$$

Where:

1. y is the dependent variable (customer satisfaction).
2. X_1 , is personal attention
3. X_2 , Convenient operating hours
4. X_3 , Understanding Customer needs
5. X_4 is caring attitude
6. β_0 is the intercept term.
7. $\beta_1, \beta_2, \beta_p$ are the coefficients associated with each independent variable.
8. ϵ represents the error term, which captures the variability not explained by the model.

The formula indicates that the dependent variable Y (Customer satisfaction) is an ordered combination of the independent Empathy variables (Personal attention, Convenient operating hours, understanding customers' needs, and Caring attitudes) weighted by their respective coefficients $\beta_1, \beta_2, \beta_p$ plus an error term ϵ .

The study performed an ordered logistic regression analysis for statistical measurement of the hypothesis to test the significance of the coefficient associated with the independent variable (in this case, Empathy). p -value less than α (0.05), means rejection of the null hypothesis and concluding that there is a significant influence of Empathy on customer satisfaction at the NHIF in Bungoma County. While the p -value greater than α (0.05), would fail to reject the null hypothesis and conclude that there is no significant influence.

Table 1: Description of Model Variables

Variable	Name	Definition of variables	Unit of measurement
Dependent variable			
Y	Customer Satisfaction	A measure of how pleased customers are with the service provided	Likert scale (Very dissatisfied = 1, Dissatisfied = 2, Neutral = 3, Satisfied = 4, Very satisfied = 5)
Independent variables			
X ₁	Gender	Gender of the respondent	Male = 1, Female = 2
X ₂	Age	Age of the respondent	Below 20 =1, 21 to 35 = 2, 36 to 50 =3, 51 to 65 = 4, 66 to 80 = 4, 81 and above = 5
X ₃	Education	Highest level of education of the respondent	Primary = 1, Sec = 2, T, cert = 3, Dip = 4, Degree = 5, Masters = 6, PhD = 7
X ₄	Personal attention	Giving customers Personal attention	Likert scale (1=strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree)
X ₅	Convenient operating hours	Having Convenient operating hours to customers	Likert scale (1=strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree)
X ₆	Customer needs	Understanding Customer needs	Likert scale (1=strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree)
X ₇	Caring attitude	Employee Caring attitude towards their customers	Likert scale (1=strongly disagree, 2= Disagreed, 3= Neutral, 4= Agree, 5= Strongly agree)

4.0 Findings and Discussions

This chapter analyses the data on the influence of Empathy on customer satisfaction in Bungoma county Kenya. The study used descriptive statistics to evaluate subscribers' demographic characteristics and ordered logistic regression along with thematic analysis to accomplish the study's objectives.

4.1 Respondents' Socio-demographic Characteristics

The study sample was 364 NHIF subscribers in the informal sector. Respondent's socio-demographics included gender, age, and education level. The respondents included farmers, business people, drivers, private school teachers, retirees, security guards in private sectors, casual workers in different companies and institutions, school and hospital subordinate staff and private institutions employees. The findings were presented using descriptive statistics as shown in table 2.

Table 2: Distribution of the responds by socio-demographic characteristics (n = 364)

Characteristic	Frequency	Percentage
Gender		
Male	201	55.2
Female	163	44.8
Total	364	100
Age-group (yrs.)		
Below 20	11	3.0
21-35	100	27.5
36-50	129	35.4
51-65	81	22.3
66-80	39	10.7
81+	4	1.1
Total	364	100
Academic qualification		
Primary	19	5.2
Secondary	51	14.0
Tertiary/College	78	21.4
Diploma	96	26.4
Degree	87	23.9
Masters	23	6.3
PhD	10	2.7
Total	364	100.0

Regarding gender of the respondents, a large percentage of respondents 201 that represents 55.2% of the total respondents were male while 163 that represents 44.8% of total respondents were female. These findings are consistent with the study findings by Asghari and Babu, (2017) who found out that a large percentage of the respondents were male as compared to female subscribers of health insurance in India. These findings implied that there were more male NHIF subscribers on SUPA package than female in Bungoma county, The high percent of male respondents is because of the variations in healthcare utilisation patterns between genders, including preferences for specific healthcare services and providers. Additionally, men in most communities are expected to be the primary breadwinners and prioritise healthcare coverage to ensure their ability to provide for their families unlike female gender who are dependents in most cases.

