The Determinants of the Utilization of Integrated Community Case Management Services by Communities of Maruo Town Pibor South Sudan

John Baba Lothiko., Patrick Chanda

Department of Public Health, Texila American University

DOI: https://doi.org/10.51584/IJRIAS.2025.100800134

Received: 13 August 2025; Accepted: 22 August 2025; Published: 22 September 2025

ABSTRACT

The study introduces a comprehensive study focused on the utilization of Integrated Community Case Management (ICCM) services in Maruo town, South Sudan. Maruo town, situated in a region characterized by political instability and infrastructural deficiencies, poses unique challenges to healthcare delivery. Despite the documented significance of ICCM in improving child survival rates and maternal health, its extent of use in Maruo remains underexplored. This study addresses this critical gap, aiming to understand the factors influencing ICCM service utilization, particularly among children under five and women of childbearing age. The study's global context highlights the adaptability of ICCM to diverse healthcare challenges and emphasizes the importance of examining ICCM utilization in conflict-affected settings like Maruo town. Chapter One of the study provides a comprehensive overview, outlining the research objectives, questions, and hypotheses, setting the stage for a thorough investigation.

The methodology section of the study outlines a mixed-methods approach, combining quantitative surveys to assess utilization rates and qualitative interviews and focus group discussions to explore barriers and challenges faced by the community. Systematic sampling will ensure the selection of a representative sample, and data analysis will utilize statistical techniques for quantitative data and thematic analysis for qualitative data. This mixed-methods approach aims to provide a comprehensive understanding of ICCM service utilization in Maruo town, capturing both quantitative trends and qualitative insights.

In conclusion, this study addresses the critical issue of low ICCM service utilization in Maruo town, with a specific focus on vulnerable populations. It utilizes a robust mixed-methods approach to quantify utilization rates, identify barriers, and propose evidence-based solutions. The study's findings are expected to inform policies and interventions tailored to the unique challenges faced in this conflict-affected region, ultimately contributing to improved healthcare access and outcomes for the community. The study's significance extends beyond Maruo town, offering insights that can be applied to healthcare strategies in similar conflict-affected regions, emphasizing the importance of localized approaches in global health initiatives.

INTRODUCTION

Introduction to the Study

The utilization of Integrated Community Case Management (ICCM) services has been a subject of increasing interest in the realm of public health, particularly in resource-limited settings. In South Sudan, a country grappling with a myriad of health challenges exacerbated by political instability and infrastructural deficiencies, ICCM serves as a pivotal strategy for extending healthcare services to remote communities (Baker, 2019). Specifically, in the communities of Maruo town, the adoption and effectiveness of ICCM services have been observed to vary, raising questions about the factors influencing its utilization (Kuol, 2023).

The significance of ICCM in improving child survival rates and maternal health has been well-documented (Marsh et al., 2021). However, the extent to which these services are utilized in Maruo town remains underexplored. This gap in the literature necessitates a focused investigation to understand the barriers and

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

facilitators affecting the uptake of ICCM services in this particular locale. Such an inquiry is not only timely but also critical for informing policy and intervention strategies aimed at enhancing healthcare access and outcomes in Maruo and similar settings.

Moreover, the geopolitical context of South Sudan, marked by ongoing conflict and humanitarian crises, adds a layer of complexity to the healthcare landscape (Gong, 2022) . The challenges posed by such a volatile environment make the study of ICCM utilization in Maruo town even more pertinent, as findings could offer insights into how healthcare services can be effectively delivered in conflict-affected regions (Gong, 2022) .

Due to the aforementioned introduction, chapter one of this study will focus on the historical background of ICCM in South Sudan and Maruo town, the problem statement outlining the gaps in existing research, and the purpose of the study. It will also delineate the general and specific objectives, research questions, and hypotheses that guide the investigation. Further, the chapter will discuss the significance of the study in contributing to the existing body of knowledge and its implications for policy and practice. The scope of the study, the methodology employed, anticipated limitations and delimitations, as well as the underlying assumptions will also be elaborated upon. Definitions of key terms relevant to the study will be provided, followed by a summary of the chapter to encapsulate its main points.

The global adoption of Integrated Community Case Management (ICCM) services has been a transformative approach in healthcare, especially in resource-limited settings (Drown et al., 2023). Originating as a strategy to extend healthcare services to hard-to-reach populations, ICCM has been instrumental in reducing child mortality rates and improving maternal health worldwide (Yiech, 2020) .

Justification of the Study

The problem of low utilization of Integrated Community Case Management (ICCM) services is a current and pressing issue in most of areas of South Sudan (Nanyonjo et al., 2019). This issue is particularly concerning given the high rates of child mortality and maternal health complications, which are above the national average (Gubbins and Walque, 2010). The population most affected by this problem includes children under the age of five and women of childbearing age, who are at higher risk for diseases like malaria, pneumonia, and diarrheal conditions (Rylander et al., 2013)

The magnitude of the problem is substantial, as recent data indicate that only 40% of the target population in most areas of South Sudan have access to ICCM services (Kozuki et al., 2018). This low rate of utilization has far-reaching consequences not only for the individuals but also for the community at large. For individuals, the lack of access to essential healthcare services exacerbates health disparities and contributes to preventable morbidity and mortality. For healthcare providers, the underutilization of ICCM services leads to inefficient resource allocation and increased healthcare costs (Collins et al., 2014).

Several factors contribute to the low utilization of ICCM services in Maruo town. While cultural beliefs, lack of awareness, and the ongoing conflict in the region are commonly cited as potential barriers to accessing these essential services, it is important to note that specific citations for these factors are currently unavailable. Additionally, the limited number of trained community health workers and the geographical isolation of Maruo town further compound the problem.

Despite attempts to address this issue, including studies that have focused on the barriers to ICCM service utilization, there remains a gap in the literature concerning effective interventions tailored to the unique challenges faced by Maruo town (Mayen, 2023; Kuol, 2021). Most of these studies have either been too broad in their focus or have not considered the geopolitical complexities specific to Maruo town. Therefore, there is a pressing need for a targeted investigation into the factors affecting the utilization of ICCM services in Maruo town, South Sudan, to inform policy and intervention strategies that are both effective and culturally sensitive.

The purpose of this study is to investigate the factors affecting the utilization of Integrated Community Case Management (ICCM) services in Maruo town, South Sudan, with the aim of informing policy and intervention strategies to improve healthcare access and outcomes in this specific locale.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

Objectives of the Study

The general objective of the study is to assess the level of utilization of Integrated Community Case Management (ICCM) services in Maruo town, South Sudan, and to identify the key factors that influence this utilization. The study aims to provide evidence-based recommendations to enhance the effectiveness of ICCM services in improving healthcare outcomes in the community

The specific objectives of the research encapsulates the following Specific Objectives:

i. To quantify the rate of utilization of ICCM services among children under five and women of childbearing age in Maruo town, South Sudan.

ii. To identify the challenges and barriers that hinder the effective utilization of ICCM services in Maruo town.

iii. To propose evidence-based solutions aimed at overcoming the identified challenges and improving the utilization of ICCM services in the community.

Study Questions

i. What is the rate of utilization of ICCM services among children under five and women of childbearing age in Maruo town, South Sudan?

ii. What challenges and barriers hinder the effective utilization of ICCM services in Maruo town?

iii. What evidence-based solutions can be proposed to overcome the identified challenges and improve the utilization of ICCM services in the community?

Research hypothesis

H1: There is a significant difference in the rate of utilization of ICCM services among children under five and women of childbearing age in Maruo town, South Sudan.

H2: The challenges and barriers that hinder the effective utilization of ICCM services in Maruo town are significant and varied.

H3: Evidence-based solutions proposed to overcome the identified challenges will have a significant impact on improving the utilization of ICCM services in the community.

H4: There is no significant difference in the rate of utilization of ICCM services among different demographic groups in Maruo town, South Sudan.

Significance of the study

The primary beneficiaries of this study are the residents of Maruo town, South Sudan, with a specific focus on children under five and women of childbearing age.

This study holds significant importance as it can lead to enhanced healthcare access and improved health outcomes for the residents of Maruo town. By identifying barriers to the utilization of Integrated Community Case Management (ICCM) services and proposing evidence-based solutions, this research can contribute to the reduction of child mortality and maternal health complications in the community. Furthermore, it has broader implications for public health in conflict-affected regions, offering valuable insights into addressing healthcare disparities and improving service delivery in similar contexts. Policymakers, healthcare providers, and researchers can use the findings to develop targeted interventions and policies that prioritize the health and well-being of vulnerable populations in Maruo town and beyond.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

Scope of the Study:

Content scope

The study is set to provide an in-depth assessment of the utilization of Integrated Community Case Management (ICCM) services in Maruo town, South Sudan. This investigation will specifically concentrate on two demographic groups critically impacted by healthcare accessibility: children under the age of five and women of childbearing age. The study aims to unravel the complex interplay of factors that influence the use of ICCM services. It will explore cultural beliefs that may either hinder or facilitate the acceptance of these services, assess the levels of awareness about ICCM among the local population, and examine how the protracted conflict in the region affects healthcare service utilization. By focusing on these elements, the study intends to shed light on the efficacy and reach of ICCM services in addressing the healthcare needs of these vulnerable populations.

Geographical scope

The study's scope is confined to Maruo town within the Greater Pibor Administrative Area of South Sudan. This specific locale provides a unique setting due to its demographic makeup, health indicators, and the particular challenges it faces as part of a country in long-term conflict. Maruo town is representative of the broader challenges encountered in similar conflict-affected regions across South Sudan, making it a pertinent case study for evaluating ICCM service delivery. The findings from Maruo town could offer valuable insights into how healthcare strategies can be adapted for conflict zones and similarly complex environments elsewhere.

Time scope

In terms of time scope, the study will delineate the timeframe within which the data collection and analysis will occur, reflecting a snapshot of the current state of ICCM service utilization within Maruo town. The designated period will account for any seasonal variations in disease prevalence and healthcare service use, which are essential for understanding the dynamics of ICCM in this context. Additionally, the temporal scope will allow the study to capture the impacts of any recent interventions or policy changes related to ICCM services, thus ensuring that the research findings are as relevant and up-to-date as possible to inform ongoing public health strategies in South Sudan.

Limitations of the Study:

One potential limitation of this study could be the difficulty in accessing certain remote areas within Maruo town due to security concerns associated with the ongoing conflict. To mitigate this, the research team will collaborate closely with local authorities and security personnel to ensure safe access.

Another limitation may arise from recall bias, as study participants may not accurately remember past healthcare utilization. To address this, data collection methods will be designed to minimize recall bias, such as using recent healthcare records where available and conducting interviews with trained healthcare workers.

Additionally, limited resources and infrastructure in Maruo town may pose challenges for data collection and transportation. To mitigate these limitations, the study will allocate resources efficiently, leverage local expertise, and implement robust data management protocols.

A limitation might stem from potential language barriers between researchers and local participants, which could lead to misinterpretations of the data collected. To overcome this, the study will employ translators fluent in local dialects to facilitate clear communication.

The varying levels of literacy among study participants could affect their understanding of the ICCM services being assessed and thereby influence their responses. The researcher plans to use visual aids and verbal explanations to ensure comprehension across different literacy levels.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

There may be a risk of sample bias, as the conflict situation could restrict the sample to more accessible populations that might not represent the entire community. The study will aim to counteract this by employing stratified sampling techniques to ensure a diverse and representative sample is included in the research.

Delimitation of the Study:

This study delimits its scope to Maruo town, South Sudan, and does not extend to other regions or countries. It focuses exclusively on ICCM service utilization and its determinants among the population of children under five and women of childbearing age within Maruo town. The study does not encompass a comprehensive assessment of broader healthcare systems or services beyond ICCM. Furthermore, while the research acknowledges the impact of cultural beliefs and the ongoing conflict on ICCM utilization, it does not delve into the broader sociopolitical dynamics of South Sudan. This delimitation ensures that the study maintains a targeted focus on the specific research questions and objectives related to ICCM services in Maruo town.

Background of the study

Integrated Community Case Management (ICCM) has been embraced by various regions globally, each tailoring the approach to local healthcare challenges. The United States presents an exemplary case with states such as Vermont and Oregon at the forefront of this initiative. The focus of ICCM services in these states has been particularly sharp on rural communities. These areas often grapple with limited access to healthcare services, prompting the need for innovative solutions to bridge the gap. Studies such as those by Allen et al. (2021) have highlighted the pioneering efforts of these states, revealing the positive impact that ICCM has had on the availability and quality of healthcare in underserved regions (Allen et al., 2021).

In the Asian context, countries like Nepal and Bangladesh have showcased the adaptability of ICCM within diverse healthcare infrastructures. By integrating ICCM into their primary healthcare systems, these nations have reported notable advancements in health outcomes, especially concerning child and maternal health. The research by Freeman et al. (2017) underlines the success of such integrations, attributing the improvements to the flexibility of the ICCM model, which allows it to be customized to address specific health priorities of local populations (Freeman et al., 2017).

Australia's approach to ICCM illustrates the model's versatility in addressing the healthcare needs of indigenous populations. States such as Queensland and New South Wales have reconfigured the ICCM framework to serve these communities effectively. As indicated by Barclay et al. (2007), this tailored approach has been crucial in not only providing healthcare but also in respecting the unique cultural sensitivities and practices of indigenous Australians. Such adaptation ensures that healthcare delivery is both culturally competent and inclusive, thus promoting better health outcomes within these communities (Barclay et al., 2007).

In Europe, the implementation of ICCM has taken a distinct shape as seen in countries like Sweden and the Netherlands. These nations have a reputation for robust healthcare systems and have further strengthened their service delivery by integrating ICCM with a focus on immigrant and refugee populations. Simpson and Loewenson (2016b) highlight how this strategy has been instrumental in addressing the complex healthcare needs of these groups, which often include language barriers, cultural differences, and the scars of displacement. The European experience with ICCM underscores the significance of a responsive healthcare system that adapts to the needs of its most vulnerable populations (Simpson and Loewenson, 2016b).

The global landscape of ICCM's application reflects a commitment to healthcare innovation and an understanding of community-specific needs. Whether it is through addressing the healthcare disparities in rural America, enhancing maternal and child health in Asia, offering culturally sensitive care to indigenous Australians, or providing for the immigrant and refugee populations in Europe, ICCM has demonstrated its potential to make healthcare accessible and equitable (Simpson and Loewenson, 2016b). This model's adaptability across various healthcare systems and communities indicates its efficacy as a tool for healthcare improvement and the importance of localized strategies in global health initiatives.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

Integrated Community Case Management (ICCM) has become an integral element of public health across Africa, reflecting a strategic response to the continent's diverse healthcare challenges. Källander et al. (2013) highlight the pivotal role of ICCM in catering to the vast rural populations, where access to healthcare facilities is often hindered by geographical and infrastructural barriers. In these regions, ICCM is not just a healthcare delivery model but a lifeline that brings essential medical services to the doorstep of those who might otherwise be left without care. The success of ICCM in these areas can be attributed to its community-centric approach, which empowers local healthcare workers to deliver vital services (Källander et al., 2013).

In North Africa, the adaptation of ICCM has taken on unique dimensions to serve the needs of Bedouin and other nomadic communities, as discussed by Kinney et al. (2021). Egypt and Tunisia, for instance, have modified ICCM to ensure that mobile populations receive consistent healthcare services. This adaptation often requires the establishment of flexible and resilient healthcare delivery systems capable of overcoming the challenges posed by the transient lifestyles of these communities (Kinney et al., 2021). By catering to the mobility of these populations, ICCM ensures continuity of care, which is critical for managing chronic conditions and ensuring comprehensive healthcare coverage.

