AFRICA UNIVERSITY

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UPTAKE OF CHILDHOOD IMMUNISATION IN MUTARE DISTRICT, ZIMBABWE

BY

DESIRE NIYONKURU

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER IN PUBLIC POLICY AND GOVERNANCE IN THE COLLEGE OF BUSINESS, PEACE, LEADERSHIP AND GOVERNANCE

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Abstract

The study sought to assess the uptake of childhood immunisation in Mutare District, Zimbabwe. The study adopted a conceptual framework which provided a link between the independent variables and the dependent variable, informed by the objectives of the study. Both quantitative and qualitative data were used. The researcher selected three wards namely 14, 18 and 20 with three clinics representing them. A total of 140 questionnaires were distributed, and 137 were returned representing a response rate 98% which was highly acceptable as it was above the 70% threshold which is recommended for the generalization and extrapolation of research findings to the entire population. The descriptive section presented the statistics pertaining to the independent variables and attempts were made to explain trends in relation to the literature review. A regression analysis technique was used to assess the relationship between the combined independent variables on immunisation uptake hence an SPSS version 25 package was used. Correlation analysis was carried out in order to identify the existence of multi-collinearity depicting the relationship between the independent variables and dependent variable to determine whether the relationship is positive, negative or zero. The study findings showed that the childhood immunisation uptake was generally above 50% in terms of the children receiving vaccines for BCG, Polio, DPT, measles and hepatitis B. In relation to immunisation uptake, the predisposing factors had a negative effect, which meant that predisposing factors in general were deterrents to immunisation uptake. The need factors were also negatively related to immunisation uptake and this meant that the need factors were a deterrent to the uptake of childhood immunisation. The results also showed that the enabling factors were positively related to immunisation uptake in Mutare District. Despite that the childhood immunisation uptake showed improvements in the communities within the District. There was still need for commitment and integration of activities by Health Care providers in the communities to work together with the Ministry of Health and Child Care to achieve a higher record by preventing the mortality and morbidity from vaccine preventable diseases. The study recommended participation of the communities for childhood immunisation uptake and to enhance ‘My village My home’ strategy as a way of reaching everyone in the community. Therefore, there should be awareness campaigns in the communities on EPI to make everyone access the vaccination for the children as well as the availability of services in the health centers. The predisposing factors such as demystifying child birth order and access to antenatal care should be improved.

Key Words: Uptake, childhood immunisation, preventable disease.

Declaration

I declare that this dissertation is my original work except where sources have been cited and acknowledged. The work has never been submitted, nor will it ever be submitted to another university for the award of a degree.

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Dedication

The study is dedicated to my beloved late Father Mr. Nirukiyimana Damas and my Mother Mrs. Barigono Marthe. To my siblings Charlotte, Antoinette, Adeline, Martin and Evelyne for their support and the encouragement as well as their prayers towards the accomplishment of this dissertation.

List of Acronyms and Abbreviations

ANC	Antenatal Care
BCG	Bacille Calmette Guerin
DNO	District Nurse Office
DMO	District Medical Office
DPT	Diphtheria Pertussis and Tetanus
EPI	Expanded Programme on Immunisation
MDGs	Millennium Development Goals
MOHCW	Ministry of Health and Child Welfare
MOHCC	Ministry of Health and Child Care
PEN	Predisposing Enabling Need
PMD	Provincial Medical Director
PHC	Primary Health Care
UNCRC	United Nations Convention on the Rights of the Child
UNICEF	United Nations Children's Fund
WHO	World Health Organization
ZEPI	Zimbabwe Expanded Programme on Immunisation
ZDHS	Zimbabwe Demography Health Survey

Definition of key Terms

Immunisation is a powerful public health strategy for improving child survival, not only by directly combating key diseases that kill children but also by providing a platform for other health services.

The predisposing components/factors are individual propensity to use services based on demographic, religious and values concerning health and illness (Andersen,1968).

The enabling components /factors are resources within the family and community facilitating utilization of health services.

The need components /factors which includes the accessibility, perceived health status and treatment facilities

Coverage is a key indicator of access to and utilization of immunisation services

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CHAPTER 1 INTRODUCTION

1.1 Introduction

This chapter focuses on the background to the study, the statement of the problem, the objectives of the study and the research questions that guided the study. In addition, the limitations of the study and how the researcher prevailed over these expected limitations in ameliorating the validity and liability of the findings as well as the delimitations of the study are also outlined in this chapter.

1.2 Background to the study

The Expanded Programme on Immunisation (EPI) was introduced by the World Health Organization (WHO) in 1974, which provides a free routine vaccination. The global vaccine action plan 2012 set to achieve a goal for 90% national coverage with vaccines in all children by 2020. The childhood immunisation have been classed among the most successful public health interventions and are believed to have contributed substantially to the overall increase in life expectancy observed during the 20th Century (Gellin, Maibach, & Marcuse,2000). The global immunisation coverage has increased considerably since the introduction of the Expanded Programme on Immunisation by (WHO) in 1974, which proved that twenty million deaths have been prevented through immunisation over the past twenty years (Tickner, Leman, & Woodcock,2007). Currently, many vaccine-preventable diseases such as diphtheria, tetanus, pertussis measles, BCG, hepatitis B and poliomyelitis vaccines are available in developed countries (Bardenheier, Yusuf, & Rosenthal, 2004).

Zimbabwe's Expanded Programme on Immunisation (ZEPI) was introduced in 1982 to reduce morbidity and mortality from vaccine preventable diseases such as diphtheria, tetanus, pertussis measles, BCG, hepatitis B and poliomyelitis vaccines (Ministry of Health and Child Welfare, 2005).According to WHO and UNICEF report (2008) show that, immunisation has achieved a remarkable results during its first 15years, in improving vaccination coverage of children by receiving those vaccines from 25% in 1982 to 82% in 1989,attainment of Universal Child immunisation in 1990. The WHO (2004) stated that the immunisation was introduced to help all countries to achieve the global immunisation objectives by enumerating practical activities to improve immunisation systems from the district level upwards. The Zimbabwe Expanded Programme on Immunisation in accordance with WHO recommendations has been vaccinating children against tuberculosis, poliomyelitis, measles, diphtheria, tetanus and pertussis from 1982 to 1999.WHO in 1992 recommended that all countries with a hepatitis B prevalence rate which is greater than 8% should consider adding hepatitis B vaccine in the routine schedule. Zimbabwe included Hepatitis B which is the seventh antigens in the routine infant immunisation in January 1999.

The Ministry of Health and Child Welfare (MOHCW,2005) noticed that the immunisation services remained obstructed in the country because of high staff turnover rates transport and fuel shortages, poor forecasting of logistics and supplies, inadequate timeliness in reporting routine immunisation data, and insufficient collaboration with local communities. The immunisation has been an important public health intervention to save lives of children by reducing the morbidity and mortality in the children. The study aims to assess of uptake of childhood immunisation to all children access immunisation uptake

to reduce the morbidity and mortality in the children from the vaccine preventable diseases as the immunisation was introduced as a public health intervention to prevent children against preventable diseases in all communities without discrimination.