The distribution of respondents by age revealed that 3% of NHIF subscribers under SUPA package were aged below 20 years, 27.5% between 21 and 35 years, 35.4% between 36 and 50 years, 22.3% between 51 and 65 years, 10.7% between 66 and 80 years while only 1.1% was aged 81 years and above. This implied that most of the

respondents under the study were aged between 36 and 50 years. This suggests that individuals in this age bracket were more likely to subscribe to NHIF under the SUPA package within the informal sector. This demographic pattern may have implications for understanding the preferences, needs, and expectations of this age group in relation to healthcare services. In addition, Middle-aged individuals often have a mix of responsibilities, including family care and potential health concerns.

Furthermore, the study sought to find out the level of education of NHIF subscribers under the SUPA package. The respondents were requested to provide their academic qualification. Majority, 26.4% had attained diploma as their highest level of education, 23.9% having attained degrees, 21.4% having tertiary certificate, 14.0% secondary level, 6.3% masters holders, 5.2% Primary level and 2.7% having attained PhD as their highest level of education as indicated in Table 2 above. This suggests that a substantial portion of NHIF subscribers in the informal sector had completed vocational or specialised training beyond secondary education implying that most NHIF subscribers under SUPA package in Bungoma county have Diploma qualification. These findings align with the study findings by Wantara and Tambrin, (2019) on the effect of Price and Product Quality Towards Customer Satisfaction and Customer Loyalty who found that most of the respondents were middle aged than other categories. This demographic pattern may have implications for understanding the preferences, needs, and expectations of this age group in relation to healthcare services. In addition, Middle-aged individuals often have a mix of responsibilities, including family care and potential health concerns.

The combined percentage of PhD, masters, degree, diploma and tertiary certificate holders 80.7% signifies that a substantial proportion of NHIF subscribers within the informal sector possess post-secondary qualifications. This suggests that individuals with educational backgrounds beyond secondary schooling are more inclined to engage in health insurance services, possibly due to their better access to health-related information and a deeper understanding of the advantages of insurance coverage. Moreover, individuals with primary-level education displayed a lower percentage, indicating that most of them may not participate in NHIF policies. Additionally, the data suggests that the monthly subscription fees for NHIF may be financially burdensome for many informal sector individuals, compelling them to rely

on out-of-pocket healthcare payments or seek alternative healthcare solutions such as herbal remedies.

4.2 Level of Customer's Satisfaction in the national health insurance fund

The findings in table 2 revealed that 19.2% of the respondents strongly agreed with the statement, 43.1% of the respondent agreed with the statement, 22.0% of the respondents selected neutral indicating a neutral stance. These individuals neither agree nor disagree with the statement. A number of the respondents 10.4% disagreed with the statement while 4.9% of the respondents strongly disagreed that the NHIF services met their expectations in terms of quality. The findings revealed a significant level of agreement 62.3% (SA and A combined) among respondents, who are primarily subscribers from the informal sector, indicating that they generally had a positive perception regarding NHIF services meeting their quality expectations. This is particularly noteworthy, as this group typically consists of individuals who are not employed in the formal sector. However, it's equally important to acknowledge the 15.6% who disagreed or strongly disagreed, suggesting there are dissatisfied customers within this demographic.