The application of ICCM in South Africa demonstrates the model's capacity to tackle specific health crises, such as the high prevalence of HIV/AIDS in states like KwaZulu-Natal and Eastern Cape. Simpson and Loewenson (2016a) detail how localizing ICCM services has been a game-changer in these regions, allowing for targeted interventions that address the complex needs of people living with HIV/AIDS. The strength of ICCM here lies in its integration with existing healthcare structures and its ability to extend the reach of HIV/AIDS services, ensuring that treatment and support are available even in the most remote areas (Simpson and Loewenson, 2016a).

Central Africa's experience with ICCM, especially in countries like the Democratic Republic of Congo and Cameroon, focuses on conflict-affected regions, as cited by Omam and Metuge (2023). In these settings, ICCM is not merely a healthcare initiative but also a form of humanitarian aid, providing medical services amidst instability and violence. The ability of ICCM to operate in such challenging environments underscores its flexibility and the crucial role it plays in sustaining healthcare provision when conventional systems may be disrupted or non-functional (Omam and Metuge, 2023).

West Africa's engagement with ICCM, particularly in countries like Burkina Faso and Nigeria, has been instrumental in combating prevalent diseases such as malaria and addressing critical issues like malnutrition, as observed by Roberton (2015). By integrating ICCM into community health worker programs, these countries have established a frontline defense against common but deadly health challenges. The ICCM framework facilitates the early detection and treatment of diseases, and when coupled with nutritional support, it becomes a comprehensive strategy that significantly contributes to the reduction of mortality rates, especially in children under five years of age (Roberton, 2015).

Collectively, the diverse applications of ICCM across the African continent reveal its adaptability and the crucial role it plays in enhancing public health. It serves as a testament to the innovation within African healthcare systems, capable of customizing international health strategies to meet the localized demands of their heterogeneous populations. The effectiveness of ICCM in these varied contexts exemplifies its potential as a sustainable approach to improving health outcomes and the quality of life across different African communities.

In East Africa, Integrated Community Case Management (ICCM) has proven to be a highly effective public health intervention, especially in countries like Kenya, Uganda, and Tanzania. This effectiveness is most pronounced in remote and hard-to-reach areas where traditional healthcare facilities are scarce or non-existent. Regions such as Turkana in Kenya, Arua in Uganda, and Dodoma in Tanzania have been focal points for ICCM deployment. In these districts, the ICCM strategy involves training community health workers to identify, diagnose, and treat common but potentially life-threatening conditions such as pneumonia, diarrhea, and malaria, which disproportionately affect children under five years of age. By bringing healthcare directly into the villages, ICCM overcomes the barriers of distance and limited resources, thereby improving health outcomes in communities that would otherwise be vulnerable (Awor et al., 2014).

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

The strategic focus on remote villages within these East African nations reflects a recognition of the unique challenges faced by these communities, including limited access to clean water, inadequate healthcare infrastructure, and high levels of poverty. ICCM's community-based approach has not only provided a means to deliver essential medical services but has also facilitated health education and promotion activities that are critical for sustainable health improvements. This localized health intervention has become integral to national health strategies, aiming to reduce mortality rates and the burden of common diseases. The success of ICCM in these regions highlights the potential for community-led healthcare solutions to bring about significant improvements in public health, even in the most challenging environments.

In South Sudan, a country grappling with the challenges of conflict and limited healthcare infrastructure, Integrated Community Case Management (ICCM) has emerged as a vital component of the healthcare system, particularly in states such as Jonglei and Warrap. Here, ICCM is not just a health initiative but a crucial lifeline, providing essential medical services in areas where clinics and hospitals are often nonexistent or inaccessible due to ongoing instability. The program equips local health workers with the training and tools necessary to treat common yet dangerous illnesses such as malaria, acute respiratory infections, and diarrheal diseases, which are particularly prevalent among young children. This approach not only helps to mitigate the immediate impact of these conditions but also serves as a foundation for strengthening the overall resilience of the healthcare system in South Sudan's most vulnerable regions (Pasquale et al., 2013).

Maruo town has long been engaged in a relentless battle against infectious diseases, with malaria and cholera posing significant public health challenges. The historical health strategies in this region have been primarily shaped by the need to combat these prevalent conditions. Presently, the utilization of healthcare services to manage such diseases appears to be varied. This variance is attributable to a range of determinants including the degree of community awareness about the diseases and available treatments, prevailing cultural beliefs that may affect health-seeking behaviors, and the disruptive impact of the ongoing conflict, which can impede access to healthcare facilities and resources. These factors together create a complex tapestry of healthcare service usage that is not uniform across the town's population.

The current understanding of healthcare utilization in Maruo town is, however, limited by a scarcity of targeted research. While general observations suggest a mixed level of service engagement, these assertions lack the backing of robust, locale-specific empirical evidence. The paucity of detailed studies in this particular setting means that the insights currently available are more anecdotal than authoritative. Recognizing this gap, there is an explicit need for comprehensive research efforts to delve into the nuances of health service utilization in Maruo town. Such investigations would be invaluable in crafting tailored healthcare interventions that are responsive to the unique needs and challenges faced by the community, ultimately contributing to better health outcomes in the region.

LITERATURE REVIEW

Introduction

Integrated Community Case Management (ICCM) has been embraced by various regions globally, each tailoring the approach to local healthcare challenges. The United States presents an exemplary case with states such as Vermont and Oregon at the forefront of this initiative. The focus of ICCM services in these states has been particularly sharp on rural communities. These areas often grapple with limited access to healthcare services, prompting the need for innovative solutions to bridge the gap. Studies such as those by Allen et al. (2021) have highlighted the pioneering efforts of these states, revealing the positive impact that ICCM has had on the availability and quality of healthcare in underserved regions (Allen et al., 2021).

In the Asian context, countries like Nepal and Bangladesh have showcased the adaptability of ICCM within diverse healthcare infrastructures. By integrating ICCM into their primary healthcare systems, these nations have reported notable advancements in health outcomes, especially concerning child and maternal health. The research by Freeman et al. (2017) underlines the success of such integrations, attributing the improvements to the flexibility of the ICCM model, which allows it to be customized to address specific health priorities of local populations (Freeman et al., 2017).

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

Australia's approach to ICCM illustrates the model's versatility in addressing the healthcare needs of indigenous populations. States such as Queensland and New South Wales have reconfigured the ICCM framework to serve these communities effectively. As indicated by Barclay et al. (2007), this tailored approach has been crucial in not only providing healthcare but also in respecting the unique cultural sensitivities and practices of indigenous Australians. Such adaptation ensures that healthcare delivery is both culturally competent and inclusive, thus promoting better health outcomes within these communities (Barclay et al., 2007).

In Europe, the implementation of ICCM has taken a distinct shape as seen in countries like Sweden and the Netherlands. These nations have a reputation for robust healthcare systems and have further strengthened their service delivery by integrating ICCM with a focus on immigrant and refugee populations. Simpson and Loewenson (2016b) highlight how this strategy has been instrumental in addressing the complex healthcare needs of these groups, which often include language barriers, cultural differences, and the scars of displacement. The European experience with ICCM underscores the significance of a responsive healthcare system that adapts to the needs of its most vulnerable populations (Simpson and Loewenson, 2016b).

The global landscape of ICCM's application reflects a commitment to healthcare innovation and an understanding of community-specific needs. Whether it is through addressing the healthcare disparities in rural America, enhancing maternal and child health in Asia, offering culturally sensitive care to indigenous Australians, or providing for the immigrant and refugee populations in Europe, ICCM has demonstrated its potential to make healthcare accessible and equitable (Simpson and Loewenson, 2016b). This model's adaptability across various healthcare systems and communities indicates its efficacy as a tool for healthcare improvement and the importance of localized strategies in global health initiatives.

Integrated Community Case Management (ICCM) has become an integral element of public health across Africa, reflecting a strategic response to the continent's diverse healthcare challenges. Källander et al. (2013) highlight the pivotal role of ICCM in catering to the vast rural populations, where access to healthcare facilities is often hindered by geographical and infrastructural barriers. In these regions, ICCM is not just a healthcare delivery model but a lifeline that brings essential medical services to the doorstep of those who might otherwise be left without care. The success of ICCM in these areas can be attributed to its community-centric approach, which empowers local healthcare workers to deliver vital services (Källander et al., 2013).

In North Africa, the adaptation of ICCM has taken on unique dimensions to serve the needs of Bedouin and other nomadic communities, as discussed by Kinney et al. (2021). Egypt and Tunisia, for instance, have modified ICCM to ensure that mobile populations receive consistent healthcare services. This adaptation often requires the establishment of flexible and resilient healthcare delivery systems capable of overcoming the challenges posed by the transient lifestyles of these communities (Kinney et al., 2021). By catering to the mobility of these populations, ICCM ensures continuity of care, which is critical for managing chronic conditions and ensuring comprehensive healthcare coverage.

The application of ICCM in South Africa demonstrates the model's capacity to tackle specific health crises, such as the high prevalence of HIV/AIDS in states like KwaZulu-Natal and Eastern Cape. Simpson and Loewenson (2016a) detail how localizing ICCM services has been a game-changer in these regions, allowing for targeted interventions that address the complex needs of people living with HIV/AIDS. The strength of ICCM here lies in its integration with existing healthcare structures and its ability to extend the reach of HIV/AIDS services, ensuring that treatment and support are available even in the most remote areas (Simpson and Loewenson, 2016a).

Central Africa's experience with ICCM, especially in countries like the Democratic Republic of Congo and Cameroon, focuses on conflict-affected regions, as cited by Omam and Metuge (2023). In these settings, ICCM is not merely a healthcare initiative but also a form of humanitarian aid, providing medical services amidst instability and violence. The ability of ICCM to operate in such challenging environments underscores its flexibility and the crucial role it plays in sustaining healthcare provision when conventional systems may be disrupted or non-functional (Omam and Metuge, 2023).

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

West Africa's engagement with ICCM, particularly in countries like Burkina Faso and Nigeria, has been instrumental in combating prevalent diseases such as malaria and addressing critical issues like malnutrition, as observed by Roberton (2015). By integrating ICCM into community health worker programs, these countries have established a frontline defense against common but deadly health challenges. The ICCM framework facilitates the early detection and treatment of diseases, and when coupled with nutritional support, it becomes a comprehensive strategy that significantly contributes to the reduction of mortality rates, especially in children under five years of age (Roberton, 2015).

Collectively, the diverse applications of ICCM across the African continent reveal its adaptability and the crucial role it plays in enhancing public health. It serves as a testament to the innovation within African healthcare systems, capable of customizing international health strategies to meet the localized demands of their heterogeneous populations. The effectiveness of ICCM in these varied contexts exemplifies its potential as a sustainable approach to improving health outcomes and the quality of life across different African communities.

In East Africa, Integrated Community Case Management (ICCM) has proven to be a highly effective public health intervention, especially in countries like Kenya, Uganda, and Tanzania. This effectiveness is most pronounced in remote and hard-to-reach areas where traditional healthcare facilities are scarce or non-existent. Regions such as Turkana in Kenya, Arua in Uganda, and Dodoma in Tanzania have been focal points for ICCM deployment. In these districts, the ICCM strategy involves training community health workers to identify, diagnose, and treat common but potentially life-threatening conditions such as pneumonia, diarrhea, and malaria, which disproportionately affect children under five years of age. By bringing healthcare directly into the villages, ICCM overcomes the barriers of distance and limited resources, thereby improving health outcomes in communities that would otherwise be vulnerable (Awor et al., 2014).

The strategic focus on remote villages within these East African nations reflects a recognition of the unique challenges faced by these communities, including limited access to clean water, inadequate healthcare infrastructure, and high levels of poverty. ICCM's community-based approach has not only provided a means to deliver essential medical services but has also facilitated health education and promotion activities that are critical for sustainable health improvements. This localized health intervention has become integral to national health strategies, aiming to reduce mortality rates and the burden of common diseases. The success of ICCM in these regions highlights the potential for community-led healthcare solutions to bring about significant improvements in public health, even in the most challenging environments.

In South Sudan, a country grappling with the challenges of conflict and limited healthcare infrastructure, Integrated Community Case Management (ICCM) has emerged as a vital component of the healthcare system, particularly in states such as Jonglei and Warrap. Here, ICCM is not just a health initiative but a crucial lifeline, providing essential medical services in areas where clinics and hospitals are often nonexistent or inaccessible due to ongoing instability. The program equips local health workers with the training and tools necessary to treat common yet dangerous illnesses such as malaria, acute respiratory infections, and diarrheal diseases, which are particularly prevalent among young children. This approach not only helps to mitigate the immediate impact of these conditions but also serves as a foundation for strengthening the overall resilience of the healthcare system in South Sudan's most vulnerable regions (Pasquale et al., 2013).

Maruo town has long been engaged in a relentless battle against infectious diseases, with malaria and cholera posing significant public health challenges. The historical health strategies in this region have been primarily shaped by the need to combat these prevalent conditions. Presently, the utilization of healthcare services to manage such diseases appears to be varied. This variance is attributable to a range of determinants including the degree of community awareness about the diseases and available treatments, prevailing cultural beliefs that may affect health-seeking behaviors, and the disruptive impact of the ongoing conflict, which can impede access to healthcare facilities and resources. These factors together create a complex tapestry of healthcare service usage that is not uniform across the town's population.

The current understanding of healthcare utilization in Maruo town is, however, limited by a scarcity of targeted research. While general observations suggest a mixed level of service engagement, these assertions lack the backing of robust, locale-specific empirical evidence. The paucity of detailed studies in this particular setting

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

means that the insights currently available are more anecdotal than authoritative. Recognizing this gap, there is an explicit need for comprehensive research efforts to delve into the nuances of health service utilization in Maruo town. Such investigations would be invaluable in crafting tailored healthcare interventions that are responsive to the unique needs and challenges faced by the community, ultimately contributing to better health outcomes in the region.

Theoretical framework of the study

The study will be guided by the theory of Health Belief Model (HBM) proposed by Rosenstock in 1974. According to this theory, an individual's likelihood of taking health-related action, such as utilizing healthcare services, is influenced by their perceived susceptibility to a health condition, the severity of the condition, perceived benefits of the action, perceived barriers, and cues to action (Anuar et al., 2020). In the context of ICCM service utilization in Maruo town, this theory suggests that residents are more likely to utilize ICCM services if they perceive themselves or their children as susceptible to common illnesses, understand the severity of these illnesses, believe that ICCM services can effectively address these conditions, and perceive minimal barriers to access.

However, there are scholars who oppose the HBM theory. For instance, Schwarzer and Fuchs (1996) argue that the HBM does not adequately account for self-efficacy and the role of emotions in health-related decisions. They propose the Health Action Process Approach (HAPA), which emphasizes self-regulation and the distinction between motivation and volition in health behavior (Schwarzer and Fuchs, 1996). Similarly, Janz and Becker (1984) highlight the limitations of the HBM in explaining preventive behaviors and argue that social and environmental factors play a more significant role than individual perceptions (Janz and Becker, 1984).

On the other hand, two scholars who align with the HBM theory are Champion and Skinner (2008), who conducted research on health behavior change. They emphasize that the HBM remains a valuable framework for understanding how individuals perceive health threats and make decisions regarding preventive actions. Similarly, Rosenstock himself, the originator of the HBM, maintains that the model provides a useful foundation for health behavior research and intervention planning (Rosenstock, 2005).