According to Zimbabwe Demography Health Survey (ZDHS, 2019) Mutare District in Manicaland Province has a total number of populations which is about 281,032 including females and males. The same district total number of children under-five is 38,329 both female and male infants (ZDHS, 2019). The Ministry of Health and Child Care (MOHCC) and UNICEF worked together to enhance the utilization of childhood immunisation in order to protect and vaccinated the children. The childhood immunisation is one of the public health concerns and the children in the communities need to access the vaccination programme as a way of reducing morbidity and mortality in the children. Zimbabwe Expanded Programme on Immunisation (ZEPI) has a big campaign on major vaccine preventable diseases such as Measles, Polio, Bacille Calmette Guerin (BCG), Hepatitis B and Diphtheria, Pertussis and Tetanus (DPT) vaccines to fight against the infections or bacterial infections. Both vaccines are safe and immunogenic and highly efficacious with over 90% of susceptible children developing a protective antibody response after three doses. The government needs to make available of all these vaccines to all communities. Furthermore, children must easily access those doses through the Ministry of Health and Child Care (MOHCC, 2005). Ha et al. (2009), state that the immunisation should be accessible to everyone without discrimination. Though some groups with their religious beliefs do not take their children for vaccination, a campaign should be used as a way to inform families about the benefits of the kid's vaccination.

1.3 Statement of the problem

According to the World Health Organization and Ministry of Health and Child Care (WHO and MOHCC, 2015) many factors associated with socio-economic, socio-demographic and religion are affecting the uptake of childhood immunisation. Despite numerous efforts, resources and interventions provided by government in enhancing this programme, a 2018 report from Ministry of Health and Child Care in Zimbabwe showed that 80% coverage had been achieved which proved that the uptake of childhood immunisation was not high to reach their targeted coverage of 90% in the communities. Mutare District nursing department annual report 2018 stated that because of the overdue vaccines, it was very hard to reach children in the communities. The lack of community mobilization by health officials on immunisation and lack of confidence in vaccines for children was considered a threat to the success of childhood immunisation uptake in the communities (Dube et al., 2013). Attitudes toward vaccination should be seen as cross sectional in time, on a continuum ranging from active demand for vaccines to complete refusal of all vaccines and changeable overtime (Dube et al., 2013).The immunisation policy was one of public health concerns and all children in the communities should be able to complete vaccination practices as a way of reducing morbidity and mortality from vaccine preventable disease such as diphtheria, pertussis, tetanus, measles, BCG (Bacille Calmette Guerin), hepatitis B and poliomyelitis vaccines. A national vaccination coverage survey conducted in Zimbabwe in 2010 on childhood immunisation shows that children from some group of apostolic church like what they called Marange Johanne are not vaccinated as compared to children from other church's members (MOHCC and WHO, 2010). The Apostolic church communities in Zimbabwe have been found to be poorer,

less educated and likely to live in rural areas and having a higher ratio of economically inactive household's members than other Christian churches. The children in urban areas were receiving vaccination compared to the children from rural areas due to socio-demographic, socio-economic and religious (Ha et al., 2014).

1.4 Purpose of the study

The purpose of this study was to assess the uptake of childhood immunisation policy that has been introduced as one of the public Health interventions to reduce mortality and morbidity from childhood preventable diseases in Mutare District, Zimbabwe.

1.5 Research objectives

The study objectives were to:

1. assess the childhood immunisation uptake policy in Mutare District;
2. examine the socio-economic effects on childhood immunisation in Mutare District;
3. ascertain the enabling factors on childhood immunisation in Mutare District; and
4. examine the need factors on childhood immunisation in Mutare District.

1.6 Research questions

1. What is the childhood immunisation uptake policy in Mutare District?
2. In what ways does socio-economic effects affect childhood immunisation in Mutare District?
3. What are the enabling factors that mitigate childhood immunisation in Mutare District?
4. What are the need factors on childhood immunisation in Mutare District?

1.7 Assumptions of the study

This study assumed that the childhood immunisation uptake policy is playing a big role in reducing the morbidity and mortality in the children from vaccine preventable diseases within the communities in Mutare District. Furthermore, it assumed that the communities are much committed to access all vaccines for their children as it required by the Ministry of Health and Child Care in the Country. It is also assumed that the District charged on the community services on immunisation is helping much and make the uptake of childhood immunisation reach to a better achievement associated to the resources being provided by the Ministry of Health and Child Care in all ministry's levels. It assumes that the factors provide can affects the uptake of childhood immunisation in Mutare District and the socio-economic can cause low coverage in immunisation.

1.8 Significance of the study

This study sets different ways to explain the importance for carrying this research as the following:

1.8.1 Mutare District's communities

The community would benefit from this study because the information obtained from the field would be available and accessible to interested actors. The study would deepen understanding on how the uptake of childhood immunisation is very important to children and the community with the view to minimize the spread of disease in Mutare District. The District will be able to make community-oriented policies as the results will be shared with the District Medical Office (DMO) and Provincial Medical Director (PMD) so that policy interventions in the implementation of immunisation programmes are strengthened in the whole District.

1.8.2 The Ministry of Health and Child Care and other Sectors

This study would inform both private sectors and Ministry of Health and Child Care through the recommendations given in the research so that those sectors can enhance the immunisation policies and support the District to reach the coverage target through the immunisation process. The study would also raise awareness on the distribution of vaccines in the whole community.

1.8.3 Academia

This study will contribute a lot to the body of literature and the area under study through the availability of new information and methodologies. The researcher will benefit as well from this research as this study will help him to achieve his qualification of his Master's degree. This study would motivate other researchers who wish to carry out the research on immunisation to have information on the same study. The Ministry of Health and Child Care (MOHCC) will also have access to the research findings after the work is approved. Other policies markers will be able to find the strategy implemented if it has succeeded and more recommendations will be there so that there is an improvement for childhood immunisation uptake in the community and Mutare District.

1.9 Limitation of the study

Participants were willing to participating in this study and gave information regarding the utilization of childhood immunisation for their children as far as vaccine was concerned. However, the researcher emphasized the significance of the study so as to instill confidence in participants. The major limitation of this study was that the time to conduct an exhaustive study around the research topic was short. Access to key informants was not a challenge as they were helpful despite their busy schedules, especially those in

administration. However, the researcher made some appointments and sent some briefing interview guides to reduce the limitation on the time factor. The research was undertaken for academic purposes and not for any other reasons and the respondents were aware before participating in this study. For the questionnaires, the researcher used a simple way to get answers from the respondents because participation was voluntary.