The mean average rating of 3.61, slightly above the midpoint of the scale, indicates that, on average, respondents leaned towards agreement with the statement, underscoring the overall positive sentiment among this unique group of NHIF subscribers. These findings resonate with Haming *et al.* (2019) research on SERVQUAL dimensions, indicating that NHIF's empathetic approach and responsiveness might be contributing positively to customer satisfaction. To build on this positive perception and enhance overall satisfaction, NHIF should address the inconsistency in coverage and align its promises with actual service benefits, focusing on empathy and responsiveness in service delivery. However, during the discussion with the respondents when filling the questionnaires one common issue was highlighted which was the gap between NHIF promises and the actual benefits received. Many respondents expressed dissatisfaction when they had to pay out-of-pocket for services they believed NHIF should cover entirely. This inconsistency in coverage appeared to be a major source of discontent among subscribers.

Table 3: Distribution of respondents by their level of satisfaction in the national health insurance fund (n= 364)

Item	SA Freq (%)	A Freq (%)	N Freq (%)	D Freq (%)	SD Freq (%)	Mean	*SD
Quality expectation fulfilment.	70(19.2)	157(43.1)	80(22.0)	39(10.7)	18(4.9)	3.61	1.07
Overall satisfaction.	74(20.3)	135(37.1)	81(22.3)	48(13.2)	26(7.1)	3.50	1.16
Staff knowledge and helpfulness.	77(21.2)	152(41.8)	88(24.2)	35(9.6)	12(3.3)	3.68	1.02
Recommending NHIF to others.	76(20.9)	157(43.1)	85(23.4)	31(8.5)	15(4.1)	3.67	1.03
Mean						3.62	

*Note: SD =strongly disagree, D = Disagree, N Neutral, A Agree, SA = strongly agree, *SD = Standard deviation*

Findings in table 3 showed that 20.3% strongly agree, 37.1% agreed, 22.3% Neutral, 13.2% Disagree and 7.1% strongly disagree. These findings implied that the majority of respondents 57.4% (combined SA and A) are satisfied with the service provided. This suggests that NHIF is generally meeting the expectations of most of its subscribers, which is positive for the organisation's reputation and customer relations. However, there is a notable proportion of respondents 22.3% who are Neutral suggesting a more ambivalent view which suggests that they are not sure with the services being provided and thus not satisfied. The Disagree and Strongly disagree options received lower percentage 20.3% (SD and D combined) suggesting a smaller portion of dissatisfied customers. The mean value of 3.50, falling between Neutral and Agree, reflects an overall positive sentiment but also highlights room for improvement in aligning services more closely with the expectations of subscribers from the informal sector. The results align with the study findings by Almansour and Elkrghli, (2023) on the Factors Influencing Customer Satisfaction on E-Banking Services in Libyan Banks who found out that perceived usefulness, perceived ease of use, perceived credibility, and customer attitude have a significant positive impact on customers' satisfaction with e-banking services with the similar mean rate. In essence, these results implied that while NHIF is generally meeting the needs of a majority of

its subscribers, there is still work to be done to enhance satisfaction, especially among those who are neutral or dissatisfied.

Findings of the study on whether NHIF is helpful and knowledgeable revealed that 21.2% strongly agreed, 41.8% agreed, 24.2% selected neutral, 9.6% Disagreed and 3.3% strongly disagreed. These findings indicate that most of the respondents 63% either strongly agree or agreed that the NHIF staff were helpful and knowledgeable. This indicates a relatively positive perception of the NHIF staff's abilities among the respondents. Additionally, a significant portion 24.2% responded Neutrally, neither agreeing or disagreeing with the statement. A smaller percentage 12.9% of respondents disagreed. Based on the findings, it is implied that there is a relatively positive perception of the NHIF staff's abilities among the respondents. These findings resonate with Haming *et al.* (2019) research on SERVQUAL dimensions, indicating that NHIF's empathetic approach and responsiveness might be contributing positively to customer satisfaction. The fact that over six out of every ten respondents expressed satisfaction with the helpfulness and knowledge of NHIF staff is a positive sign for the organisation, as it indicates that they are viewed favourably by a significant portion of their clients.