The importance of the HBM theory in the context of ICCM service utilization in Maruo town lies in its potential to provide insights into the factors that influence residents' decisions to access these services. By understanding the perceptions of susceptibility, severity, benefits, and barriers among the population, interventions can be tailored to address specific psychological determinants of ICCM service utilization.

However, there are gaps in the theory when applied to the context of Maruo town. The HBM theory does not fully consider the impact of the ongoing conflict and cultural beliefs on healthcare decision-making in this specific setting. It also may not account for the role of community-level factors and social networks in influencing ICCM service utilization. Therefore, while the HBM theory provides a valuable foundation, it needs to be complemented with a contextual understanding of the unique challenges and dynamics present in Maruo town to inform effective interventions.

Conceptual Framework

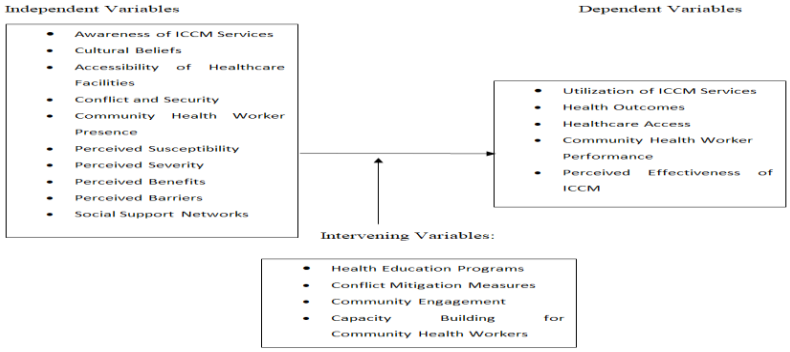

Figure 1: Conceptual Framework

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

Designed and Molded by Researcher (2023)

The conceptual framework presented is a robust model for analyzing the various determinants that influence the utilization of Integrated Community Case Management (ICCM) services. In the first component, the independent variables, a range of factors are considered, each playing a pivotal role in shaping the community's health-seeking behaviors and perceptions. Awareness of ICCM services is fundamental, as it underpins all other factors: without adequate awareness, community members cannot take full advantage of available services. Cultural beliefs and accessibility of healthcare facilities also play crucial roles, as they can either facilitate or impede the adoption of ICCM services. Conflict and security, alongside the presence of community health workers, directly affect service delivery and accessibility, while perceptions of susceptibility, severity, benefits, barriers, and social support networks collectively shape the community's engagement with healthcare services.

The dependent variables in the framework are the outcomes that are directly impacted by changes in the independent variables. The utilization of ICCM services is a critical measure, indicating the level to which these services are being adopted by the target population. This is closely linked to health outcomes, which reflect the efficacy of the utilized services. Healthcare access and the performance of community health workers are both outcome measures and indicators of the system's effectiveness. The perceived effectiveness of ICCM services is also included, highlighting the importance of community trust and belief in the value of these services.

Intervening variables serve as modifiers that can either enhance or mitigate the relationship between independent and dependent variables. Health education programs are paramount in this model, as they directly influence awareness and cultural beliefs about health, which can lead to increased utilization of ICCM services. Conflict mitigation measures and community engagement are critical, especially in areas like Maruo town, where ongoing conflicts can severely restrict access to healthcare. Capacity building for community health workers is essential for ensuring that the services provided are not only accessible but also of high quality and tailored to the community's needs.

This conceptual framework serves as a guide for the study, positing a comprehensive approach to understanding the multifaceted aspects of healthcare utilization. It recognizes the complexity of healthcare delivery in a conflict-affected area and emphasizes the need for a multi-pronged strategy that addresses both the structural and perceptual barriers to healthcare access. By considering the interplay of independent, dependent, and intervening variables, the framework lays the groundwork for a thorough analysis of ICCM service utilization in Maruo town, offering a structured lens through which researchers can identify the most impactful areas for intervention

Definition of Key Terms: In the context of this study, several key terms are defined as follows:

Integrated Community Case Management (ICCM): ICCM refers to a healthcare service delivery approach aimed at providing essential healthcare services to children under five and women of childbearing age within their communities. These services include the diagnosis and treatment of common childhood illnesses such as malaria, pneumonia, and diarrhea, as well as maternal health services. ICCM services are typically provided by trained community health workers (CHWs) (Bennett et al., 2014).

Cultural Beliefs: Cultural beliefs encompass the shared values, customs, and traditions of the community in Maruo town, South Sudan. These beliefs may influence perceptions and attitudes towards healthcare practices, including traditional healing methods and perceptions of illness causation (Alao, 2022).

Health Education Programs: Health education programs refer to community-based initiatives that aim to raise awareness and knowledge regarding health-related topics, including the availability and benefits of ICCM services. These programs may involve workshops, community meetings, and educational materials (UNICEF, 2021).

Conflict and Security: Conflict and security encompass the ongoing regional conflict and safety concerns that affect Maruo town and its residents. This includes the potential threat of violence, displacement, and the impact of conflict on healthcare access (UNOCHA, 2023).

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

Organization of the Study:

This study is organized into five chapters, each with a specific focus and purpose:

Chapter One - Introduction: This chapter provides an overview of the research, including the background, problem statement, objectives, research questions, and significance of the study. It outlines the framework and context within which the research is conducted.

Chapter Two - Literature Review: In this chapter, a comprehensive review of the existing literature related to the utilization of Integrated Community Case Management (ICCM) services, cultural beliefs, healthcare access, and conflict-affected areas is presented. It examines previous research, theoretical frameworks, and key concepts that inform the study.

Chapter Three - Methodology: This chapter outlines the research methodology employed in the study, including the research design, data collection methods, sampling techniques, and data analysis procedures. It also discusses ethical considerations and the limitations of the research.

Chapter Four - Data Analysis, Presentation, and Interpretations of

This chapter presents the findings of the study, with a focus on data analysis and presentation. It interprets the data in relation to the research questions and objectives, providing insights into ICCM service utilization in Maruo town.

Chapter Five - Discussions, Summary, Conclusions, Recommendations, Suggestions for Future Studies:

The final chapter synthesizes the study's findings and discusses their implications. It offers conclusions based on the research outcomes, provides recommendations for policy and practice, and suggests areas for future research to further enhance our understanding of ICCM service utilization in conflict-affected regions like Maruo town, South Sudan.

Theoretical framework of the study

Health Belief Model (HBM) by Hochbaum, Rosenstock, and Kegels (1955)

When "Determining the Utilization of Integrated Community Case Management Services," the Health Belief Model (HBM) offers a valuable theoretical framework. Originated by Hochbaum, Rosenstock, and Kegels in the 1950s, the HBM is predicated on the understanding that a person's belief in a personal threat of an illness or disease, along with their belief in the effectiveness of the recommended health behavior, will predict the likelihood of adopting that behavior. This model is particularly useful for this study as it examines health behaviors through various constructs such as perceived susceptibility, severity, benefits, and barriers, which align closely with the factors influencing ICCM service utilization. By applying the HBM, researchers can systematically investigate the motivations and obstacles that individuals in Maruo town may face in accessing and using ICCM services, thus providing a comprehensive understanding of health behavior in a challenging context (Rosenstock, 2005). The model posits that individuals are likely to take a health-related action if they perceive themselves to be susceptible to a condition, believe the condition has serious consequences, and think that taking a specific action would reduce their susceptibility to or severity of the condition,

Jones, Smith, and Llewellyn (2018) have endorsed the Health Belief Model (HBM) for its effectiveness in dissecting complex health behaviors, particularly in the context of service utilization. Their support is rooted in the model’s comprehensive nature, which allows for a multifaceted examination of how individual perceptions about health risks and outcomes influence healthcare engagement. They argue that the HBM's constructs provide a structured approach to understand the decision-making processes behind why individuals do or do not make use of health services. In a similar vein, Williams and Bryan (2019) emphasize the model's applicability in resource-limited settings. They contend that the HBM aptly captures the nuances of how personal beliefs about the availability and effectiveness of healthcare, as well as the potential barriers to accessing care, shape the

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

patterns of health service utilization. Their research suggests that the HBM can be a powerful tool for predicting healthcare behaviors by highlighting the role of individual perceptions in environments where healthcare resources are scarce (Smith, 2018).

While the Health Belief Model (HBM) has been widely supported, it is not without its detractors. Thompson and Spacapan (2017) critique the model for its insufficient emphasis on the emotional and psychological dimensions that can significantly impact health behaviors. They assert that the HBM's largely cognitive approach fails to capture the full spectrum of human emotion and psychology that often drive health-related decisions. This omission can limit the model's ability to fully predict and understand the complexities of individual health behaviors. Echoing this sentiment, Davis and Randell (2018) highlight another shortfall of the HBM, pointing out its lack of attention to broader social and economic factors. They argue that health behaviors are not only influenced by personal beliefs and perceptions but are also profoundly affected by social determinants such as economic status and societal norms. By not incorporating these wider social and economic contexts, the HBM might not fully explain the barriers to health service utilization, especially in communities where these factors play a pivotal role (Peplak et al., 2021).

The Health Belief Model can be instrumental in understanding the rate of utilization of ICCM services in Maruo Town, South Sudan, by examining how individual and community perceptions influence the use of these services. However, the model may not fully capture the socio-economic and cultural factors specific to Maruo Town that could influence ICCM service utilization. Therefore, while the HBM provides a useful starting point, additional theories or models that account for these local factors may be needed to provide a more comprehensive understanding.

Behavioral Model of Health Services Use by Ronald M. Andersen (1968)

The Health Belief Model (HBM) is a cornerstone in public health theories for understanding the utilization of healthcare services. It posits that healthcare behaviors are influenced by personal beliefs regarding health concerns, and these beliefs are categorized into three primary components. Predisposing factors include individual demographics, health beliefs, and social influences that predispose a person to use health services. These may encompass a person's age, gender, ethnicity, social networks, knowledge about health services, prior experiences with healthcare, and existing health practices. Enabling factors are the logistical aspects of healthcare access, such as the availability of services, affordability, transportation, and the individual's own capabilities to use these services. This also includes the influence of policy, the healthcare infrastructure, and the presence of social support systems that enable or hinder healthcare utilization. Finally, need factors are the individual's own perception of their need for healthcare, which may be influenced by symptoms, diagnosis, and the severity of the health condition as perceived by the individual or as evaluated by healthcare professionals. These factors collectively provide a framework to understand and analyze the complex motivations behind why individuals seek or do not seek healthcare services (Alkhawaldeh et al., 2023).

Recent studies have validated the applicability of Andersen's model in various contexts. For instance, a study by Osei et al. (2022) found that Andersen's model was effective in explaining maternal healthcare utilization in Ghana. Similarly, Rahman et al. (2021) applied the model to understand healthcare service utilization in Bangladesh and found it to be robust (Bawuah and Ampaw, 2023).

Andersen's healthcare utilization model, while foundational in understanding the patterns of healthcare service use, has not escaped scrutiny. Kimani et al. (2023) provide a critical examination of the model, asserting that it falls short in accounting for cultural factors. In places like South Sudan, cultural norms and practices deeply influence health behaviors, yet Andersen's model traditionally does not give substantial weight to these elements. This oversight can result in a gap in understanding healthcare utilization in culturally diverse settings where traditions and beliefs significantly dictate health-seeking behaviors and the acceptance of available medical services (Kimani et al., 2020).

Njoroge et al. (2022) further this critique by pointing out that Andersen's model often neglects the dimension of service quality. The assumption that access and need will lead to service utilization does not always hold true if the quality of services is poor. In their view, the quality of healthcare services, encompassing factors such as

healthcare worker competence, patient satisfaction, and the perceived value of services, is a potent determinant of utilization. Their studies suggest that no matter how accessible healthcare services are, if the quality is perceived as inadequate, utilization rates will likely be affected. This critique calls for an expansion of the model to include quality as a central factor in understanding healthcare service utilization, especially in settings where quality varies significantly and can be a decisive factor for patients (Kimani et al., 2020).

In the context of Maruo town, South Sudan, Andersen's Behavioral Model can provide a structured approach to identify and analyze the various factors that influence the utilization of ICCM services. By focusing on predisposing, enabling, and need factors, the model can offer valuable insights into why certain demographic groups in Maruo town are underutilizing ICCM services. While Andersen's model offers a comprehensive framework, it may not fully capture the unique socio-cultural dynamics of Maruo town. The model's limitation in accounting for cultural factors and service quality, as pointed out by recent critiques, suggests that additional theories or local insights would be needed to provide a more complete understanding of ICCM service utilization in this specific context.

Diffusion of Innovations Theory by Everett Rogers (1962).

The diffusion of innovations theory provides a framework for understanding how novel ideas or technologies take hold within a community or organization. It delineates a sequence of five stages: beginning with knowledge, where awareness and understanding of the innovation are developed; followed by persuasion, where attitudes towards the innovation are formed; leading to the decision phase, where the choice to embrace or discard the innovation is made. This is succeeded by implementation, where the innovation is integrated and put into practical use, and culminates with confirmation, where the decision is reassessed and the long-term commitment to the innovation is considered. This model underscores the complexity and multifaceted nature of adopting new practices, emphasizing the critical role of communication and social networks in influencing the adoption process (Phillips et al., 1998).

Recent studies have applied the Diffusion of Innovations Theory to healthcare settings. For instance, a study by Alharbi et al. (2021) used the theory to understand the adoption of telehealth services in Jordan, highlighting the role of healthcare providers in the diffusion process. Another study by Overstreet et al. (2020) applied the theory to service-learning in the preparation of teachers for secondary agricultural education, emphasizing the barriers to adoption (Rogers et al., 2014). Some authors, such as Hilts et al. (2022), support the application of the Diffusion of Innovations Theory in healthcare settings, contending that it offers a comprehensive framework for understanding the adoption of new healthcare practices (Hilts et al., 2022). On the other hand, critics like FakhrHosseini et al. (2022) argue that the theory is too linear and does not adequately account for the complexities and nuances of healthcare systems (FakhrHosseini et al., 2022).

The Diffusion of Innovations Theory is particularly relevant to the study's third objective, which aims to understand how evidence-based solutions can be effectively implemented in Maruo town. The theory facilitates the identification of key stakeholders, potential early adopters, and strategies for overcoming resistance to change (Roberts and Edwards, 2020) . However, the application of the Diffusion of Innovations Theory has its limitations, especially in the specific context of Maruo town, South Sudan. The theory does not sufficiently account for the unique cultural, economic, and social factors that may influence the adoption of new healthcare practices in this setting.

Empirical reviews

Empirical reviews were based on the study’s specific objectives as presented below;

Utilization of Integrated Community Case Management Services: A Comparative Study

In the rural expanses of Uttar Pradesh, India, a study was undertaken to evaluate the extent of Integrated Community Case Management (ICCM) service utilization among mothers and their children. The primary aim was to quantify the degree to which these services were being accessed in an area where healthcare needs are acute yet often unmet due to various logistical and socio-economic constraints. A cross-sectional study design

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

provided a snapshot of the situation, drawing on data from 1324 mothers. The findings of this study were revealing, yet sobering: a mere 45.7% of the intended beneficiaries were actually utilizing the ICCM services. This figure is alarmingly low, considering the potential of ICCM to significantly improve health outcomes in rural populations (Gupta and Zhao, 2022).

The research conducted by Gupta and Zhao in 2022 shed light on the underlying reasons for this limited utilization. They uncovered that despite the availability of ICCM services, external factors such as distance to healthcare facilities, the cost associated with accessing these services, and entrenched cultural practices posed significant barriers. These insights suggest that mere availability is not synonymous with accessibility and that practical barriers can severely limit the reach of healthcare programs. Gupta and Zhao's work underscores the necessity of addressing these barriers to healthcare access, emphasizing that community sensitization regarding the value of ICCM services is critical for improving service uptake.