1.10 Delimitation of the study

This research focused on population residing in Mutare District. The participants for this study came from three clinics in the selected wards, namely Bezeley bridge clinic, Rowa clinic and Matanda clinic. Given that the research period did not allow the researcher to cover the entire clinics within the District that is why the scope of the study focused on the three wards. The participants of this study were selected from Mutare District's wards 14, 18 and ward 20 particularly those who were attended the vaccination programmes with of their children during the period of data collection. The participants' age ranged from between 15 years to 55. The study focused more on women selected from those clinics and at least who had a child in order to have a clear a proper information in line with the topic at hand and anyone who is in good position to provide the information on questions being administrated. Each clinic was treated separately and the results were generalized to whole District even though the study was just focusing on three clinics from 36 clinics in Mutare District. The results obtained from those three clinics were taken as presentative of the whole District.

CHAPTER 2 REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter focused on the review of literature related to the uptake of childhood immunisation. The chapter entailed a review of literature that highlighted important areas related to the research objectives of the study. The chapter also analysed previous studies carried out by different researchers and scholars related to the childhood immunisation. The conceptual framework that informed the study was covered in this chapter.

2.2 Conceptual Framework literature review

This study was guided by Andersen's (1968) model of hypothetical of health care utilisation which looks at three components (PEN) predisposing-enabling and need as factors of immunisation uptake. The predisposing components which were considered were the independent variable, individual propensity to use services based on demographic, religious and values concerning health and illness. The included the child's birth order, child's sex, mother's age, marital status, mass media exposure (television, radio, and newspaper), religion, place of delivery, and the antenatal care utilization during pregnancy. The enabling (independent variables) were resources within the family and community facilitating utilization of health services. These were educational level, wealth status, rural or urban residence, region of residence, and employment status of the mother. The last component or independent variable was need which included the accessibility, perceived health status and treatment facilities. The dependent variable as the immunisation uptake was the outcome of the immunised children.

Figure 1: Conceptual Framework

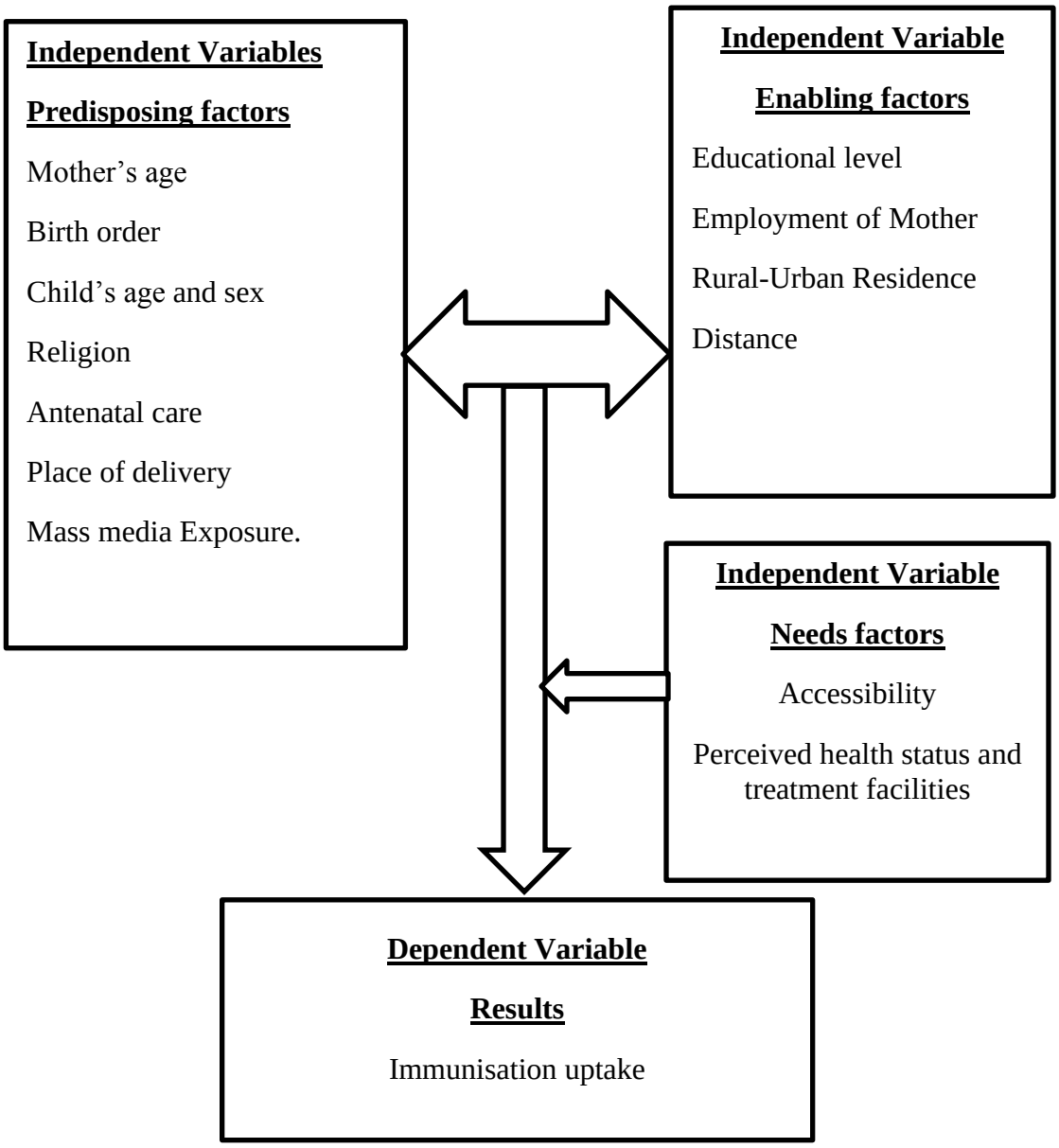


Figure 1 above shows the conceptual framework indicating the link of relationship between the three independent variable and one variable (Andersen,1968). The three factors focused on how the immunisation uptake has succeeded in the community or not. The level of uptake of childhood immunisation was explained through those components those factors which explain the independent variables. The conceptual framework, also

showed the challenges faced by the communities in accessing the immunisation services. The results of immunisation uptake represented the dependent variable as the purpose of the study the childhood immunisation uptake in the District.

2.2.1 Childhood immunisation uptake policy

The immunisation policy has been classified as a powerful public health tool for improving child survival, not only by directly combating some of the key diseases and cause of child mortality, but also by providing a platform for broader health services (Andre, 2008; Bloom, 2011; Clements, 2008; Jama, 2006; Wiysonge, 2006). The global effort to use immunisation as a public health was started when the World Health Organization (WHO) launched the Expanded Programme on immunisation (EPI) in 1974, following the successful global smallpox eradication programme (Wiysonge,2013). Who recommended a standard immunisation schedule covering basic antigens as follows (Bacille Calmette-Guerin, polio, diphtheria, pertussis, tetanus and measles).