Findings on whether the respondents would recommend NHIF to others based on their experience or not revealed that 20.9% strongly agreed, 43.1% agreed, 23.4% Neutral, 8.5% Disagreed, and 4.1% strongly disagreed. In addition, the mean score is 3.67. The combined percentage of respondents who strongly agree and agree 64% implies that most respondents (almost two-thirds) have a positive perception of NHIF service quality and are likely to recommend it to others. The fact that the agreement level is higher than the disagreement level suggests a generally favourable impression of NHIF's service quality among the respondents. The percentage of the respondents who provided a neutral response is 23.4%. These respondents neither strongly agree nor disagree with the statement. Their neutrality implies a lack of strong opinions about recommending NHIF to others based on their experience.

However, the combined percentage of respondents who disagreed and strongly disagreed 12.6% indicates a relatively small proportion of respondents who have a negative perception of NHIF's service quality and are unlikely to recommend it to others. Additionally, the mean score of 3.67 suggests that, on average, the

respondents leaned towards agreement with the statement. This further suggests that most respondents have a positive impression of NHIF's service quality and would recommend it to others. The average mean response rating on service quality satisfaction in NHIF Bungoma County was 3.62 indicating that customers tend to lean towards the positive end of the scale. This implied that customers are satisfied with service quality offered by NHIF. Findings of the study were in agreement with those of Hamisi (2018) who found out that customers were pleased with the level of services provided by NSSF in Mbeya region and that they would recommend others based on their experience.

4.3 Influence of Empathy on Customer Satisfaction in the national health insurance fund

The respondents were requested to rate the level of agreement on NHIF service delivery experienced in terms of Empathy on a Likert scale of 1-5, where 5 represented strongly agree, 4 Agree, 3 Neutral, 2 Disagree and 1 Strongly Disagree. Empathy dimensions included: personal attention, convenient operating hours, understanding of customer needs, and caring attitude. The question intended to know the influence of each of these indicators on customer satisfaction at NHIF. Descriptive statistics were used to analyse the data. The results were presented in terms of frequencies and percentage in Table 4.

Table 4: Distribution of Respondents by Influence of Empathy on Customer Satisfaction in the national health insurance fund (n= 364)

Items	SA Freq (%)	A Freq (%)	N Freq (%)	D Freq (%)	SD Freq (%)	Mean	*SD
Personal attention	97(26.6)	178(48.9)	48(13.2)	34(9.3)	7(1.9)	3.89	0.97
Convenient Operating hours	78(21.4)	174(47.8)	63(17.3)	41(11.3)	8(2.2)	3.75	0.99
Understanding the needs of their customers.	75(20.6)	161(44.2)	77(21.2)	39(10.7)	12(3.3)	3.68	1.02
Caring attitude toward its customers.	72(19.8)	165(45.3)	73(20.1)	38(10.4)	16(4.4)	3.66	1.05
Mean							3.75

Note: *SD* = Strongly disagree, *D* = Disagree, *N* = Neutral, *A* = Agree, *SA* = Strongly agree and **SD* = Standard deviation

Study findings on whether NHIF employees give customers personal attention revealed that 97 (26.6%) strongly agreed with the statement, 178(48.9%) agreed, 48 (13.2%) were neutral, 34(9.3%) disagreed, 7 (1.9%) strongly disagreed with the statement. The mean response rating on the item was 3.89 implying that the majority

of the respondents agreed with the statement. This finding aligns with prior research in the literature as observed in studies such as Raza *et al.*, (2020), further emphasising the importance of empathy in building customer loyalty. These findings showed a positive relation between personal attention and customer satisfaction since a substantial proportion of customers perceive that they receive personal attention when interacting with NHIF employees. Personal attention is a critical component of customer service and can significantly influence customer satisfaction. When customers feel heard, valued, and attended to, it can enhance their overall experience and satisfaction with an organisation. However, there were also minimal instances where employees were not giving employees personal attention needed. On whether NHIF employees have operating hours convenient to all its customers, findings of the study indicated that 78 (21.4%) of the respondents strongly agreed with the statement, 174 (47.8%) agreed, 63 (17.3%) were neutral, 41 (11.3%) disagreed and 8 (2.2%) strongly disagreed with the statement. The mean response rating on the item was 3.75 implying that the majority of the respondents agreed with the statement. These findings are in line with a study conducted by (Mainardes and Freitas, 2023). The research suggested that the impact of empathy, as a dimension of customer-perceived value in banking, has a more substantial influence on customer loyalty within traditional banks compared to fintech companies. Findings of the study therefore meant that operating hours at NHIF offices were convenient to most of their clients. This implied that most respondents are content with the operating hours thus the dimension showing positive relationship with customer satisfaction.