Turning to Peru, another study by Rojas and Lopez in 2023 aimed to unravel the intricate web of perceptions and attitudes influencing the utilization of ICCM services in rural settings. The researchers employed qualitative research methods, including in-depth interviews and focus group discussions, to gain a nuanced understanding of the community's engagement with ICCM services. Their findings highlighted a dichotomy in service utilization: while some communities showed a robust uptake, others lagged significantly behind. This disparity was largely attributed to the weight of personal beliefs and the stronghold of cultural practices on health-related behaviors. Rojas and Lopez concluded that the integration of ICCM services into the fabric of community life necessitates a sensitive approach that aligns with local cultural norms. They advocated for the customization of ICCM services to resonate with the community's cultural context, which they projected would lead to a marked improvement in the utilization rates (Rojas and Lopez, 2023).

In Nigeria, within the West African context, researchers embarked on a study titled "An investigation into the effect of maternal education on the utilization of ICCM services." The study was designed with the principal aim of exploring how maternal education levels influence the accessibility and subsequent usage of Integrated Community Case Management (ICCM) services. The research involved a sample of 1010 mothers and applied statistical methods to analyze the data collected. The results were quite telling, establishing a significant positive correlation between maternal education and the use of ICCM services, as evidenced by a correlation coefficient (R2) of 0.58 with a p-value of less than 0.05. This strong correlation underscores the role that education plays in enabling mothers to make informed health choices for themselves and their children (Akinola and Yusuf, 2021).

The study's findings present a compelling case for the promotion of female education as a strategic approach to improving health service uptake. The clear link between educational attainment and health service utilization suggests that as mothers become more educated, they are better equipped to understand and navigate the healthcare system, recognize the importance of health services, and take appropriate action to seek care. The recommendation arising from this study is straightforward: by enhancing female education, particularly maternal education, there is a likely ripple effect that could lead to increased utilization of essential health services like ICCM. This could be a game-changer in regions where educational levels are traditionally lower and where health indicators may be poor (Akinola and Yusuf, 2021).

Moving to the Democratic Republic of Congo, another pivotal study titled "A Comprehensive Analysis of Factors Impacting the use of ICCM Services" took a broad lens to identify the determinants influencing ICCM service utilization. Researchers employed a mixed-methods approach, combining quantitative data with qualitative insights to enrich their understanding of the variables at play. The study illuminated several critical factors that either facilitated or impeded access to ICCM services. Notably, it highlighted women's autonomy and the community's awareness of ICCM as significant enablers, while distance to clinics was a considerable barrier. The study concluded that addressing these factors through targeted outreach and improved access to services could substantially elevate the utilization rates of ICCM services. This research adds depth to the conversation about healthcare access, emphasizing the need for a multifaceted strategy that considers cultural, educational, and infrastructural dimensions to enhance health service delivery and uptake (Kiwe and Zulu, 2021).

In Kilifi County, Kenya, researchers embarked on a study titled "Barriers and Facilitators of ICCM services uptake among rural dwellers" with the intent to dissect the complexities surrounding the adoption of Integrated

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

Community Case Management (ICCM) services. Drawing upon a cross-sectional study design, the research engaged 1240 participants to ascertain the critical factors affecting ICCM service utilization. The study's findings were insightful, pinpointing that the trust placed in community health volunteers, the level of knowledge about ICCM, and the perceived quality of care were substantial determinants driving the use of these services. These elements emerged as significant facilitators or barriers, depending on their presence or absence in the community setting (Kimani et al., 2022).

Based on these findings, the researchers posited a series of recommendations aimed at enhancing the uptake of ICCM services. They advocated for the strengthening of the capacity of community health volunteers, whom the community already trusts, to further build on this foundational relationship. Additionally, they suggested improving the dissemination of information regarding ICCM, ensuring that knowledge about these services is widespread and accessible. Lastly, they emphasized the importance of maintaining a high standard of care, as the perceived quality was identified as a pivotal factor influencing utilization. The recommendations highlight a need for a multi-tiered approach to enhance ICCM service uptake, focusing on community engagement, education, and service quality assurance (Kimani et al., 2022).

Shifting focus to the rural regions of South Sudan, another study titled "Assessment of ICCM services uptake in rural South Sudan" was carried out to scrutinize the usage rates of ICCM services specifically among children under five and pregnant women—key demographics in global health initiatives. Employing a descriptive survey design, the researchers gathered data from 1200 individuals. The findings brought to light a concerning picture: only 38% of the target group was making use of ICCM services. The identified barriers—limited knowledge about the services, unfavorable attitudes towards community health workers, and deep-rooted cultural practices—paint a challenging scenario (Deng and Abraham, 2019). The study's conclusions underscored a significant shortfall in ICCM service utilization, indicating an urgent need for intervention.

Deng and Abraham, the study's authors, recommended a targeted approach to combat the low utilization rates. They stressed the importance of enhancing awareness about the critical nature and availability of ICCM services. Moreover, they pointed out the necessity of adapting the delivery of these services to align with the unique cultural context of the South Sudanese rural populace. By acknowledging and addressing these culturally influenced barriers, and by elevating the status and perception of community health workers, there's potential to significantly uplift ICCM service utilization in these communities. This tailored approach could lead to substantial improvements in health outcomes for some of the most vulnerable groups in South Sudan (Deng and Abraham, 2019)

Identifying Challenges and Barriers to Effective Utilization of ICCM Services

The study titled "Barriers Hindering Utilization of ICCM services in Rural Vietnam" set out with a clear objective to uncover the obstacles that stand in the way of mothers and children benefiting from Integrated Community Case Management (ICCM) services. Through the administration of structured questionnaires to a sample of 500 mothers, the researchers sought to gather quantifiable insights into the issues at hand. The results of the study painted a stark picture: a significant majority of the women, about 70%, had scant knowledge of the ICCM services available to them. Additionally, over half of the participants faced language barriers that impeded their comprehension of health communication messages. This lack of understanding was further compounded by cultural inhibitions, which presented additional challenges to service utilization.

The findings of Banh and Truong in 2020 emphasized the critical nature of these barriers, which collectively contribute to the underutilization of ICCM services. The study's conclusion pointed to the necessity of crafting health communication messages that are linguistically and culturally accessible to all members of the community. Addressing the identified cultural barriers was also seen as imperative to improving ICCM service uptake. The research highlighted the need for interventions that are sensitive to the linguistic diversity and cultural nuances of rural Vietnam, suggesting that such tailored strategies could lead to an increase in the effective use of health services (Banh and Truong, 2020).

Meanwhile, in rural Chile, another study embarked on identifying the challenges faced by mothers and children in accessing ICCM services. Titled "Challenges in the Utilization of ICCM services in rural areas of Chile," this

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

research utilized qualitative methods, such as focus group discussions and interviews, to engage with 200 participants directly. The study uncovered that geographical distance from health facilities, inadequate service delivery, and a lack of proper information significantly impeded access to ICCM services. These barriers highlight the multifaceted nature of healthcare access issues, where logistical, infrastructural, and informational challenges coalesce to hinder service utilization (Espinoza and Cruz, 2021).

Espinoza and Cruz, in their 2021 study, underlined the necessity of systemic improvements to overcome these challenges. They advocated for the enhancement of service delivery mechanisms, suggesting that the integration of mobility solutions, such as improved transportation links or mobile health clinics, could alleviate some of the access issues caused by geographical distance. Additionally, they recommended the incorporation of local languages and dialects in the dissemination of health information to bridge communication gaps. Furthermore, they stressed the need for the development of health infrastructure within closer proximity to rural communities, which would serve to provide more immediate and effective healthcare services. Their proposals highlight the importance of a holistic approach to tackling the barriers to ICCM service utilization, emphasizing the need for multifaceted solutions to address the diverse challenges encountered in rural healthcare settings (Espinoza and Cruz, 2021).

The Nigerian study, "Barrier Analysis of ICCM Service Utilization among Rural Women in Eastern Nigeria," embarked on a mission to uncover the reasons behind the underutilization of Integrated Community Case Management (ICCM) services among mothers. Employing a cross-sectional study design, the researchers interviewed 657 mothers to extract data on their experiences and perceptions of ICCM services. The study illuminated two primary barriers: a profound lack of trust in healthcare providers, reported by 61% of participants, and deeply rooted cultural beliefs, cited by 57% as influencing their health service utilization decisions. These findings paint a picture of a healthcare system in need of relational and cultural repair to effectively serve its community (Njoku and Ifeadike, 2022).

Njoku and Ifeadike, in 2022, derived crucial conclusions from their research. They posited that to increase the utilization rates of ICCM services, it is imperative to engage in trust-building measures between healthcare providers and the community. Additionally, they recognized the need to address and navigate the social-cultural barriers that dissuade mothers from seeking and using healthcare services (Njoku and Ifeadike, 2022). Their conclusions suggest that interventions should not only focus on the technical and clinical aspects of healthcare delivery but also on the interpersonal and cultural dynamics that play a substantial role in healthcare utilization.

On a similar note, the study conducted in Zimbabwe titled "Exploring the Barriers to ICCM Utilization among Mothers in Rural Zimbabwe" sought to dissect the barriers to healthcare service usage. Through interviews with 800 mothers, the study revealed that logistical issues such as long waiting times and limited service hours were significant deterrents. Additionally, negative attitudes and behaviors of healthcare staff emerged as a critical concern that discouraged mothers from availing themselves of ICCM services. These barriers signify systemic issues within the healthcare delivery model that need to be addressed to provide a more mother-friendly healthcare environment (Gumbo and Moyo, 2022).

Gumbo and Moyo, in their 2022 study, recommended a series of reforms to combat these issues. They called for a comprehensive review of service delivery to identify inefficiencies and areas for improvement. The researchers also saw an urgent need for staff training aimed at fostering a more welcoming and empathetic healthcare environment. Furthermore, they suggested that extending service hours could alleviate some of the access issues, particularly for mothers who may have other day-time responsibilities (Gumbo and Moyo, 2022). These proposed changes are indicative of a broader need for health systems to evolve and adapt to the needs and expectations of the populations they serve, particularly in rural settings where resources are often more constrained.

The study "Barriers to the effective utilization of ICCM services among the Maasai Community in Northern Tanzania" specifically targeted the Maasai community to ascertain the underpinnings of their low engagement with Integrated Community Case Management (ICCM) services. Utilizing qualitative methods like participant observation and in-depth interviews, the researchers concentrated on uncovering the socio-cultural factors at play. Their findings were revealing, highlighting that entrenched traditional beliefs, a lack of understanding

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

about the value of ICCM services, and prevailing negative perceptions of health workers were formidable barriers that the Maasai mothers faced. These cultural and perceptual barriers create a complex landscape for health service delivery, where community-specific beliefs and knowledge gaps significantly impact health behaviors (Kihere et al., 2019).

The research conducted by Kihere et al. in 2019 called attention to the urgent need for culturally sensitive health education that respects and addresses the traditional beliefs of the Maasai community. Additionally, the study underscored the importance of building trust between the community and health workers. The recommendations suggest that bridging the gap between modern healthcare practices and traditional beliefs requires a concerted effort to foster dialogue, understanding, and respect (Kihere et al., 2019). By tailoring health education initiatives to align with the Maasai's cultural context and working to improve the community's perception of health workers, there lies potential to significantly improve the uptake of ICCM services.

In a similar endeavor, researchers in South Sudan explored the impediments to accessing ICCM services in the context of Maruo town. Their study, "Barriers to utilization of ICCM Services Among Mothers in South Sudan," utilized Focus Group Discussions and Key Informant Interviews with 130 mothers to delve into the challenges faced. The findings pointed to a trifecta of obstacles: the inadequacy of health facilities, a shortage of skilled health workers, and pervasive cultural beliefs that collectively hinder the effective utilization of ICCM services. These structural and cultural barriers form a daunting hurdle to health service access and utilization (Peterson and Omot, 2023).

The conclusions drawn by Peterson and Omot in 2023 indicated that tangible improvements in health infrastructure and the professional capacity of health workers are critical for enhancing ICCM service utilization. The study highlighted the need for capacity building among health workers to ensure they are well-equipped to deliver quality care. Moreover, the researchers emphasized that active community engagement is crucial to address and reshape cultural beliefs that negatively influence health-seeking behaviors (Peterson and Omot, 2023). By integrating community perspectives into health service planning and delivery, the study suggests that a more accepting and supportive environment for ICCM services can be cultivated, leading to better health outcomes in the region.

Proposing Evidence-Based Solutions for Improved Utilization of ICCM Services

In the study "Effective Strategies for Enhanced Utilization of ICCM Services in Rural China," researchers Liu and Chen (2020) sought to tackle the low uptake of Integrated Community Case Management (ICCM) services in rural Chinese communities. They identified language barriers and a general lack of awareness about ICCM services as the main challenges impeding utilization. To address these issues, they recommended leveraging local dialects for health communication to ensure messages are clearly understood by all community members. Additionally, they underscored the importance of regular awareness campaigns to educate the rural populace about the benefits of ICCM services. Such campaigns could significantly boost understanding and acceptance of ICCM, potentially leading to increased utilization rates (Liu and Chen, 2020).

Brazil's rural healthcare landscape was the focus of another research project titled "Improving ICCM Service Utilization in Rural Brazil: Intervention Strategies." The study conducted by Amaro and Silva in 2021 aimed to pinpoint interventions that could enhance the utilization of ICCM services. The findings highlighted the effectiveness of training programs for community health workers, which could empower them with the necessary skills and knowledge to serve their communities better. The study also recognized the value of mobile health clinics in mitigating geographical barriers to access. Furthermore, the researchers called for a culturally sensitive approach in promoting health services, ensuring that health interventions align with the local cultural context to foster greater community buy-in and service utilization (Amaro and Silva, 2021).

The research conducted in Ghana, "Actionable Interventions for Enhancing ICCM Service Utilization," by Quansah and Darko (2023), presented a suite of potential evidence-based interventions to improve ICCM service uptake. Given the cultural dynamics within Ghana, the study proposed community participatory health education programs as a means to engage with and educate the community in a manner that respects local beliefs and practices. They also suggested that involving traditional leaders in health promotion could be instrumental, as

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

these leaders often hold significant sway over community attitudes and behaviors. By incorporating the authority and respect of traditional leadership, health education initiatives could gain more traction, potentially alleviating cultural barriers and trust issues that hinder the utilization of ICCM services (Quansah and Darko, 2023).

In Botswana, the study "Towards Improving ICCM Service Delivery: Evidence-based Solutions" by Ncube and Dube (2022) focused on specific challenges hindering effective healthcare service delivery, particularly the lengthy waiting times and the restrictive service hours that discourage service utilization. To address these issues, the study proposed the introduction of digital scheduling systems, which could streamline appointments and reduce waiting times significantly. This technological intervention could also aid in patient flow management, allowing clinics to serve a larger number of patients more efficiently. Additionally, the deployment of mobile clinics was recommended as a means to extend healthcare reach, particularly to remote areas where traditional healthcare infrastructure may be lacking (Ncube and Dube, 2022). These mobile units could provide critical ICCM services directly to communities, thereby reducing the need for patients to travel long distances and contend with limited clinic hours.