The Zimbabwe Expanded programme on Immunisation in accordance with WHO recommendations has been vaccinating children against those basis antigens above since the introduction of this in Zimbabwe. The Zimbabwe Expanded Programme on Immunisation policy is in response to change disease pattern and Health Sector Reforms as they impact on the Health Delivery System. All vaccines preparations in use in Zimbabwe are made available at all levels of health care delivery system, including the private sector at all time in order for the communities to be able to access those vaccines for their children. Immunisation is one of public health intervention that requires legal support to ensure elimination of vaccine preventable diseases. The legal instruments such as the Child Protection and Adoption Act, Public Health Act, The Convention on the

Rights of the Child provide the guidance on the prevention of infectious diseases among children in the countries. Despite the challenges, the Zimbabwe Expanded on Immunisation has been making a good progress in expanding the range of vaccines for child and useful of innovation strategies such as reaching every District, My Village My home' strategy and other strategies ,also the campaigns even though in the communities there are incomplete vaccination and this decline the immunisation coverage resulted in the poor uptake of vaccination among socio-cultural and religious groups.

2.2.1.1 The United Nations Convention on the Rights of the Child (UNCRC)

The United Nations Conventions on the Rights of the Child (UNCRC) was adopted by the UN General Assembly in 1989 and applies to children from birth to eighteen years of age. The problem of the Great -War of 1914-1918 exposed children to widespread suffering, and this was a major challenge for the development of children's rights (Fass, 2011). The children have the rights to focus on his or her welfare and more children's agency and participation rights have been encouraged on this to be followed (Freeman,2009). The UN Committee on the Rights of the Child monitors the progress of ratifying countries, who must produce a self -review report after two years, and thereafter every five years but the quality of the data been used in the UNCRC report has been criticized (Ennew, 2011). The UN Committee responds to each country's report with a set of conclusion observation after the review of their reports on the right of children. The United Nations Committee on the Rights of the Child (UNCRC, 2005) highlights the importance of children's rights for young children and argues that governments should adopt a positive plan for the Health education of childhood and take away the traditional beliefs which it has been as cultural

to some communities and failing to adopt the immunisation strategy for their children and this can help in increasing the coverage of vaccination.

The Convention on the Rights on Child has provisions obligating state parties to respect and ensure children's right relating to, among other goods, life, identity and nationality, family of belonging, privacy, freedom of expression and though, education, health, social security, standard of living, protection from torture and from sexual and commercial exploitation, and due process an legal assistance. In a fashion parallel to other human rights convention, the CRC establish a committee (of state-appointed experts) to oversee implementation on the part of signatories and to encourage international cooperation.

2.2.2 Socio-economic effects on childhood immunisation (predisposing factors)

2.2.2.1 Religion

Ha et al. (2009) using the survey data in Zimbabwe, found that children in apostolic faith were less likely to be immunised as compared to those from other Christian faith. Mothers with good economic status were more likely to immunise their children than those with poor economic status (Ozaydlin et al., 2005; Mosand et al., 2012). The relationship between birth order and immunisation status was disclosed by many studies that did not have much effect on immunisation status (Elizabeth et al., 2003; Bhola et al., 2007; Vilas et al., 2013).

A national vaccination coverage survey conducted in Zimbabwe in 2010 found that estimated 58% c overage with all childhood vaccinations among children aged 12-23 months are coming from the Apostolic church members as compared to 70% in children from Catholics church members, 70% in children from Pentecostals church members and

67% in children from protestants church members and it was reported by Ministry of Health and Child Care and World Health Organization (MHCC &WHO, 2010). Apostolic communities are comprised of various subgroups with varying degrees of health service utilization and immunisation coverage rate (Ha et al., 2014).

2.2.2.2 Antenatal Care

In other studies, mothers who were using the antenatal care services during the pregnancy and health facility when giving birth, are likely to immunize their children than those who did not attend the antenatal care and health facility (Babalola, 2009; Luma, 2005; Etana & Deressa, 2011; Pandey & Lee, 2011; Mosand et al., 2012). A study in Mozambique found that adjustments for the estimated accuracy of mother's reports of measles case raised the estimated vaccine efficacy from 37 to 66 % (Cutts et al., 1990). A similar study done in Tanzania found that an efficacy of 54 % based on mother's recall of vaccination status compared to an estimate of 96% based on clinic cards (Killewo et al., 1991).

Etana and Deressa (2012) in their study done in Ethiopia, were able to show that children belonging to mothers who had fully attended antenatal care were likely to be fully immunised. In the Philippines, children whose mothers attended at least four antenatal visits were one and a half times more likely to be vaccinated than those whose mothers attended less visits or none (Bondy et al., 2009). Closely linked to antenatal care was the choice of the place of delivery.

2.2.2.3 Place of delivery

Other studies have demonstrated a strong correlation between place of delivery and the ability of the child to complete immunisation. A study by Nath et al. (2007) demonstrated

that children born at home were less likely to be vaccinated than those born in a health facility. Similar findings were reported in a study by Antai (2009) in Nigeria, Children born in a health facility receive the first vaccine (BCG) before they leave for home and mothers were reminded to bring their children for follow up vaccines. In a study carried out by Becker et al. (1993) possession a radio and a television were found to be important determinants of immunisation. Possession of those gadgets increased the likelihood of immunisation.

2.2.2.4 Mother ‘s Age and birth order

A study done in rural Ethiopia by Sullivan et al. (2010) identified the effect of paternal age on immunisation. Children belonging to older fathers were found to be more likely to be immunized than those whose fathers were young. Fathers with a higher education level were also likely to have their children immunized (Phimmasane et al., 2010). Higher literacy level of the father (and mother) was also found to be associated with full immunisation of the child in studies by Chabra et al. (2007) and Bondy et al. (2009). Studies done in Kenya and the Philippines have been able to associate birth order with immunisation uptake (Owino et al., 2009; Bondy et al., 2009). A child’s birth order was shown to be associated with various health outcomes including growth and development, accidents, morbidity and mortality due to some diseases (Elliott, 1992).

First born children were more likely to be immunized due to the excitement associated with the first child. As mothers delivered more children, resources got constrained with parental excitement waning (Brenner, Simons-Morton, Bhaskar, Das, & Clemens, 2001). Several studies showed that uneducated mothers were less conscious about the immunisation of their children as compared to the mothers who were educated (Mabrouka,

2011; Fatma &Chizoma, 2013; Omer et al., 2014; Soundarya et al., 2014 & Chris et al., 2015). Study done in Kenya by Mutua, Kimani-Murage, and Ettarh (2011) found that children belonging to older mother were more likely to be vaccinated as compared with children from mothers with less than 20 years.

2.2.2.5 Child's age and sex

For instance, in India, some studies showed that girls were less likely to access immunisation than boys and the gender discrimination in immunisation was shown to exist in many areas of the country (Filmer et al., 1998; Fikree & Pasha, 2004). A study in northern India however showed no association between birth order and immunisation uptake (Kumar et al., 2010). According to a report provided by Malawi Polio immunisation Campaign in the year of 1997 and Knowledge Attitudes and Practices in Health Survey 1996, the high vaccine coverage of 68-98% in infants had been sustained between 1992 and 1996 in Malawi as the way of enhance the childhood immunisation programme in the country (Akiba, 1996).