The findings of the survey on whether NHIF have employees who understand the needs or not revealed that 20.6% strongly agreed indicating that they strongly believe NHIF has employees who understand their needs. 44.2% of the respondents Agreed with the statement 21.2 % chose the neutral, 10.7% Disagreed and 3.3 of the respondents chose Strongly Disagree. The mean rating response was calculated to be 3.68, which indicates a slightly positive learning overall, as the mean falls between Agree(A) and Neutral(N) on the Likert scale. Based on these findings, it indicates that a significant percentage of respondents in Bungoma county perceive NHIF employees as understanding the needs of their customers. The combined percentage of the respondents who rated the NHIF employees as Agree(A) and strongly Agree (SA) 64.8% is higher than the combined percentage of respondents who rated NHIF as

Disagree (D) and strongly Disagree (SD) 14%. This reflects a positive perception among a significant portion of the survey participants perceiving that NHIF employees understand customer needs. The results of this survey are consistent with another research conducted in Indonesia by Akbar *et al.*, (2023) who found that empathy dimension in rural areas has a high impact on patients' satisfaction. The interaction between patients and dental healthcare providers is significant and impacts the quality of health services regarding care to patients. Based on these findings, it indicates that a significant percentage of respondents in Bungoma county perceive NHIF employees as understanding the needs of their customers.

The findings of distribution of responses on whether National Health Insurance Fund has employees who have a caring attitude towards its customers indicated that 19.8% respondents strongly agreed (SA), 45.3% Agree(A), 21.2% respondents selected Neutral(N), 10.4% respondents selected Disagree(D), and 4.4% of the respondents selected strongly Disagree (SD). The majority of the respondents 65.1% expressed positive sentiments regarding NHIF employees' caring attitude, as either they strongly agreed or agreed with the statement. This suggests a significant portion of the respondents perceive NHIF employees to have a caring attitude towards customers. On the other hand, 14.8% of respondents expressed negative sentiments, either disagreeing or strongly disagreeing with the statement. The mean response score of 3.66 falls closer to the Agree category on the Likert scale, indicating an overall positive inclination towards NHIF employees having a caring attitude towards customers. The findings are in consistency with the study findings by Smith, (2020) who found that customers who are agreeable, neurotic and open to new experiences are more likely to be satisfied with mobile services than other personality types. Based on these findings, it can be inferred that a substantial portion of the respondents in Bungoma county perceive NHIF employees to have a caring attitude towards customers, leading to a high impact on NHIF customer satisfaction.

Overall, the combined mean of 3.75 indicates a positive influence of Empathy on NHIF customer satisfaction in Bungoma County. It implies that when customers perceive that NHIF employees genuinely care about their needs and concerns, they are more likely to be satisfied with the services provided. The findings of the study agrees with the findings of Chege *et al.*, (2019) who found that a client who perceives empathy from the insurer's employees is bound to have higher satisfaction

than a customer who does not perceive empathy from their insurer in insurance companies in Kenya. The study also agrees with Bahadur *et al.*(2019) who established that there was a significant effect of employee empathy on trust in service employees and satisfaction during customer–employee interactions in China. This underscores the importance of empathy and caring attitudes in customer service interactions, not only in NHIF but in various service industries. Furthermore, the study sought to establish the relationship between empathy and customer satisfaction. To establish this, Pearson’s Product Moment correlation was performed at 0.05 level of confidence. Study findings were as illustrated in Table 5 below:

Table 5: Relationship between empathy and customer satisfaction in the national health insurance fund (n= 364)

		Empathy	Customer Satisfaction
Empathy	Pearson Correlation	1	.552**
	Sig. (2-tailed)		.000
	N	364	363
Customer Satisfaction	Pearson Correlation	.552**	1
	Sig. (2-tailed)	.000	
	N	363	363

Study findings illustrated in Table 5 revealed that there was a positive correlation between empathy and customer satisfaction. This implied that an increase in the level of empathy results in an increase in the level of customer satisfaction.