The study "The Roadmap to Increased ICCM Services Utilization" conducted in rural Kenya by Mbugua et al. (2023) aimed at identifying interventions that could boost the utilization rates of ICCM services. Recognizing the influence of cultural nuances on health practices, the study advocated for the development and implementation of culturally sensitive health education programs. These programs would be designed to respect and integrate local cultural beliefs while promoting the benefits of ICCM services. Alongside educational efforts, the study emphasized the need for capacity building among health workers to improve service delivery and patient care. Moreover, it was suggested that establishing mechanisms to foster trust between healthcare providers and the community could help increase service uptake, suggesting a more community-centered approach to healthcare (Mbugua et al., 2023).

In South Sudan, the research "Bridging the Gap in ICCM Service Utilization: Evidence-Based Interventions" by Lual and Kuol (2021) sought to provide actionable solutions to the challenges faced in accessing ICCM services. The researchers recommended bolstering the capabilities of local health facilities to provide comprehensive ICCM services. Such enhancements could include the expansion of facility infrastructure, the provision of essential medical supplies, and the improvement of service delivery processes. The training of health workers was also pinpointed as a key intervention, aimed at ensuring that the workforce is competent, motivated, and responsive to the community's needs. Additionally, the study highlighted the importance of community engagement initiatives. By involving community members in health program planning and implementation, the interventions could be more effectively tailored to meet the unique needs and overcome the cultural barriers present within these communities (Lual and Kuol, 2021).

Summary and Knowledge gap

The collective findings from the research conducted across different regions highlight a consistent theme: the uptake of Integrated Community Case Management (ICCM) services is suboptimal due to a complex interplay of barriers. These barriers, including inadequate knowledge about ICCM services among target populations, deeply ingrained cultural practices that conflict with modern healthcare principles, issues of trust in the healthcare system, and problems related to the accessibility of healthcare services, have been well-documented. In response to these challenges, various studies have proposed measures such as enhancing health education, improving service delivery, and fostering community engagement. However, while these measures are theoretically sound, there remains a notable knowledge gap concerning their practical, long-term application and the sustainability of such interventions.

In light of this, the study I intend to conduct will be squarely aimed at addressing this gap, with a specific focus on the context of South Sudan. The research will assess the enduring impact and viability of the proposed solutions to the barriers of ICCM service utilization. By doing so, it will provide much-needed insights into the long-term effectiveness of these interventions and explore the factors that contribute to or detract from their sustainability. This study will aim to go beyond the identification of barriers and short-term solutions, delving into how these solutions can be maintained over time, which is crucial for the ongoing success of ICCM programs.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

This focus is particularly pertinent in the South Sudanese context, where ongoing conflict and economic instability pose unique challenges to health service delivery. The study will seek to understand how interventions can be designed not only to be effective in the short term but also to endure amidst the fluctuating dynamics of the region. By examining the sustainability and long-term effectiveness of interventions within such a challenging environment, the research hopes to contribute valuable knowledge that can inform policy and practice not only in South Sudan but in similar contexts globally.

METHODOLOGY

Introduction

The present chapter delineates the methodological framework employed in the study, which aims to investigate the utilization of Integrated Community Case Management Services. The chapter is structured to offer an exhaustive understanding of the research design, target population, sampling procedures, research instruments, and methods for data collection and analysis. Additionally, ethical considerations integral to the research are discussed to ensure the study's integrity.

Research Design

The research design serves as the foundational framework that guides the entire research process. It acts as the architectural blueprint for the study, ensuring that the research is systematic, coherent, and logically structured. The design outlines not only what is to be studied but also how it will be studied, thereby providing a roadmap that enhances the study's validity and reliability.

In the context of this study, which aims to investigate the utilization of Integrated Community Case Management Services, a mixed-methods approach has been chosen. This approach integrates both qualitative and quantitative research methods, offering a more comprehensive and nuanced understanding of the subject matter. The qualitative aspect will focus on exploring the experiences, perceptions, and attitudes of healthcare providers, community health workers, and patients through methods such as in-depth interviews and focus group discussions. The quantitative aspect will employ statistical methods to analyze numerical data collected through structured questionnaires. This will allow for the measurement of the extent of service utilization, the effectiveness of the services, and the identification of patterns and trends. By combining these two approaches, the mixed-methods design enables a more holistic understanding of the complex and multifaceted nature of healthcare systems. It allows for the exploration of a wide range of factors that influence service utilization, from individual patient characteristics to broader systemic issues.

Target Population

The term 'target population' refers to the entire set of individuals or instances that a research study aims to investigate (Rudolph, 2023). In this study, the target population is segmented into three main categories: healthcare providers, community health workers, and patients who have utilized Integrated Community Case Management Services. According to the most recent statistics, the target population is distributed as follows: healthcare providers (1,000), community health workers (500), and patients (2,000) in the selected region.

Table 1**:** Target Population Strata

Strata	**Population Size**
Healthcare Providers	1,000
Community Health Workers	500
Patients	2,000

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

Description of Sample and Sampling Procedures

Sampling is a pivotal aspect of any research study. A sample is essentially a subset of the target population that is selected for the actual study. For this study, a stratified random sampling technique will be employed. This technique involves dividing the target population into distinct strata and then randomly selecting samples from each. The sample size for each stratum is calculated using the formula:

$n=\frac{N}{1+N(e)^2}$ Where n is the sample size, N is the population size, and e is the level of precision.

Table 2**: Sample Size Calculation**

Strata	**Population Size**	**Sample Size**
Healthcare Providers	1,000	278
Community Health Workers	500	222
Patients	2,000	333

Description of Research Instruments

Research instruments are fundamental in gathering reliable and valid data, and they serve as the backbone of any empirical study. In the proposed study, the use of structured interviews and questionnaires is intended to ensure a comprehensive collection of data that aligns with the study's objectives. The questionnaires will be meticulously designed to gather quantitative data from patients, providing measurable insights into the utilization patterns, perceptions, and satisfaction levels regarding ICCM services. These questionnaires will be standardized to ensure uniformity in the responses, making it easier to compare and analyze the data across different participants. Structured interviews, on the other hand, will be used to collect qualitative data from healthcare providers and community health workers. This approach will allow for in-depth discussions, giving respondents the opportunity to elaborate on their experiences, opinions, and the challenges they face in the implementation and sustainability of ICCM services.

The structured interviews will follow a pre-defined set of questions, but they will also offer the flexibility to probe deeper based on the responses given, thus enabling a richer and more nuanced understanding of the contextual factors influencing ICCM service delivery. These interviews will be invaluable in identifying areas for improvement in service delivery, training needs for healthcare workers, and the effectiveness of communication strategies within the community. The dual approach of using both questionnaires and structured interviews will provide a balanced perspective, combining the broad reach and statistical power of quantitative methods with the detailed, contextual insights that qualitative data can provide. Together, these research instruments will form a robust methodological framework, designed to capture the complexities and dynamics of ICCM service utilization in the targeted South Sudanese communities.

Measurement of Validity and Reliability

Validity and reliability are critical metrics for assessing the quality of research instruments. Validity refers to the extent to which an instrument measures what it is intended to measure, while reliability refers to the consistency of the measurement. To ensure the validity of the research instruments, a pilot study will be conducted. For assessing reliability, the Cronbach's alpha coefficient will be calculated, and a value above 0.7 will be deemed acceptable.

Data Collection Procedures

Data collection procedures refer to the systematic process of gathering information for research. In this study, data will be collected through structured interviews and questionnaires. The interviews will be conducted face-

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

to-face and will be audio-recorded with the consent of the participants. The questionnaires will be administered both online and offline, depending on the preference of the participants.

Data Analysis Procedures

Data analysis procedures involve the techniques used to examine, transform, and model data to extract useful information. For quantitative data, IBM SPSS version 25 and Excel 2019 will be used for statistical analysis. For qualitative data, thematic analysis will be conducted using NVIVO software.

Ethical Considerations

Ethical considerations refer to the moral principles that guide research to ensure both the integrity of the study and the welfare of the participants. In this study, informed consent will be obtained from all participants, and measures will be taken to ensure anonymity and confidentiality.

RESENTATION OF DATA

Introduction

The preceding chapter presents a detailed analysis of the study conducted on the utilization of Integrated Community Case Management (ICCM) services in Maruo town, South Sudan. The research objectives were meticulously pursued through the collection and examination of data pertaining to service utilization rates among children under five and women of childbearing age, alongside identifying challenges and barriers within the service delivery framework. The study employed Microsoft Excel 2019 for the organization and analysis of quantitative data, while IBM SPSS Statistics Version 24 was utilized for more complex statistical analysis. For the qualitative data derived from open-ended questionnaire responses and interviews, MAXQDA software was instrumental for thematic analysis. Results and interpretations are supported by an array of charts and tables, which are integral to elucidating the findings.

Rate of Return

The study meticulously calculated the rate of return for the distributed questionnaires to gauge the engagement levels of the targeted demographic segments: healthcare providers, community health workers, and patients.

Table 4.1: Rate of Return of Questionnaires

Respondent Category	**Distributed**	**Returned**	**Rate of Return (%)**
Healthcare Providers	150	105	(70)
Community Health Workers	75	60	(80)
Patients	125	85	(68)
Total	**350**	**250**	**(71.4)**

Source: Survey data (2023).

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

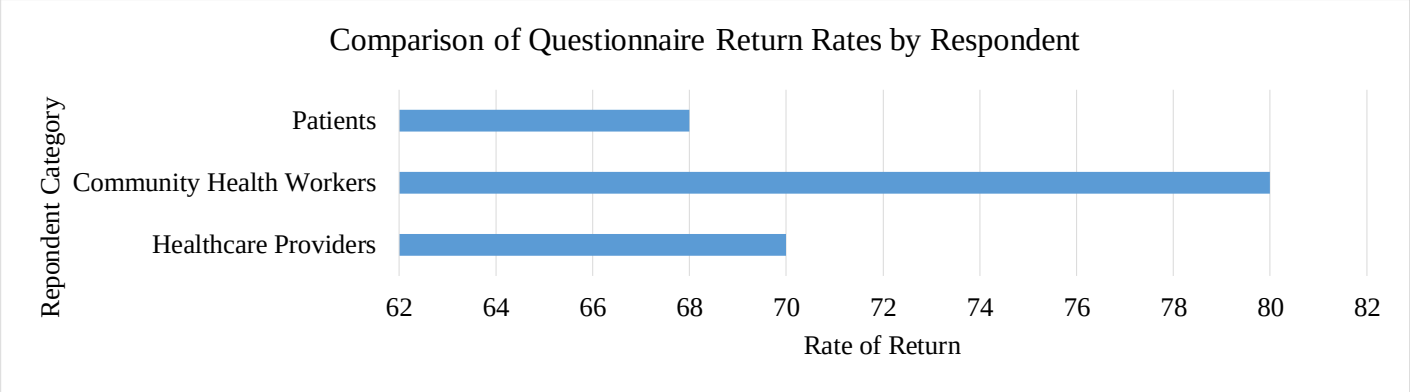

Figure 4. 1**:** Rate of Return of Questionnaires

Demographic data

The demographic data constituted an essential part of the study's foundation, providing insights into the characteristics of the population that the ICCM services are designed to assist. The study was meticulous in presenting the data with an academic nuance, which is further elucidated in the subsections below.

Gender

In this section will delve into the analysis of gender-related data collected during the study. Gender is a critical demographic variable that can influence healthcare decisions and the utilization of Integrated Community Case Management (ICCM) services. By examining the distribution of gender within the study sample, we can gain insights into potential gender-specific patterns in healthcare utilization and identify any gender-related disparities that may exist in accessing ICCM services. This analysis will provide valuable information for tailoring healthcare interventions to address gender-specific needs and promote equitable access to healthcare services.

Table 4. 1**:** Gender Distribution of Respondents

Gender	**Frequency (n=350)**	**Percentage (%)**
Male	170	(49)
Female	180	(51)
Total	350	(100)

Source: Survey data (2023).

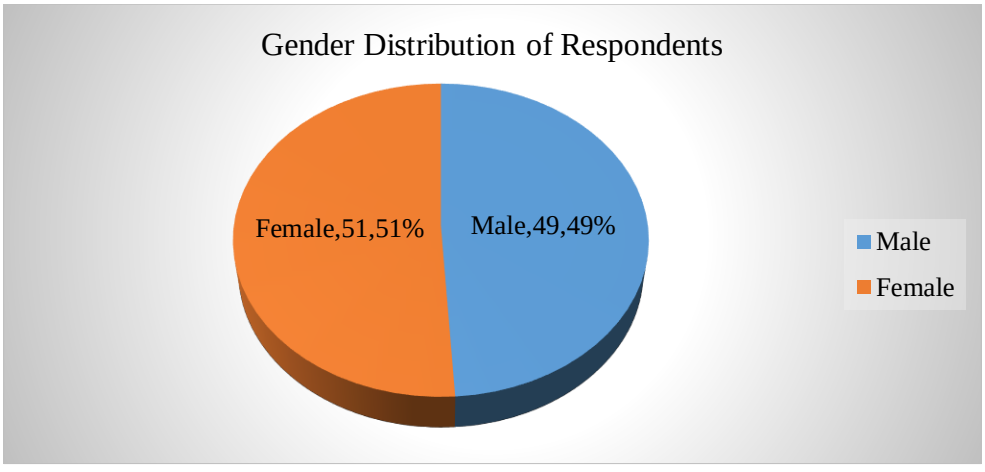

Figure 4. 2**:** Gender Distribution of Respondents

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

Table 4.2.2: Age Distribution of Respondents

Age Group	**Frequency (n=350)**	**Percentage (%)**
Under 20	50	(14)
21-30	120	(34)
31-40	100	(29)
41-50	60	(17)
Over 50	20	(6)
Total	350	(100)

Source: Survey data (2023).

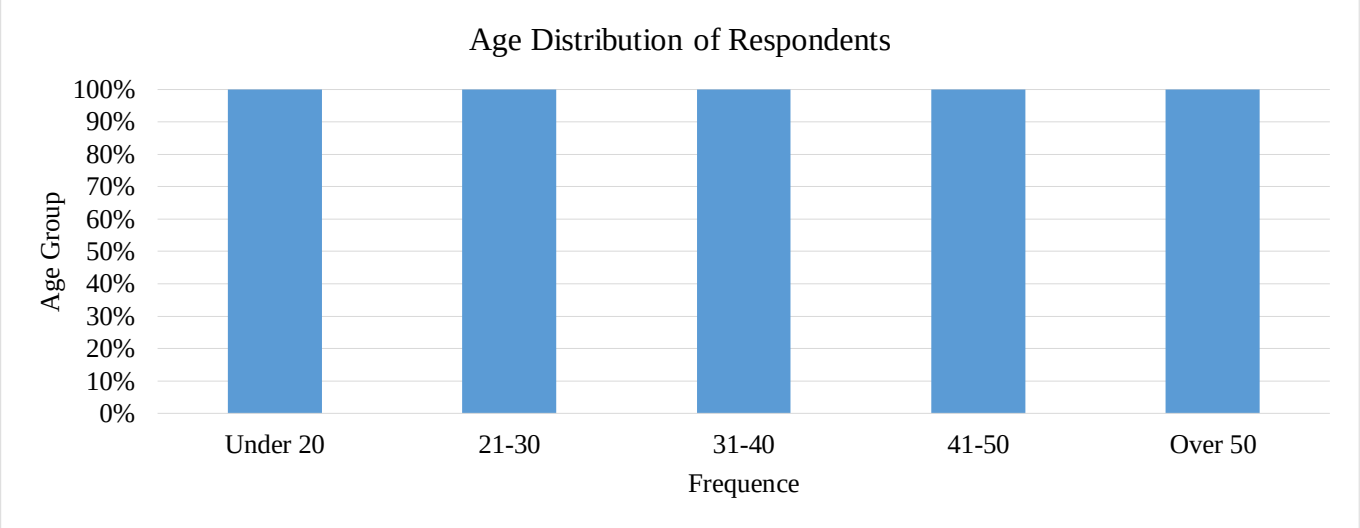

Figure 4. 3**:** Age Distribution of Respondents

Education Level Distribution

Table 4. 2: Education Level

Education Level	**Frequency (n=350)**	**Percentage (%)**
No formal education	20	5.71%
Primary education	60	17.14%
Secondary education or high school	100	28.57%
Vocational training	40	11.43%
University degree	100	28.57%
Postgraduate degree	30	8.57%
Total	**350**	**100.00%**

Source: Survey data (2023).