2.2.2.6 Mass Media Exposure

Through public health delivery systems and mass campaigns, major institutions such as the government (e.g. the Health Ministry and Child Care) or the mass media (radio, television, and newspaper) endeavor to mobilize various social actors towards recognizing the efficacy of immunisation (Perez-Cuevas et al., 1999). The basic logic behind this was an increase in demand which lead to more supply leading to more immunisation among children (Das & Dasgupta, 2000). To make this effort successful people should actively demand rather than passively accepting the message (Nichter, 1995; Bonu, Rani & Baker, 2003).

According to Centers for Disease Control (2004) mass immunisation campaigns were boosted by National Immunisation days, improved surveillance, training of local community health workers, and door-to-door campaigns on immunisation. The kick Polio out of Africa campaigns assured functional cold chain systems and continuing education of communities about the importance of routine immunisation (WHO,1995). In order to create more awareness on the disease, prominent Africa football players have participated in public awareness campaigns since 1997 by distributing posters, conducting radio interviews, and holding public autograph sessions through an alliance with the African Football Confederation (Letore,1998).

2.2.3 Enabling factors on childhood immunisation

2.2.3.1 Educational level

The studies done by (Mabrouka, 2011; Fatima, Chizoma, 2013; Omer et al., 2014, Soundarya et al., 2014; and Chris et all, 2015) reported that uneducated mothers were found to be less conscious about the immunisation of their children as compared to the mothers who were educated. Some studies reported statistically significant association between occupation and immunisation status (Vilas et al., 2013; & John, 2014). A study done in Bangladesh on immunisation uptake in four rural areas by Steele, Diamond, and Amin (1996) found that the effect and contribution of the mother's education on childhood immunisation status disappeared once the father's education was factored in, and that the latter became insignificant when village level dummy variables were added.

Desai and Alva (1998) in their studies, used the data from the Demographic and Health Surveys (DHS) in 22 countries and found that whereas the inclusion of individual level

and community level fixed effects significantly weakened the relationship between maternal education and childhood health, the relationship between maternal education and child immunisation remained strong. Studies done by Guatemala, Pebley, Goldman, and Rodriguez (1996) showed that both the mother's and father's education had a significant and positive effect on childhood immunisation status, as well as the family and community were more influential as the source of having low coverage on child immunisation. They hypothesized that family health beliefs, differing abilities among families took advantage of available resources, and variance in their intensity of immunisation campaigns in different areas explained these intra class correlations. In another study, Gage, Sommerfelt, and Piani (1997) find that higher household socioeconomic levels and more maternal education both increased the likelihood of childhood immunisation in Nigeria and Niger.

2.2.3.2 Employment level

The studies done by different authors showed that on limited resources settings, the good immunisation coverage was achieved by the efforts of a robust primary care approach (Bradley, 2005) mother's knowledge (Streatfield et al., 1990; Bhuiya et al., 1995; Bradley, 2005) and the provision of immunisation information (Bhuiya et al., 1995; Jamil et al., 1999; Cui and Gofin, 2007).

Other studies showed that mothers with higher education like secondary and tertiary education were more informed and empowered to have their children immunized than those with no education (Pandey & Lee,2011; Nath,2007; Tadesse,2009). Other studies also showed that the association between maternal education level and immunisation uptake disappeared when other variables were considered, including the father's education

level and socioeconomic status (Steele; Diamond & Amin, 1996). Bosu (1997) demonstrated that there was an inverse relationship between the vaccination coverage and distance from vaccination clinics, the reliable transportation was a basic need for effective implementation of the programme.

2.2.3.3 Distance and Residence area

Studies done by Ibnouf et al. (2007) and Rup et al. (2008) demonstrated that immunisation practice was inversely related to the distance from home to a health facility. The same studies showed that as one moved from urban areas to rural areas, the distance from home to a health facility increased. Children in urban areas had a bigger potential to be vaccinated than children from the rural areas (Mosand & Dixit, 2012; Wiysonge et al, 2012; Fernandez, Awotess & Ramasha, 2011; Patra, 2008; Mantral, 2007). According to the 2005 Expanded Programme Immunisation (EPI) report in Bangladesh, the country had remarkable success in immunisation coverage, but a gap still existed between urban and rural areas.

Jegede (2007) in his study showed that 50% to 60% of Nigerians lived in the rural areas and poor transportation hindered the coverage of immunisation during the mass campaigns. Sutter and Cochi (2008) agreed that poor roads networks were a problem in Nigeria and therefore pockets of unvaccinated children were left out during mass immunisation campaigns. Last (2005) affirmed that much was not done to ensure all children in the communities like rural areas were reached during immunisation days in the country.

2.2.4 Needs factors on Childhood Immunisation

2.2.4.1 Accessibility

Similar studies found that a large amount of unexplained variation at both the household and village levels, which related to immunisation accessibility, the attitudes of local leaders, differences in household attitudes and beliefs, and power relationships within the household (Steele, Diamond, & Amin,1996). Other studies also showed that inadequate monitoring and supervision at all levels resulted in low immunisation coverage and that improving the monitoring and supervision enhanced the programme (Subramanyam & Sekhar, 1987; Joseph et al., 1988). For example, in Afghanistan, immunisation coverage failed to increase between 2000 and 2003 due to political instability, despite the presence of a relatively large number of vaccination and vaccinations centers (Mashal et al., 2007).

According to Cutts et al. (1991) the reported number of cases of measles in Burundi decreased by more than 50 % between 1981 and 1988. They found that in Rwanda, the reported incidence in 1988, when coverage was greater than 80% was only 3% of the rate reported before the start of immunisation programme. Similar data from Lesotho showed a large drop in reported incidence rates as vaccination coverage increased (Cutts et al., 1991). However, several African studies suggested that poliomyelitis vaccination campaigns reduced the incidence of disease and paralysis (Rodrigues, 1991; Deming et al., 1992). Despite the vaccine's lower efficacy in Africa than in developed countries (Oduntan, 1978; Böttingeret al., 1981; de Swardt et al., 1990). Diphtheria had a lower incidence rate in sub-Saharan Africa because of high levels of acquired immunity, although it had a high case-fatality rate (Rodrigues, 1991).

The study done by Obadare (2005) in Nigeria argued that efficient road networks enabled mass coverage of immunisation in most cities particularly in South and Mohammed et al (2009) maintained that most parents faced challenges in reaching the immunisation centers due to poor accessibility. Jegede (2007) supported this fact and emphasized that some individuals had to cross rivers before arriving to the immunisation centers. Reference was made to Bayelsa State a south geo-political zone of Nigeria. Odutola (2004) pointed also pointed out that there was a big divide in terms of immunisation uptake in Nigeria and attributed the divide to be not only to poor accessibility but also to literacy levels.