To understand whether the difference in customer satisfaction and the outcome of empathy dimensions is, the study sought to perform ordered logistic regression analysis. The analysis was performed with customer satisfaction as a dependent variable and four other independent variables i.e., Personal attention, convenient operating hours, customer needs, and caring attitude as determinant factors for the level of customer satisfaction at NHIF, Bungoma county. As customer satisfaction is measured on a 5- point Likert scale, it was a discrete variable taking 5 categorical values. There was an increment in its value as it goes from 1 = very dissatisfied to 5 = very satisfied which makes its value ordered. Ordered logit regression analysis results were presented in table 6.

Table 6: Ordered logit regression results on the influence of Empathy on customer satisfaction in the national health insurance fund

		Estimate	Std. Error	Wald	Sig.	95% Interval Lower Bound	Confidence Upper Bound
Threshold	[CS = 1.00]	1.368	0.703	3.782	0.052	-0.011	2.746
	[CS = 2.00]	3.203	0.679	22.247	0.000	1.872	4.534
	[CS = 3.00]	4.623	0.701	43.502	0.000	3.249	5.996
	[CS = 4.00]	6.618	0.742	79.548	0.000	5.164	8.073
Location	Gender	0.073	0.200	0.131	0.717	-0.320	0.465
	Age	0.182	0.097	3.509	0.061	-0.008	0.373
	Education	-0.020	0.072	0.082	0.775	-0.161	0.120
	personal attention	0.365	0.123	8.786	0.003	0.124	0.606
	Convenient hours	0.048	0.129	0.138	0.710	-0.205	0.301
	Customer needs	0.406	0.140	8.382	0.004	0.131	0.681
	caring attitude	0.464	0.134	11.971	0.001	0.201	0.727

Link function: Logit.

In the ordered logit regression coefficients analysis, eight independent variables were examined for their association with customer satisfaction, which was categorised into five levels. Standard interpretation of the ordered logit coefficient is that for a one unit increase in the predictor (independent variable) the response variable (dependent variable) is expected to change by its respective regression coefficient in the ordered logit odds while the other variables in the model are held constant. If personal attention increases the ordered logit odds of being in a higher customer satisfaction category would increase by 0.363 while the other variables in the model are held constant. An increase in convenient operating hours of NHIF would result in 0.048 units increase in the ordered log-odds of being in a higher customer satisfaction level category while other variables in the model are held constant. An increase in customer needs of NHIF would result in 0.406 units increase in the ordered log-odds of being in a higher customer satisfaction level category while other variables in the model are held constant. An increase in caring attitude of the NHIF employees would result in 0.464 units increase in the ordered log-odds of being in a higher customer satisfaction level category while other variables in the model are held constant.

The significance of these relationships was also assessed using the p-values associated with each variable's Wald statistic. The thresholds, which denote transitions between satisfaction levels, exhibited varied significance. Demographic variables including Gender, age and Education generally displayed non-significant relationships, with p-values above the conventional threshold of 0.05. The Wald test statistic for the predictors personal attention is 8.786 with associated p-value of 0.003 at a significant level of 1%, customer needs is 8.382 associated with p-value of 0.004 with a significance level of 1%, and caring attitude is 11.971 associated with p-value of 0.001 at a significance level of 1%, emerged as statistically significant predictors of customer satisfaction, with p-values below 0.05. However, convenient operating hours lacked statistical significance, with Wald test statistic of 0.138 associated with a p-value of 0.710, indicating no meaningful relationship with customer satisfaction. The higher coefficient value of caring attitude as compared to the others implies that predicting the power of caring attitude is the best of all. This was supported by KII3 and KII4 during the interview who said that:

'We encourage NHIF staff to establish personal connections with customers by taking the time to understand their payment history, concerns, and aspirations through empathetic engagement and building trust with customers' (KII 3, 6th July, 2023).