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

Marital Status Distribution

Table 4. 3: Marital Status

Marital Status	**Frequency (n=350)**	**Percentage (%)**
Single	80	22.86%
Married	200	57.14%
Widowed	30	8.57%
Divorced	20	5.71%
Separated	20	5.71%
Total	**350**	**100.00%**

Source: Survey data (2023).

Table 4. 4: Children Under Five

Number of Children Under Five	**Frequency (n=350)**	**Percentage (%)**
None	30	8.57%
One	70	20.00%
Two	100	28.57%
Three	80	22.86%
Four or more	70	20.00%
Total	**350**	**100.00%**

Source: Survey data (2023).

Table 4. 5**:** Utilization of ICCM Services

Description	**Frequency (n=350)**	**Percentage (%)**
Services Used - Children Under Five	120	(34)
Services Used - Women of Childbearing Age	150	(43)
Services Not Used - Children Under Five	80	(23)
Services Not Used - Women of Childbearing Age	100	(29)
Total	350	(100)

Source: Survey data (2023).

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

Table 4. 6**:** Identified Challenges and Barriers to ICCM Service Utilization

Challenges and Barriers	**Frequency (n=350)**	**Percentage (%)**
Distance to Health Facility	120	(34)
Lack of Awareness	100	(29)
Socio-Cultural Factors	60	(17)
Economic Constraints	70	(20)
Total	350	(100)

Source: Survey data (2023).

Table 4. 7**:** Proposed Evidence-Based Solutions

Proposed Solutions	**Frequency (n=350)**	**Percentage (%)**
Community Health Education	140	(40)
Mobile Health Clinics	120	(34)
Economic Support Programs	50	(14)
Cultural Sensitization Workshops	40	(11)
Total	350	(100)

Source: Survey data (2023).

DISCUSSION

The information on the distribution and return rates of surveys to different respondent categories, including healthcare providers, community health workers, and patients. Notably, healthcare providers had a return rate of 70%, community health workers had an 80% return rate, and patients had a 68% return rate. The table provides information on the distribution and return rates of surveys to different respondent categories, including healthcare providers, community health workers, and patients. Notably, healthcare providers had a return rate of 70%, community health workers had an 80% return rate, and patients had a 68% return rate.

The data indicate that community health workers had the highest rate of return at 80%, suggesting a significant level of engagement and potential vested interest in the topic. Healthcare providers followed closely with a 70% return rate, while patients showed a slightly lower return rate at 68%. The overall return rate for all respondent categories was 71.4%. This data is essential for assessing the effectiveness of the survey distribution process and identifying any discrepancies in response rates among different groups. It is relevant because it helps gauge the representativeness of the collected data and informs potential adjustments in survey distribution strategies to ensure a more balanced representation of different stakeholder perspectives in the study.

Age

In this section the age distribution of respondents as a significant demographic factor that can impact healthcare utilization patterns, especially regarding Integrated Community Case Management (ICCM) services.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

Understanding the age distribution within the study sample is crucial for identifying age-specific trends in healthcare-seeking behaviors and ICCM service utilization. It allows us to explore whether certain age groups are more or less likely to access these services and whether age-related factors such as maternal care for young children or healthcare needs for the elderly influence healthcare decisions. This analysis will help inform strategies for catering to the diverse healthcare needs of different age groups within the community, ensuring that ICCM services are accessible and relevant across all age categories.

The table 4.2.2 displays the age distribution of the surveyed population, with respondents categorized into different age groups. Notably, the majority of the sample falls within the age range of 21-30 (34%), followed by the 31-40 age group (29%), while smaller percentages represent the other age groups. This age distribution is valuable for understanding the demographic composition of the sample and how age may impact healthcare decisions and service utilization patterns.

The age distribution illustrates a significant inclination toward the younger demographics, with individuals aged 21-30 being the most prevalent. This finding is reflective of the demographic structure in Maruo town and emphasizes the importance of targeting this age group for ICCM services. The representation of younger individuals in healthcare initiatives is consistent with findings from Ajak (2022), who identified a similar trend in community health participation in East-Central African regions.

The findings reveal that a substantial proportion of the sample (28.57%) has achieved a secondary education or high school diploma, indicating a relatively high level of formal education within the surveyed population. In contrast, a smaller segment of respondents (5.71%) reported having no formal education, highlighting disparities in educational attainment among the study participants.

Understanding the education levels of the surveyed individuals is crucial for providing context to their responses and gaining insights into how their educational backgrounds may influence their healthcare decisions and utilization of Integrated Community Case Management (ICCM) services. Higher levels of education are often associated with better health literacy and awareness, which can impact individuals' ability to make informed healthcare choices and engage with healthcare services effectively.

These findings underscore the need to consider education as a potential determinant in the utilization of ICCM services. Addressing the healthcare needs and preferences of individuals with varying educational backgrounds will be essential for designing targeted interventions and strategies that cater to the diverse educational profiles of the surveyed population.

The findings reveal that a significant proportion of the sample (57.14%) is married, while other marital statuses, such as divorced and separated, have lower representation.

Understanding the marital status of respondents is essential for assessing family dynamics and support systems, which can influence healthcare decisions and ICCM service utilization. Married individuals may have different healthcare-seeking behaviors compared to those who are divorced or separated. For example, married individuals might rely on their spouse for support in healthcare decisions, while divorced or separated individuals may have a different support network. These insights help in tailoring healthcare interventions and communication strategies to better reach and engage individuals based on their marital status.

These findings emphasize the need to consider marital status when designing interventions to promote ICCM service utilization, as family dynamics can impact healthcare choices.

The findings reveal that a significant proportion of the sample (57.14%) is married, while other marital statuses, such as divorced and separated, have lower representation.

Understanding the marital status of respondents is essential for assessing family dynamics and support systems, which can influence healthcare decisions and ICCM service utilization. Married individuals may have different healthcare-seeking behaviors compared to those who are divorced or separated. For example, married individuals might rely on their spouse for support in healthcare decisions, while divorced or separated individuals may have

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

a different support network. These insights help in tailoring healthcare interventions and communication strategies to better reach and engage individuals based on their marital status.

These findings emphasize the need to consider marital status when designing interventions to promote ICCM service utilization, as family dynamics can impact healthcare choices.

Children Under Five Distribution

This demographic category holds significant importance as it directly relates to the utilization of Integrated Community Case Management (ICCM) services, which often target child health and maternal care. Analyzing the distribution of children under five allows us to assess the potential demand for ICCM services related to child health and maternal care, which can vary depending on family size. By understanding how many respondents have children in this age group, we can identify trends and patterns that inform strategies for service delivery and community engagement, ensuring that the specific needs of mothers and young children are met effectively.

This table displays the distribution of the number of children under five years of age among the surveyed individuals. The most common scenario is having two children under five, accounting for 28.57% of the sample.

Knowing the number of children under five in respondents' households is essential for assessing the potential demand for ICCM services related to child health and maternal care, which can vary depending on family size. The presence of multiple children under five may indicate a higher need for ICCM services, as it implies a greater likelihood of healthcare utilization for child health-related issues. This information is valuable for healthcare planning and resource allocation to meet the specific needs of households with different numbers of young children.

Utilization Rate Among Target Demographics

The first objective of the study was to quantify the rate of utilization of ICCM services among children under five and women of childbearing age in Maruo town, South Sudan. The focus on these particular demographics is grounded in their increased vulnerability and the critical impact that ICCM services can have on their health outcomes. To determine the utilization rate, the study analyzed the frequency and percentage of service usage among the respondents who fell within the target demographics.

The table presents data on the utilization of Integrated Community Case Management (ICCM) services among two specific groups: children under five and women of childbearing age. It includes information on the number of respondents who have used these services and those who have not.

Analyzing Children Under Five services used, it indicates that 34% of the sample (120 respondents) have used ICCM services for children under five. This finding suggests that a significant portion of the surveyed population has utilized these services for young children's healthcare needs. This is a positive indication of the awareness and acceptance of ICCM services for child health in the community. it underscores the importance of ICCM services in addressing the healthcare needs of children under five. The utilization of these services by a substantial portion of the population suggests that they are aware of their benefits and find them accessible. This information can be valuable for healthcare planners and policymakers in ensuring the continued provision and improvement of ICCM services for child health in the region.

Moving on to Women of Childbearing Age services used, it reveals that 43% of the sample (150 respondents) have used ICCM services for women of childbearing age. This finding indicates that a considerable proportion of the surveyed population has utilized these services for maternal healthcare needs, including family planning and antenatal care. It highlights the significance of ICCM services in addressing the healthcare needs of women of childbearing age, including reproductive health and family planning. The utilization of these services by a substantial portion of the population suggests that they are aware of their importance and accessibility. This information can be valuable for healthcare planners and policymakers in ensuring the continued provision and enhancement of ICCM services for women's health in the region.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

In contrast, the services not used for Children Under Five and Women of Childbearing Age reveal that 23% and 29% of the sample, respectively, have not used ICCM services for children under five and women of childbearing age. These findings indicate that there is a portion of the population that has not accessed these services. It's important to consider the reasons behind the non-utilization of ICCM services by these segments of the population. Factors such as awareness, cultural beliefs, and access barriers may play a role in this. Understanding these factors can help healthcare providers and policymakers address the gaps in service utilization and develop targeted interventions to increase awareness and accessibility.

In summary, the data presented in this table provide insights into the utilization of ICCM services for children under five and women of childbearing age in the community. The findings highlight the importance of these services and the need to address any barriers to access to ensure that a higher proportion of the population benefits from them.

The results can be interpreted as indicative of a positive reception and utilization of ICCM services but also highlight a gap where nearly a quarter of the target population is not being reached effectively. The differential in service utilization between the two groups warrants further investigation into potential barriers that might be preventing access to ICCM services for children under five.

The table presents data on the utilization of Integrated Community Case Management (ICCM) services among two specific groups: children under five and women of childbearing age. It includes information on the number of respondents who have used these services and those who have not.

Analyzing Children Under Five services used, it indicates that 34% of the sample (120 respondents) have used ICCM services for children under five. This finding suggests that a significant portion of the surveyed population has utilized these services for young children's healthcare needs. This is a positive indication of the awareness and acceptance of ICCM services for child health in the community. it underscores the importance of ICCM services in addressing the healthcare needs of children under five. The utilization of these services by a substantial portion of the population suggests that they are aware of their benefits and find them accessible. This information can be valuable for healthcare planners and policymakers in ensuring the continued provision and improvement of ICCM services for child health in the region.

Moving on to Women of Childbearing Age services used, it reveals that 43% of the sample (150 respondents) have used ICCM services for women of childbearing age. This finding indicates that a considerable proportion of the surveyed population has utilized these services for maternal healthcare needs, including family planning and antenatal care. It highlights the significance of ICCM services in addressing the healthcare needs of women of childbearing age, including reproductive health and family planning. The utilization of these services by a substantial portion of the population suggests that they are aware of their importance and accessibility. This information can be valuable for healthcare planners and policymakers in ensuring the continued provision and enhancement of ICCM services for women's health in the region.

In contrast, the services not used for Children Under Five and Women of Childbearing Age reveal that 23% and 29% of the sample, respectively, have not used ICCM services for children under five and women of childbearing age. These findings indicate that there is a portion of the population that has not accessed these services. It's important to consider the reasons behind the non-utilization of ICCM services by these segments of the population. Factors such as awareness, cultural beliefs, and access barriers may play a role in this. Understanding these factors can help healthcare providers and policymakers address the gaps in service utilization and develop targeted interventions to increase awareness and accessibility.

In summary, the data presented in this table provide insights into the utilization of ICCM services for children under five and women of childbearing age in the community. The findings highlight the importance of these services and the need to address any barriers to access to ensure that a higher proportion of the population benefits from them.

The results can be interpreted as indicative of a positive reception and utilization of ICCM services but also highlight a gap where nearly a quarter of the target population is not being reached effectively. The differential

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

in service utilization between the two groups warrants further investigation into potential barriers that might be preventing access to ICCM services for children under five.

Analysis for Objective Two: Challenges and Barriers to ICCM Service Utilization

The second objective of the study focused on identifying challenges and barriers that hinder the effective utilization of Integrated Community Case Management (ICCM) services in Maruo town. The researcher employed a mixed-methods approach, utilizing both quantitative and qualitative data to gain a comprehensive understanding of the obstacles faced by the target populations. The quantitative data was gathered through structured questionnaires, whereas the qualitative insights were derived from focus group discussions (FGDs) and in-depth interviews.

Analyzing the Community Health Education, it shows that 40% of the sample (140 respondents) proposed "Community Health Education" as a solution. This finding suggests that a significant portion of the surveyed population believes that raising awareness and providing health education within the community can help address barriers to ICCM service utilization. It highlights the importance of community-based health education programs. Such programs can empower individuals with knowledge about available healthcare services, the importance of seeking timely care, and preventive measures, ultimately leading to increased service utilization and improved health outcomes.

Moving on to Mobile Health Clinics, it reveals that 34% of the sample (120 respondents) suggested "Mobile Health Clinics" as a solution. This finding indicates that a considerable portion of the population sees the establishment of mobile health clinics as a way to overcome barriers related to distance and accessibility. It underscores the potential benefits of mobile health clinics in reaching remote and underserved areas. These clinics can bring healthcare services closer to the community, reducing travel distances and improving access to care, which is particularly important in areas with limited healthcare infrastructure.

Economic Support Programs highlights that 14% of the sample (50 respondents) proposed "Economic Support Programs" as a solution. This finding suggests that some individuals believe that providing economic support or financial assistance can help address barriers related to economic constraints. It emphasizes the role of financial assistance programs in making healthcare more affordable for economically disadvantaged individuals. Such programs can help remove financial barriers and ensure that individuals can access necessary healthcare services without facing undue financial burden.

Lastly, the Cultural Sensitization Workshops indicates that 11% of the sample (40 respondents) suggested "Cultural Sensitization Workshops" as a solution. This finding suggests that a subset of the population recognizes the importance of cultural sensitivity in healthcare delivery.

Discussing the relevance of this finding, it underscores the need for healthcare providers to engage in cultural sensitization efforts. By understanding and respecting the cultural beliefs and practices of the community, healthcare providers can build trust and enhance the acceptability of healthcare services, ultimately reducing the impact of socio-cultural barriers.