2.2.4.2 Perceived health and Treatment Facilities

Several experts have highlighted a wide range of issues affecting uptake of vaccines in various settings (Bloom, 2005; Dube, 2013; Mills, 2005 & Munoz, 2015). The issues varied between and within settings due to social, economic, cultural, geographical, political, and religious factors. Therefore, potential interventions were also likely to vary across different settings. However, immunisation had the potential to do more, increasing coverage with existing vaccines, as well as the introduction and increased uptake of a portfolio of newly available vaccines in EPI programme in low and middle income countries (LMICs), could save the lives of millions more children each year (Andre, 2008; Brown, 2011, Chopra, 2013; Duclos; Liu, 2012; Machingaidze, 2013a & WHO-UNICEF, 2009; Wiysonge, 2012a).

Several studies have demonstrated huge changes in the incidence of measles following the large increase in vaccination coverage. Dabis et al. (1988) making reference to a study done in Pointe -Noire, Congo during the implementation of the Expanded Programme on

Immunisation which began in 1982, estimated that coverage rate increased to 31% and 37%, respectively in 1982 and 1983 and to 47% in 1984 and 1985. Another study in Yaoundé, Cameroon in 1974-1979 showed that the number of recorded cases dropped by 44% when the cold Chain was improved and the minimum age at vaccination was increased from 6 to 9 months (Heymann et al., 1983).

Mohammed et al. (2009) stated that some health -workers or vaccination personnel arrived at their designated health centers late or with difficulties, hence, disrupted the cold chain of vaccines resulting in very few children being vaccinated during the day.

2.3 Childhood Immunisation

The Childhood immunisation plays a key role in the control of infectious disease and infection bacterium through the use of the vaccine preventable diseases. The disease related to morbidity and mortality places a substantial burden on healthcare systems and preventing children from becoming ill was more favorable in terms of healthcare-associated costs than treating them once they were ill. The immunisation had a direct effect by offering protection to the immunized children and an indirect effect by reducing the incidence of disease among other children. Since vaccinated children were less likely to act as a source of infection, the community benefitted from those vaccines as a way of protecting the children and women of child bearing age with safe vaccines (ScotPho, 2008).

The routine immunisation against measles, poliomyelitis, diphtheria, tetanus, pertussis and tuberculosis infections was provided in all developing countries but many countries also included a wider range of immunisation against influenza and hepatitis B

immunisation was recommended by WHO for all countries (WHO, 2005). The immunisation practice may have been active or passive; the passive immunisation provided short-term protection and active immunisation known as vaccination induced protective long-lasting immunity. Active immunisation involved the administration of an antigen which elicited an immune response similar to that of a naturally acquired infection (Robinson & Roberton, 2003). The immunity was due to widespread, relatively mild, subclinical cases among children diagnosed with diphtheria leading to a high case-fatality rate. Relative to other diseases, diphtheria was not a major cause of death among children in Africa. One study suggested that DPT vaccination in Sudan had reduced the incidence of diphtheria (Loevinsohn, 1990).

The primary immunisation for the children comprised of the following stages. At birth, the Hepatitis B vaccine was for the children born to women who were carries of Hepatitis B virus and if mother was carrying the Hepatitis B antigen, the baby would have an additional single dose of the Hepatitis B immunoglobulin, which was given in the opposite thigh at birth and the Bacille Calmette Guinn(BCG) at birth period. Polio, DTP and Hib vaccines at 6 and 14 weeks, the measles vaccines and rubella at 9 month and 18 months (Greenwood et al.,2007). The secondary immunisation was usually a booster dose of polio, tetanus and diphtheria which they were getting at the 4 to 5 years. It provided the chance to catch up primary immunisation to any child who had missed out an earlier vaccination (Greenwood at al., 2007). The third immunisation was BCG which was administered at the age of 10 to 14 years and polio, tetanus and diphtheria at 13 to 18 ages (Greenwood et al.,2007).

Data done on immunisation coverage from 1988-2007 from WHO and UNICEF ,the measure the proportion of children who had received the DTP3 and measles vaccines at one year of age ,which was obtained either through the service delivery record or survey carried by WHO's Expanded Programme on Immunisation .Several studies expressed concerns over the disparity between coverage rates reported from service delivery records and actual coverage rate measured by sample surveys (Boerma et al.,1990). Other studies compared these data with household-level data from 82 countries and found that, in general, using reported rate as a dependent variable was reasonable and did not exhibit any significant evidence for systematic bias. The correlation between measles and DTP3 rate at the national level are quite high (Gauri & Khaleghian,2002).

2.4 Socio-economic differentials on immunisation uptake

The socio-economic inequalities in child health remains a major concern in developing countries to vis-à-vis the need to attain Sustainable Development Goals (SDGs, 2016). The way of reducing these inequalities in child health is being stalled by gaps in documenting and understanding trends in less developed countries (Lauridsen, 2011; Pradhan, 2011). The socio-economic development for developing countries remains at a low level with insufficient housing and poor hygiene. The under-nutrition for children below of 5 years of age is also a problem of concern. Like India, vaccines and medications are present but the delivering of health services are poor and inadequately funded with poor connections, infrastructure and low literacy. Studies showed that maternal education or literacy was a strong and consistent predictor of child immunisation outcome (Kamau & Esamai, 2001; Kumar; Aggarwal & Gomber, 2010). In both the United States and

Kenya, studies showed that higher maternal education is associated with higher immunisation uptake (Luman, McCauley, Shefer & Chu, 2003; Abuya et al., 2011).

Poore (1988) stated that due to lack of economic development in developing countries two independent strategies were formed.

Firstly, the primary health care (PHC) was designed to maintain a link between the people and health services which can be achieved by recruitment, training, supply and support of village health workers that helped in involvement and communication with people, to learn from people that will improve health care delivery and immunisation coverage. Secondly, effective, sustainable development of healthcare delivery systems was needed to support the government and primary health care workers for immunisation programme to succeed.

In developing countries national government and international donors have played a major role to increase immunisation coverage. Therefore, a basic vaccination schedule has been incorporated in health programs to reduce mortality in children. (Hardon & Bloom, 2005; Jolly, 2004; Stephan et al., 2008).Despite these huge potentials vaccination achievements so far have been described as" fragile", given the outbreaks of some of these infectious diseases in LMICs and high-income countries(Duclos, 2009; Sage, 2015; Siegfried, 2010).These outbreaks reflect the existence of communities with partially vaccinated or unvaccinated children which are communities whose herd immunity was not high enough to stall the transmission of these disease (Dube, 2013; Sage, 2015).

In developed countries, low socio-economic status (Babatsikou; Vorou; Galani; Ktenas & Loutis, 2010), low maternal education (Samad et al., 2006) and higher birth order (Haynes

& Stone, 2004) have been associated with low immunisation uptake. In developing countries, education level both parents (Sullivan et al., 2010), maternal age (Kamau & Esmai, 2001), distance to the nearby health facility (Phukan, Barman & Mahanta, 2009) and maternal knowledge affect immunisation uptake (Phimmasane, Douangmala, Koffi, Reinharz & Buison, 2010).