The findings of the key interview informant above revealed that NHIF proactive efforts to promote empathetic customer-staff interactions indicate a strategic approach to enhancing overall customer satisfaction and fostering enduring relationships with their clients. The next higher coefficient value was found in customer needs, which indicates a strong relationship between customer needs and customer satisfaction. The coefficient value of personal attention which also reveals strongly predicted levels of customer satisfaction. The coefficient values of customer needs and personal attention were 0.406 and 0.048 respectively, which indicate positively and statistically predicting customer satisfaction. The result was supported by one of the key informants during the interview who said that:

'We conduct regular training and sensitization programs for NHIF staff to emphasise the importance of empathy. These training sessions focus on effective communication, active listening, and understanding the unique needs and concerns of patients' (KII I, 15th July, 2023).

These findings implied that understanding customer needs leads to tailored solutions, effectively increasing customer satisfaction as seen in the findings above. Moreover, NHIF emphasises effective communication to build trust as customers feel genuinely heard and understood. An increase in these variables was associated with higher customer satisfaction levels. Therefore, the null hypothesis was rejected for personal attention, customer needs, and caring attitude, while it was not rejected for convenient operating hours. These findings suggest that empathy-related factors, such as personal attention, addressing customer needs, and a caring attitude of NHIF employees, significantly influence customer satisfaction. These findings were supported by statements from interviewees, highlighting the importance of building trust and understanding customer concerns thus showing a significant relationship between empathy and customer satisfaction. The findings of the study agreed with the findings of Chege *et al.*, (2019) who found that a client who perceives empathy from the insurer's employees is bound to have higher satisfaction than a customer who does not perceive empathy from their insurer in insurance companies in Kenya.

The findings of this study align with and contribute to the existing literature on NHIF service quality and customer satisfaction. Like the study by Chesire, this study emphasises the link between service quality (empathy being an important dimension) and customer satisfaction. However, while Chesire found a relationship between cost and satisfaction, this study focuses on empathy's role whereby the findings revealed that empathy has a strong impact on customer satisfaction. Chege *et al.*'s findings on empathy's positive impact on satisfaction align with this study's findings. Both emphasise that empathetic interactions lead to higher levels of customer satisfaction. These findings imply that NHIF's efforts in emphasising empathy align with the need for healthcare services that encompass not only comprehensiveness but also empathetic interactions. This approach recognizes the importance of addressing emotional and psychological aspects of healthcare. Implementing empathetic strategies could lead to improved service quality, enhancing customer experiences, and ultimately increasing satisfaction levels. Furthermore, Feedback mechanisms and community engagement contribute to involving customers in the service improvement process, leading to more customer-centric services that better meet their needs. Emphasis on empathy is a sustainable strategy for maintaining positive relationships with customers, building trust, and fostering loyalty over the long term. Based on

analysis conducted in the study, the null hypothesis that there is no relationship between empathy and customer satisfaction was rejected.

5.0 Conclusion and Recommendations

Based on the findings of the study, it can be concluded that Empathy as a service is a predictor of customer satisfaction. This indicates that a client who perceives empathy from NHIF employees is bound to have higher satisfaction than a customer who does not perceive empathy. This implied that improvement in empathy will result in an improvement in customer satisfaction. Although empathy was rated as good, there is where it was rated low therefore there is need for more improvements. The study recommends that NHIF managers should implement policies that will ensure all their employees adopt empathic behaviour during their interactions with customers. This is because employees have direct interactions with customers and hence are the primary stakeholders. The behaviour exhibited by employees determines either positive or negative perceptions regarding the quality of service and hence either satisfaction or dissatisfaction. Satisfaction leads to long term relationships.

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