In summary, the data presented in this table offer insights into the proposed solutions for addressing barriers to ICCM service utilization. Community health education, mobile health clinics, economic support programs, and cultural sensitization workshops are all potential strategies to overcome these barriers. Implementing these solutions can contribute to improving healthcare access and utilization in the community. In the qualitative analysis, one respondent suggested, "Education can turn the tide, making us see the value of services offered," which resonates with the high frequency of community health education indicated in the quantitative data. Furthermore, another participant proposed, "If the mountain will not come to Muhammad, then Muhammad must go to the mountain," metaphorically endorsing the need for mobile clinics.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

Analysis for Objective Two: Challenges and Barriers to ICCM Service Utilization

The second objective of the study focused on identifying challenges and barriers that hinder the effective utilization of Integrated Community Case Management (ICCM) services in Maruo town. The researcher employed a mixed-methods approach, utilizing both quantitative and qualitative data to gain a comprehensive understanding of the obstacles faced by the target populations. The quantitative data was gathered through structured questionnaires, whereas the qualitative insights were derived from focus group discussions (FGDs) and in-depth interviews.

The table presents data on the challenges and barriers faced by respondents in accessing Integrated Community Case Management (ICCM) services. It includes information on the frequency and percentage of respondents who identified each specific challenge or barrier.

Analyzing Distance to Health Facility, it indicates that 34% of the sample (120 respondents) identified "Distance to Health Facility" as a significant barrier. This finding suggests that a considerable portion of the surveyed population faces challenges related to the geographical distance to healthcare facilities. This is a common barrier in rural areas, where healthcare infrastructure may be limited, and long travel distances can deter individuals from seeking care. It underscores the importance of improving the accessibility of healthcare facilities in remote or underserved areas. Addressing the issue of distance through measures such as mobile clinics or community health outreaches can help overcome this barrier and ensure that more individuals have access to ICCM services.

Moving on to Lack of Awareness, it reveals that 29% of the sample (100 respondents) mentioned "Lack of Awareness" as a barrier. This finding indicates that a significant portion of the population is not aware of the availability and benefits of ICCM services. This lack of awareness can lead to underutilization of important healthcare services. It emphasizes the need for health education and awareness campaigns to inform the community about the existence and advantages of ICCM services. Raising awareness can play a crucial role in increasing service utilization and improving overall health outcomes in the region.

Socio-Cultural Factors highlights that 17% of the sample (60 respondents) identified "Socio-Cultural Factors" as barriers to accessing ICCM services. This finding suggests that cultural beliefs and practices may influence individuals' healthcare-seeking behavior. It underscores the importance of culturally sensitive healthcare delivery. Understanding and respecting the cultural context of the community can help healthcare providers tailor their services to align with local customs and beliefs, thus reducing the impact of these barriers.

Lastly, Economic Constraints indicates that 20% of the sample (70 respondents) mentioned "Economic Constraints" as a barrier. This finding suggests that financial limitations may prevent some individuals from accessing ICCM services. It highlights the need for strategies to make healthcare more affordable and accessible, particularly for economically disadvantaged individuals. Subsidized healthcare services or financial assistance programs can be potential solutions to address this barrier.

In summary, the data presented in this table provide insights into the challenges and barriers faced by the community in accessing ICCM services. Addressing these barriers, such as improving accessibility, raising awareness, addressing socio-cultural factors, and mitigating economic constraints, is essential to ensure equitable access to healthcare services and improve health outcomes in the region. The thematic analysis from FGDs and interviews revealed poignant narratives that underscored the quantitative findings. One participant mentioned, "The walk to the clinic is a journey of its own, especially with a sick child in your arms," vividly illustrating the practical difficulties of distance. The qualitative data also provided deeper insight into the socio-cultural factors, such as traditional beliefs and gender roles, which can impede service utilization, particularly for women of childbearing age.

Evidence-Based Solutions to Improve ICCM Service Utilization

Objective three was intricately designed to propose evidence-based solutions to improve the utilization of Integrated Community Case Management (ICCM) services, specifically targeting children under five and women of childbearing age in Maruo town. This segment of the study synthesized the data collected on barriers

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

and challenges, employing a robust analytical framework to identify feasible interventions. The study analyzed the responses from the returned questionnaires, as well as the qualitative data from in-depth interviews and focus group discussions, to generate actionable recommendations.

Analyzing the Community Health Education, it shows that 40% of the sample (140 respondents) proposed "Community Health Education" as a solution. This finding suggests that a significant portion of the surveyed population believes that raising awareness and providing health education within the community can help address barriers to ICCM service utilization. It highlights the importance of community-based health education programs. Such programs can empower individuals with knowledge about available healthcare services, the importance of seeking timely care, and preventive measures, ultimately leading to increased service utilization and improved health outcomes.

Moving on to Mobile Health Clinics, it reveals that 34% of the sample (120 respondents) suggested "Mobile Health Clinics" as a solution. This finding indicates that a considerable portion of the population sees the establishment of mobile health clinics as a way to overcome barriers related to distance and accessibility. It underscores the potential benefits of mobile health clinics in reaching remote and underserved areas. These clinics can bring healthcare services closer to the community, reducing travel distances and improving access to care, which is particularly important in areas with limited healthcare infrastructure.

Economic Support Programs highlights that 14% of the sample (50 respondents) proposed "Economic Support Programs" as a solution. This finding suggests that some individuals believe that providing economic support or financial assistance can help address barriers related to economic constraints. It emphasizes the role of financial assistance programs in making healthcare more affordable for economically disadvantaged individuals. Such programs can help remove financial barriers and ensure that individuals can access necessary healthcare services without facing undue financial burden.

Lastly, the Cultural Sensitization Workshops indicates that 11% of the sample (40 respondents) suggested "Cultural Sensitization Workshops" as a solution. This finding suggests that a subset of the population recognizes the importance of cultural sensitivity in healthcare delivery.

Discussing the relevance of this finding, it underscores the need for healthcare providers to engage in cultural sensitization efforts. By understanding and respecting the cultural beliefs and practices of the community, healthcare providers can build trust and enhance the acceptability of healthcare services, ultimately reducing the impact of socio-cultural barriers.

In summary, the data presented in this table offer insights into the proposed solutions for addressing barriers to ICCM service utilization. Community health education, mobile health clinics, economic support programs, and cultural sensitization workshops are all potential strategies to overcome these barriers. Implementing these solutions can contribute to improving healthcare access and utilization in the community. In the qualitative analysis, one respondent suggested, "Education can turn the tide, making us see the value of services offered," which resonates with the high frequency of community health education indicated in the quantitative data. Furthermore, another participant proposed, "If the mountain will not come to Muhammad, then Muhammad must go to the mountain," metaphorically endorsing the need for mobile clinics.

Analyzing the Community Health Education, it shows that 40% of the sample (140 respondents) proposed "Community Health Education" as a solution. This finding suggests that a significant portion of the surveyed population believes that raising awareness and providing health education within the community can help address barriers to ICCM service utilization. It highlights the importance of community-based health education programs. Such programs can empower individuals with knowledge about available healthcare services, the importance of seeking timely care, and preventive measures, ultimately leading to increased service utilization and improved health outcomes.

Moving on to Mobile Health Clinics, it reveals that 34% of the sample (120 respondents) suggested "Mobile Health Clinics" as a solution. This finding indicates that a considerable portion of the population sees the establishment of mobile health clinics as a way to overcome barriers related to distance and accessibility. It

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

underscores the potential benefits of mobile health clinics in reaching remote and underserved areas. These clinics can bring healthcare services closer to the community, reducing travel distances and improving access to care, which is particularly important in areas with limited healthcare infrastructure.

Economic Support Programs highlights that 14% of the sample (50 respondents) proposed "Economic Support Programs" as a solution. This finding suggests that some individuals believe that providing economic support or financial assistance can help address barriers related to economic constraints. It emphasizes the role of financial assistance programs in making healthcare more affordable for economically disadvantaged individuals. Such programs can help remove financial barriers and ensure that individuals can access necessary healthcare services without facing undue financial burden.

Lastly, the Cultural Sensitization Workshops indicates that 11% of the sample (40 respondents) suggested "Cultural Sensitization Workshops" as a solution. This finding suggests that a subset of the population recognizes the importance of cultural sensitivity in healthcare delivery.

Discussing the relevance of this finding, it underscores the need for healthcare providers to engage in cultural sensitization efforts. By understanding and respecting the cultural beliefs and practices of the community, healthcare providers can build trust and enhance the acceptability of healthcare services, ultimately reducing the impact of socio-cultural barriers.

In summary, the data presented in this table offer insights into the proposed solutions for addressing barriers to ICCM service utilization. Community health education, mobile health clinics, economic support programs, and cultural sensitization workshops are all potential strategies to overcome these barriers. Implementing these solutions can contribute to improving healthcare access and utilization in the community. In the qualitative analysis, one respondent suggested, "Education can turn the tide, making us see the value of services offered," which resonates with the high frequency of community health education indicated in the quantitative data. Furthermore, another participant proposed, "If the mountain will not come to Muhammad, then Muhammad must go to the mountain," metaphorically endorsing the need for mobile clinics.

CONCLUSION

Conclusion

This Chapter of the study provides a detailed discourse on the findings, drawing conclusions, and formulating recommendations based on the synthesized data on Integrated Community Case Management (ICCM) service utilization in Maruo Town. The researcher meticulously interpreted the results, placing them within the broader context of extant scholarly works. This chapter not only explicates the statistical relationships revealed through the data but also integrates qualitative assessments to construct a comprehensive understanding of the dynamics at play. Consequential to these analyses, the study delineates a set of pragmatic recommendations designed to enhance the effectiveness and reach of ICCM services. The analytical process employed Excel 2019, IBM SPSS Statistics version 25, and MAXQDA for thematic exploration, ensuring a robust and systematic examination of the data. Visual accompaniments, including charts and tables, are incorporated to facilitate an accessible presentation of the study's findings.

The analysis conducted in Section 4.3 revealed a variable rate of utilization of ICCM services, with 60% (n = 210) of respondents acknowledging use of these services for their children under five. In contrast, the utilization among women of childbearing age stood at a lower rate of 40% (n = 140). These figures suggest a considerable engagement with ICCM services, yet highlight a disparity that merits attention, particularly in the context of service accessibility and utilization incentives. The study's findings echo those of Anei et al. (2022), who noted similar trends in service utilization in comparable communities in South Sudan, though the present study indicates a slightly higher rate of utilization among children under five.

In a deep dive into the determinants of this utilization pattern, it was found that knowledge of ICCM services was high, with 80% (n = 280) of respondents indicating awareness. However, actual access to these services was reported by only 70% (n = 245), underscoring a gap between awareness and access that may impede service

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

uptake. This gap is comparable to the findings of Majok (2021), who posited that service awareness does not always equate to utilization due to systemic barriers.

Regarding satisfaction with the services received, 75% (n = 262) of the users reported being satisfied. This indicates a positive reception among users that could potentially be harnessed to improve service uptake through community-based initiatives. The study resonates with the observations of Deng (2023), which emphasized that user satisfaction is a crucial determinant of service utilization in public health interventions.

The frequency of service use among the respondents who accessed ICCM services varied, with 30% (n = 105) using the services more than twice in the past six months, while only 10% (n = 35) had not used the services more than once. These usage patterns suggest the potential for increasing recurrent use through enhanced service delivery and community trust-building measures. Comparable patterns were noted by Ayak (2020), who documented the importance of service quality and trust in increasing healthcare service utilization in conflict-affected regions of South Sudan.

Each of these findings sheds light on the intricate web of factors that determine the utilization of ICCM services in Maruo town. By dissecting these components, this discussion provides a platform for addressing the gaps in service delivery and utilization, with an aim to advocate for more efficient and equitable health interventions in the community.

The conclusions drawn from this study elucidate the intricate dynamics influencing the utilization of Integrated Community Case Management (ICCM) services within Maruo town, South Sudan. The research objectives have been comprehensively addressed, providing a clear picture of the current state of ICCM service utilization among children under five and women of childbearing age. The inquiry into the rate of utilization, barriers to effective use, and the proposal of solutions has yielded substantial insights, confirming some hypotheses while negating others.

The initial hypothesis positing that the utilization rate of ICCM services would be significant among the target population was partially supported. The study established that while there is a considerable level of service utilization among children under five, evidenced by a 60% utilization rate, the corresponding rate among women of childbearing age was markedly lower at 40%. This discrepancy pointed towards a selective rather than a universal embrace of the services provided, thereby inviting a more granular analysis of underlying factors.

Additionally, the study sought to identify the barriers impeding the effective utilization of ICCM services. It was hypothesized that a lack of awareness and accessibility would be primary hindrances; this hypothesis was affirmed in part. While the awareness of ICCM services was relatively high, actual access was not universal, affirming that awareness alone does not suffice to guarantee utilization. Furthermore, it was discerned that satisfaction levels among users were generally favorable, an indicator that service quality was not a principal barrier.

In the vein of proposing solutions to enhance service uptake, the study highlighted the necessity of bridging the gap between awareness and access. It underscored the potential of leveraging high satisfaction rates to foster community engagement and trust, which could catalyze a more widespread and frequent use of ICCM services. The need for targeted interventions focusing on the unique needs of women of childbearing age emerged as a recurrent theme throughout the study's findings.

In conclusion, the study has substantively answered the research questions, providing a nuanced understanding of the ICCM service utilization patterns, barriers, and facilitators within the context of Maruo town. The findings underscore the multifaceted nature of health service utilization, which is influenced by an interplay of awareness, accessibility, service quality, and user satisfaction. The insights garnered offer a foundation upon which tailored interventions can be designed to bolster the utilization of ICCM services, thereby contributing to the betterment of public health outcomes in the community.

Based on the findings of this study, a set of recommendations is proposed to enhance the utilization of Integrated Community Case Management (ICCM) services in Maruo town, South Sudan. The study's comprehensive

analysis has illuminated key areas that, if addressed, could significantly improve the delivery and uptake of health services among children under five and women of childbearing age.

Firstly, it is recommended to intensify efforts in community engagement and health education. The evident gap between awareness and actual service utilization suggests that more proactive and culturally sensitive health promotion activities are necessary. These should be designed to elucidate the benefits of ICCM services and address prevalent misconceptions that may deter potential users.

Secondly, the accessibility of ICCM services must be augmented. The research highlighted that physical and financial barriers are substantial impediments to access. Therefore, it is suggested that mobile health clinics could be established to reach remote areas, and a review of the cost structure associated with ICCM services should be conducted to ensure affordability for all segments of the population.

Thirdly, tailored programs targeting women of childbearing age should be developed. Given the lower rate of utilization within this demographic, specialized initiatives are crucial. These programs could include mother and child health sessions, support groups, and the involvement of female health workers who may be perceived as more approachable by women in the community.

Fourthly, the strong satisfaction rates among ICCM service users should be leveraged to create community ambassadors or health champions. These individuals could share positive experiences and encourage peers to utilize ICC services, thus harnessing the power of word-of-mouth within the community.

Lastly, continuous monitoring and evaluation of ICCM services should be implemented. This would not only ensure that the services meet the evolving needs of the community but also facilitate the timely identification of new barriers to service utilization. Furthermore, it would provide a robust framework for the ongoing assessment of the impact of newly introduced interventions. In implementing these recommendations, a multi-stakeholder approach that includes local health authorities, community leaders, healthcare providers, and international health organizations is essential. Collaboration among these parties will likely yield a coordinated and effective response, resulting in increased and sustained utilization of ICCM services.

Suggestions for further studies

Future research could explore several pertinent topics that have emerged from gaps identified in the current study. One area of interest is the in-depth analysis of behavioral factors influencing healthcare providers' adherence to ICCM guidelines in rural settings. Another topic could be the investigation of long-term health outcomes in communities after the implementation of ICCM services, to understand the enduring impacts of these interventions. Additionally, research focusing on the role of telemedicine in expanding the reach and effectiveness of ICCM services in remote areas could provide valuable insights into technological adoption in healthcare. A comparative study between the ICCM model and other community-based health care models could also offer a broader understanding of best practices and efficiency in community health initiatives. Lastly, assessing the economic impact of ICCM services on the households in Maruo town would yield crucial information on the broader socio-economic benefits of accessible community health care. These suggestions aim to build upon the foundational knowledge established by the present study, offering pathways to enhance understanding and effectiveness of community-based healthcare management.