Desai and Alva (1998);Streatfield, Singarimbum, and Diamond, 1990 ;Gage, Sommerfelt, and Piani ,(1997); Pedley, Goldman, and Rodriguez (1996);Steele, Diamond ,and Amin, (1996) find that maternal education and household socio-economic to be correlated with the probability of childhood immunisation, but there are disparate findings concerning the extent to which these are causally related to immunisation status, and whether measurable maternal and household characteristics might be proxies for other underlying factors or for characteristics of the communities of residence.

2.5 Health Education as intervention on immunisation uptake

According to LeVine, LeVine and Schnell (2001), the mother's education is considered to be one of the most important factors for monitoring the differentials of child's health. It leads to better social, cultural and human capital which helps in increasing the rate of immunisation progress in children. They explained the importance of mother's education through the benefits providing care to their children. Educated mothers:

Firstly, have a good knowledge and are known about benefits of health care known as human capital advantage,

Secondly, develop more contacts with people who have a wide knowledge of benefits of care and have an access to health care services which are categorized as the social capital advantage,

Thirdly, develop skills which are valued and give them a higher status which helps in building self-confidence and thus links with medical providers; which is identified as cultural capital route.

Lastly, become more active in household and society which makes them more focused to seek better care for their child. Literacy helps them to access other sources of health information such as mass media and get to familiar about all these programs provided by the Ministry of health and Child Care.

According to studies done by Jamil, Bhuiya, Streatfield and Chakrabarty (1999), a mother who has inadequate knowledge of the doses and timing of the vaccines will have more rather than less, understanding of completing her child's immunisation schedule. But having different networks with people helping in getting care, for example association with religious or caste organization hinder mothers to seek immunisation for children due to orthodox norms and beliefs. On the other hand, knowing about advantages of immunisation and going to the local immunisation campaigns is increased in association with development organizations which might help in encouraging modern thoughts. (Vikram, 2012; Vanneman & Desai, 2012).

Munshi and Lee (2000) believed that Mother's Antenatal Care (ANC) is also one of the important policy variables. The Antenatal care motivates women for child immunisation through motivational messages. Roy, Mishra and Sharma (1988) for their study believed

that a woman visiting maternity hospitals, shows a strong relationship between family planning acceptance and provision of immunisation for the children.

2.6 The Effects of the immunisation uptake

It is not easy to predict the change that will result from a given level of coverage because populations differ substantially in the degrees of contact between children. However, if vaccination coverage increase sufficiently, epidemics will be less frequent during and immediately after the start of the vaccination programme (Cutts et al., 1991).

Parents can have a positive attitude about vaccines for a number of reasons. Most parents know about the certain diseases that could be fatal for their babies (Dannetun,2007; Anders, 2007; Giesecke & Johan, 2007). Vaccines have demonstrated to have positive effects in solving this problem and this is the main motivation for most parents to have their children immunized (Dannetun, Anders; Giesecke, & Johan, 2007). Most parents don't give it a second thought since vaccines are widely accepted and promoted in today's society (Douglas &Diekema,2012). It is given out through schools and some schools even require children to be vaccinated before they can be accepted into a school (Douglas &Diekema,2012). So, one of the big influences on the beliefs of parents that are pro-vaccination come from the General health community and the government (Dannetun, Anders, Giesecke & Johan, 2007). The World Health Organization (WHO) says that it wants most countries to vaccinate all their children (Dannetun, Anders, Giesecke & Johan, 2007). These groups push vaccinations by the parent receiving the advice from a health professional, or having the parent's children face restrictions in the future like not being able to attend a certain school (Douglas & Diekema,2012).

In the context of polio immunisation uptake for example in Nigeria, it is unlikely for parents to have their children immunized, when parents feel that vaccines are ineffective, seen as unnecessary or dangerous for infants or children who are not experiencing any health problem or when parents perceive no fear of death by not complying to immunisation which in turn enable them lack cues to action. Parents are likely to accept their children being immunized if there is the belief that vaccines are effective and perceived benefit outweighs the barriers that inhibit immunisation uptake. A typically example by Renne (1996) is that of a Rotary Club immunisation project in Zaria City, northern Nigeria in March 1995 that was abandoned after the second visit because parents refused to bring their children out for immunisation. The uptake behavior in such case is enhanced by cues to actin such as symptoms, mass campaigns or physician's advice.

2.7 Chapter summary

This chapter reviewed the literature that looks at the uptake of childhood immunisation in globally and it has put some effort to understand the factors lead to a low access of childhood immunisation. Besides that, the reviewed shared briefly the different points very important for better understanding on how different authors have been discussed about the expanded programme on immunisation. The study showed that there are several factors affect the immunisation uptake in the communities. Other studies showed that the theory of innovation diffusion is very important for people to adopt this strategy. This chapter presented the important of immunisation and related interventions to enhance the immunisation uptake. Finally, critically review and other literature was explained.

CHAPTER 3 RESEARCH METHODOLOGY

3.1 Introduction

This chapter covered research design, population and sampling techniques, research instruments and data collection, presentation and analysis of data, research validity and reliability, research ethical consideration.

3.2 Research Design

The research design is a plan of logical collection of techniques used in carrying out a research in order to address the research questions (Creswell, 2009). The mixed method approach was adopted in this study to help in answering the research questions. The mixed methods helped the researcher to explain the uptake of immunisation in Mutasa District as a way understanding the importance of immunisation in reducing child mortality rates in Mutare District. Thus, the quantitative and qualitative approaches were able to measure the research variables as they related to providing descriptive and statistical analysis of the relationship between those three factors and the narrative presentation on the uptake of child immunisation.

For the quantitative research design, the study used the survey method in order to reach out to the wider target population who participated in this research. The survey method was very helpfully in providing descriptive statistical data that helped in explaining the relationship among the variables under study.

3.2.1 The Mixed Methods

Plano Clark (2005) define the mixed methods research as research that combines qualitative and quantitative data collection and data analysis methods within a single

study. The researcher adopted both methods to this study for better understanding of research problems and complex phenomena than one approach alone. The mixed methods were useful in understanding contradictions that usually arise between quantitative results and qualitative findings. For example, the qualitative methods reflected participants' point of view by ensuring that study findings were grounded in participants' experiences. The mixed methods which comprised closed-ended and open-ended questions were used in this study in order to remove the ambiguity in data collected through questionnaires and in-depth interviews. The researcher realized that the use of a single method could create confusion in results but the mix methods provided a broader perspective greater confidence that the results obtained were valid and reliable (Niglas,2004). The importance of using the mixed methods approach allowed a pragmatic approach to study a research problem of which the disadvantages of one approach could be supported by another approach. This gave a better understanding of the issues under study.