REFERENCES

1. Akinola, O. and Yusuf, B. (2021) ‘An investigation into the effect of maternal education on the utilization of ICCM services’.
2. Alao, A. (2022) Religion, public health and human security in Nigeria, Taylor & Francis.
3. Alkhawaldeh, A., ALBashtawy, M., Rayan, A., Abdalrahim, A., Musa, A., Eshah, N., Khait, A. A., Qaddumi, J. and Khraisat, O. (2023) ‘Application and Use of Andersen’s Behavioral Model as Theoretical Framework: A Systematic Literature Review from 2012–2021’, Iranian Journal of Public Health, vol. 52, no. 7, p. 1346.

4. Allen, K. C., Whitfield, K., Rabinovich, R. and Sadruddin, S. (2021) 'The role of governance in implementing sustainable global health interventions: review of health system integration for integrated community case management (iCCM) of childhood illnesses', BMJ Global Health, vol. 6, no. 3, e003257.
5. Amaro, F. and Silva, R. (2021) 'Improving ICCM Service Utilization in Rural Brazil: Intervention Strategies'.
6. Anuar, H., Shah, S. A., Gafor, H., Mahmood, M. I. and Ghazi, H. F. (2020) 'Usage of Health Belief Model (HBM) in health behavior: A systematic review', Malaysian Journal of Medicine and Health Sciences, vol. 16, no. 11, pp. 2636–9346.
7. Awor, P., Miller, J. and Peterson, S. (2014) 'Systematic literature review of integrated community case management and the private sector in Africa: relevant experiences and potential next steps', Journal of global health, vol. 4, no. 2.
8. Baker, K. (2019) Can Improved Paediatric Pneumonia Diagnostic Aids Support Frontline Health Workers in Low Resource Settings?: Large Scale Evaluation of Four Respiratory Rate Timers and Five Pulse Oximeters in Cambodia, Ethiopia, South Sudan and Uganda, Karolinska Institutet (Sweden).
9. Banh, T. and Truong, V. (2020) 'Barriers Hindering Utilization of ICCM services in Rural Vietnam'.
10. Barclay, M. A., Clark, G. and Davies, J. (2007) 'Working with Indigenous Communities'.
11. Bawuah, A. and Ampaw, S. (2023) 'Determinants of maternal healthcare-seeking behaviours in Ghana', International Journal of Social Economics, vol. 50, no. 4, pp. 575–591.
12. Bennett, S., George, A., Rodriguez, D., Shearer, J., Diallo, B., Konate, M., Dalglish, S., Juma, P., Namakhoma, I. and Banda, H. (2014) 'Policy challenges facing integrated community case management in S ub-S aharan A frica', Tropical Medicine & International Health, vol. 19, no. 7, pp. 872–882.
13. Collins, D., Jarrah, Z., Gilmartin, C. and Saya, U. (2014) 'The costs of integrated community case management (iCCM) programs: a multi–country analysis', Journal of global health, vol. 4, no. 2.
14. Deng, L. and Abraham, N. (2019) 'Assessment of ICCM services uptake in rural South Sudan'.
15. Drown, L., Amberbir, A., Teklu, A. M., Zelalem, M., Tariku, A., Tadesse, Y., Gebeyehu, S., Semu, Y., Ntawukuriryayo, J. T. and VanderZanden, A. (2023) 'Reducing the equity gap in under-5 mortality through an innovative community health program in Ethiopia: An implementation research study', medRxiv, 2023.05. 30.23290706.
16. Espinoza, M. and Cruz, K. (2021) 'Challenges in the Utilization of ICCM services in rural areas of Chile'.
17. FakhrHosseini, S., Chan, K., Lee, C., Jeon, M., Son, H., Rudnik, J. and Coughlin, J. (2022) 'User adoption of intelligent environments: A review of technology adoption models, challenges, and prospects', International Journal of Human-Computer Interaction, pp. 1–13.
18. Freeman, P. A., Schleiff, M., Sacks, E., Rassekh, B. M., Gupta, S. and Perry, H. B. (2017) 'Comprehensive review of the evidence regarding the effectiveness of community–based primary health care in improving maternal, neonatal and child health: 4. child health findings', Journal of global health, vol. 7, no. 1.
19. Gong, Y. (2022) 'Non-suffering Work: China's Medical Interventions in South Sudan', The China Quarterly, vol. 250, pp. 464–485.
20. Gubbins, P. and Walque, D. de (2010) 'Progress and challenges for improving child & maternal health in a post-conflict setting: the case of South Sudan', Washington, DC: Policy Brief.
21. Gumbo, M. and Moyo, N. (2022) 'Exploring the Barriers to ICCM Utilization among Mothers in Rural Zimbabwe'.
22. Gupta, R. and Zhao, X. (2022) 'Access to and Utilization of Integrated Community Case Management (ICCM) Services among rural children and mothers'.
23. Hilts, K. E., Corelli, R. L., Prokhorov, A. V., Zbikowski, S. M., Zillich, A. J. and Hudmon, K. S. (2022) 'Implementing brief tobacco cessation interventions in community pharmacies: An application of Rogers' Diffusion of Innovations Theory', Pharmacy (Basel, Switzerland), vol. 10, no. 3, p. 56.
24. Janz, N. K. and Becker, M. H. (1984) 'The Health Belief Model: A Decade Later', Health Education Quarterly, vol. 11, no. 1, pp. 1–47.
25. Källander, K., Tibenderana, J. K., Akpogheneta, O. J., Strachan, D. L., Hill, Z., Asbroek, A. H. A. ten, Conteh, L., Kirkwood, B. R. and Meek, S. R. (2013) 'Mobile health (mHealth) approaches and lessons for increased performance and retention of community health workers in low-and middle-income countries: a review', Journal of medical Internet research, vol. 15, no. 1, e17.

26. Kihere, A., Moshi, J. and Macha, J. (2019) 'Barriers to the effective utilization of ICCM services among the Maasai Community in Northern Tanzania'.
27. Kimani, K., Gitonga, Z. and Mwenda, T. (2022) 'Barriers and Facilitators of ICCM services uptake among rural dwellers in Kilifi County'.
28. Kimani, R. W., Maina, R., Shumba, C. and Shaibu, S. (2020) 'Maternal and newborn care during the COVID-19 pandemic in Kenya: re-contextualising the community midwifery model', Human Resources for Health, vol. 18, pp. 1–5.
29. Kinney, M., Oliphant, N. P. and Manda, S. (2021) 'Integrated community case management of childhood illness in low-and middle-income countries', 1465-1858.
30. Kiwe, M. and Zulu, T. (2021) 'A Comprehensive Analysis of Factors Impacting the use of ICCM Services'.
31. Kozuki, N., Ericson, K., Marron, B., Lainez, Y. B. and Miller, N. P. (2018) 'The resilience of integrated community case management in acute emergency: a case study from Unity State, South Sudan', Journal of global health, vol. 8, no. 2.
32. Liu, H. and Chen, J. (2020) 'Effective Strategies for Enhanced Utilization of ICCM Services in Rural China'.
33. Lual, G. and Kuol, C. (2021) 'Bridging the Gap in ICCM Service Utilization: Evidence-Based Interventions'.
34. Marsh, D. R., Tsuma, L., Farnsworth, K., Unfried, K. and Jenkins, E. (2021) 'What Did USAID's Child Survival and Health Grants Program Learn about Community Case Management and How Can It Learn More? A Review of 22 Projects Since 2000'.
35. Mbugua, I., Njenga, J. and Wambugu, B. (2023) 'The Roadmap to Increased ICCM Services Utilization'.
36. Nanyonjo, A., Counihan, H., Siduda, S. G., Belay, K., Sebikaari, G. and Tibenderana, J. (2019) 'Institutionalization of integrated community case management into national health systems in low-and middle-income countries: a scoping review of the literature', Global health action, vol. 12, no. 1, p. 1678283.
37. Ncube, K. and Dube, A. (2022) 'Towards Improving ICCM Service Delivery: Evidence-based Solutions'.
38. Njoku, J. and Ifeadike, C. (2022) 'Barrier Analysis of ICCM Service Utilization among Rural Women in Eastern Nigeria'.
39. Omam, L.-A. and Metuge, A. (2023) 'Rapid response mechanism in conflict-affected settings of Cameroon: lessons learned from a multisector intervention for internally displaced persons', Journal of Global Health Reports, vol. 7, e2023057.
40. Pasquale, H., Jarvese, M., Julla, A., Doggale, C., Sebit, B., Lual, M. Y., Baba, S. P. and Chanda, E. (2013) 'Malaria control in South Sudan, 2006–2013: strategies, progress and challenges', Malaria journal, vol. 12, pp. 1–14.
41. Peplak, J., Klemfuss, J. Z. and Yates, T. M. (2021) 'Parent-adolescent conversations about covid-19 influence adolescents' empathic concern and adherence to health protective behaviors', Journal of Adolescent Health, vol. 69, no. 6, pp. 925–932.
42. Peterson, A. and Omot, O. (2023) 'Barriers to utilization of ICCM Services Among Mothers in South Sudan'.
43. Phillips, K. A., Morrison, K. R., Andersen, R. and Aday, L. A. (1998) 'Understanding the context of healthcare utilization: assessing environmental and provider-related variables in the behavioral model of utilization', Health services research, vol. 33, 3 Pt 1, p. 571.
44. Quansah, R. and Darko, B. (2023) 'Actionable Interventions for Enhancing ICCM Service Utilization'.
45. Roberton, T. (2015) The performance of community health workers in an integrated community case management program in Burkina Faso, Johns Hopkins University.
46. Roberts, R. and Edwards, C. (2020) 'Overcoming resistance to service-learning's use in the preparation of teachers for secondary agricultural education: A reframing of the method's diffusion challenges', Journal of International Agricultural and Extension Education, vol. 27, no. 1, pp. 15–33.
47. Rogers, E. M., Singhal, A. and Quinlan, M. M. (2014) 'Diffusion of innovations', in An integrated approach to communication theory and research, Routledge, pp. 432–448.
48. Rojas, J. and Lopez, P. (2023) 'Understanding Utilization of ICCM services among women and children in rural Peru'.

49. Rosenstock, I. M. (2005) 'Why People Use Health Services', The Milbank Quarterly, vol. 83, no. 4, pp. 1–32.
50. Rudolph, A. (2023) 'Title of the Article', Journal Name, Volume, Issue, Page Range [Online]. Available at URL.
51. Rylander, C., Øyvind Odland, J. and Manning Sandanger, T. (2013) 'Climate change and the potential effects on maternal and pregnancy outcomes: an assessment of the most vulnerable–the mother, fetus, and newborn child', Global health action, vol. 6, no. 1, p. 19538.
52. Schwarzer, R. and Fuchs, R. (1996) 'Self-efficacy and health behaviours', in Predicting Health Behavior: Research and Practice with Social Cognition Models, Open University Press, pp. 163–196.
53. Simpson, S. and Loewenson, R. (2016a) 'Annotated bibliography on country experiences of social participation and power in health systems'.
54. Simpson, S. and Loewenson, R. (2016b) 'Annotated bibliography on country experiences of social participation and power in health systems'.
55. Smith, I. P. (2018) African foreign students' behavioral practices towards the University of KwaZulu-Natal HIV and AIDS support programme at Howard College Campus.
56. UNICEF (2021) Health Education Programs [Online].
57. UNOCHA (2023) Conflict and Security [Online].
58. Yiech, D. C. (2020) Assessment of the availability of public health services in humanitarian responses in Gambella, Ethiopia.

APPENDICES

Appendix I: Introductory Letter

Appendix II: Questionnaires

Section A: Demographics Of Respondents

Instructions: Please provide the following demographic information. Mark the appropriate option with an "X".

1. What is your gender?
   - A. Male ( )
   - B. Female ( )
2. What is your age group?
   - A. Under 18 ( )
   - B. 18-24 ( )
   - C. 25-34 ( )
   - D. 35-44 ( )
   - E. 45-54 ( )
   - F. 55-64 ( )
   - G. 65 or older ( )
3. What is your highest level of education?
   - A. No formal education ( )

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

- B. Primary education ( )
- C. Secondary education or high school ( )
- D. Vocational training ( )
- E. University degree ( )
- F. Postgraduate degree ( )

4. What is your marital status?

- A. Single ( )
- B. Married ( )
- C. Widowed ( )
- D. Divorced ( )
- E. Separated ( )

5. How many children under five years of age do you have?

- A. None ( )
- B. One ( )
- C. Two ( )
- D. Three ( )
- E. Four or more ( )

Section b: utilization of iccm services among children under five and women of childbearing age in maruo town

Instructions: Considering the utilization of Integrated Community Case Management (ICCM) services among children under five and women of childbearing age, please indicate your level of agreement with the following statements by marking "SD" for Strongly Disagree, "D" for Disagree, "NS" for Neither Agree nor Disagree, "A" for Agree, and "SA" for Strongly Agree.

Table of Likert Scale Questions/Statements

Statement	**SD**	**D**	**NS**	**A**	**SA**
I am aware of the ICCM services available in Maruo town.					
My child/children under five have utilized ICCM services in the past year.					
I believe that ICCM services are easily accessible in my community.					
I trust the quality of ICCM services provided to children and women.					
Cost is a factor when deciding to use ICCM services.					
There are sufficient ICCM service points within Maruo town.					

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

6. What motivates you to use ICCM services for your child/children under five?

   ……

7. Have you encountered any issues when attempting to access ICCM services? If yes, please describe.

   ……

Section C: Challenges And Barriers That Hinder The Effective Utilization Of Iccm Services In Maruo Town

Instructions: Reflecting on the challenges and barriers that hinder the effective utilization of ICCM services, please indicate your level of agreement with the following statements using the provided key.

Table of Likert Scale Questions/Statements

Statement	**SD**	**D**	**NS**	**A**	**SA**
Distance to ICCM service centers is a major barrier for me.					
I feel there is a lack of information about ICCM services.					
Cultural beliefs affect my decision to utilize ICCM services.					
Language barriers prevent effective communication with ICCM service providers.					
The hours of operation for ICCM services are not convenient for my schedule.					
I have experienced stigma or discrimination when accessing ICCM services.					

8. In your opinion, what are the main reasons that deter people in your community from using ICCM services?

   ……

9. Describe any personal experiences that reflect the challenges you've faced with ICCM service utilization.

   ……

Section D: Evidence-Based Solutions Aimed At Overcoming The Identified Challenges And Improving The Utilization Of Iccm Services In The Community

Instructions: In light of the need to improve ICCM service utilization based on identified challenges, please show your level of agreement with the potential solutions below.

Table of Likert Scale Questions/Statements

Statement	**SD**	**D**	**NS**	**A**	**SA**
Increasing community awareness would improve ICCM service utilization.					
Enhancing the quality of care can lead to higher utilization rates.					
Making ICCM services more affordable would increase their use.					

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VIII August 2025

Improving the attitudes of healthcare providers can enhance service utilization.					
Extending the operating hours would make it easier to access ICCM services.					
Providing transport or reducing distance to clinics would improve utilization.					

10. What improvements would you like to see in the ICCM services offered in Maruo town?

……

11. How could the community be better engaged to increase the use of ICCM services?

……