3.3 Population and sampling techniques

The study population comprised 54 Clinics within 36 wards in Mutare District. The target population size comprised 219 women who attended immunization programmes in the three sampled clinics. The sample for this study was derived from three clinics located in wards (14,18 and 20) in Mutare District. The three selected clinics were Rowa clinic, Bezeley Bridge clinic and Matanda clinic. The sample size used for the study comprised 140 respondents. The sample size was drawn through the use of the "Raosoft calculator" online application. The simple random sampling was applied to select the respondents from the three sampled clinics as respondents for the study. This method was very effective because it gave equal chances of participants to be selected and since all of them

were attending the same vaccination programme on the same day. Each ward was treated as separately to provide a sample to the study. The final research participants were selected from each in the three wards.

Table 1: Mothers attending vaccination programme on a selected day

Selected clinics (Mutare district)	**Mothers who attend the vaccination programme on daily basis (Monday to Friday)**
Bezeley bridge clinic	80
Matanda clinic	74
Rowa clinic	65
Total	**219**

Source: DNO/District Nurse Office department

Based on population size from those 54 clinics, the researcher was able to determine the total sample size to participate in this study and the simple random sampling technique was being used in order to give equal chance to those mothers who were attending the vaccination programme on the same day. On these calculations, the margin error of 5%, the confidence level of 95% and the population proportion of 50% was used in order to get the sample size.

3.3.1 Sample Size

Since the central objective of this study was to assess the uptake of childhood immunisation strategy in Mutare District, the researcher selected mothers to participate in this study because they were in a good position to share their experiences on the

immunisation programme within their District. Patton (1990) believed that this method is very useful to approach the respondents so that they can provide good information. Eastman and Bailey (2006) describe a sample as a subset of a population. Since it is not possible to cover whole Mutare District to select all mothers from each ward, the researcher was using a sample size of 140 participants computed using the "Raosoft calculator" an online application with a 5% margin of error, 95% confidence interval, and 50% response distribution.

3.4 Research Instruments and Data collection

The researcher used both quantitative and qualitative methods comprising a questionnaire and an interview guide as data collection instruments. The questionnaire was structured in such a way that it had both closed and open – ended questions to cater for the mixed method research design. Anonymity was guaranteed to all participants as each and everyone got the right to answer any questions, they felt that they were able to answer.

The qualitative method included interviews which helped the researcher to gather information. They are active interactive tools used to get the views of the participants in a conversational manner. The key informant interview guide was used to get in-depth information because, the interviews guide had a guideline of questions that need to be asked. The researcher believed that it was very useful in getting opinions from the targeted sample with opportunities for probing and seeking clarifications.

3.4.1 Questionnaires

The self-administered questionnaire was used to collect data from the targeted sample from selected clinics in Mutare District, namely Rowa, Bezeley Bridge and Matanda

Clinics. The self-administered questionnaire was made up of a section of structured questions which were answered by targeted participants of this research. All respondents had the same questions which were closed and opened-ended question in order to give flexibility to the respondents to answer the questions informed by the mixed methods research design. The presence of the researcher during the questionnaire administration was very important because for any complications on answering the questions, the participants were able to ask for the explanation for better understanding of the question from the researcher.

3.4.2 Interview guide

The interview guide was administered to the key informants of the study. The key informants include (Community services Sister in charge, clinic Nurses, community leaders, Health workers District Nurses office) selected from Mutare District. The researcher was using the purposive sampling technique to choose the key informants as the best people are those who are aware of this immunisation programme and who are working in this department. Interviews helped the researcher to get a fast feedback from the key informants as they are in good position and are willing to help. The face-to- face interview was used to collect data using the interview guide.

3.4.3 Secondary Data

The secondary data on uptake of childhood immunisation was obtained through of relevant literature which included the books, articles and journals presented by other authors .The researcher reviewed different literatures to this study in order to have more information about the childhood immunisation strategy .Also the report submitted by the community services department on Immunisation in District was provided information on

uptake of childhood immunisation strategy in Mutare District. Those sources provided a comprehensive image on how this policy can be reviewed and find what interventions need to be implemented so that the strategy can be much more usefully in the whole Communities from his District.

3.5 Data Collection Procedure

The researcher requested for a letter from the College of Business peace, leadership and governance (CBPLG),another clearance letter from the Africa University Research Committee (AUREC) and permission from the Ministry of Health and Child Care (MOHCC).After getting the necessary permissions the researcher made arrangements with the District Nurse office(DNO) and the Sister in Charge of community service about immunisation programme in the District as most of them they were my key informants from the District so that they can assist me on directing me on how I can get into the field Before the interviews be to carried out and the questionnaires to be administered, all participants was been informed through the formal communication as the Researcher was explained the reason why I am carrying out my study and why their clinic was being selected .The one who was in charge of the Clinic in those wards wanted to confirm first if I have all required and the permission to carry out that study. The nurse in those selected clinics were good to me and they were assisting me before administrating the questionnaires to the participants and those who wasn't willing to take part for my study, there no force to anyone but most of them was willing to participate. A pre-test was done both interview questions and the questionnaires to measure the effectiveness of the questions on answering the research questions. Questionnaires was personally administered to all respondent. Fellow up was made to collect the questionnaires on the

same day as the data was collecting in the same day and same time, and the questionnaires was not much hard as they were able to answer them in less than thirty minutes.

3.6 Analysis and Organization of Data

The researcher adopted the descriptive and thematic methods of analyses. Quantitative data was analyzed using the SPSS version 25 application to come up with descriptive data represented in the form of pie charts, bar charts, tables. Qualitative analysis was done through of use of thematic analysis. The data collected was generated with the variables and codes created. The ANOVA application was used to calculate the variance and the regression models.

3.6.1 Thematic Analysis and Semi-structured Interview

The researcher adopted the semi-structured interview as a data collection instrument for the qualitative part (Kothari, 2004; Saunders, 2016). Saunders et.al (2016) described the character and nature of interviews as types of data collection instruments as distinguished from other types and as guided by research questions and objectives, research strategy and purpose. The interviewer read each question to the interviewee followed by the recording of their response in the form of precoded answers on a standardised schedule. This demanded the need to eliminate bias through asking questions exactly as written with the same voice tone by he interviewer. This was followed an explanation to the interview question. Because of the quantifiability nature of the structured interview guides were also called quantitative research interviews.

In the semi-structured interviews, however, a list of themiatic questions were used to guide the process and the order dependent on the flow of conversation during the

interaction. The conceptual framework was the basis of themes together with research questions and objectives (Braun & Clarke, 2006).The need for further explorartion of objectives and questions necessitated the asking of additional questions through probing.

The need to elicit opinions and attitudes from respondents such as key informants with regarding the subject of immunisation was guided by questions asked during semi-strucured interviews. Health workers,community leaders, clinic nurses and district nurses were the key informants that were interviewed. This was because in such a scenario the interviewer would pre-determine the question but, in the semi-structured interview this achieved a better quality of opinion and participant viewpoint.

Kothari (1990) had a high opinion of interview techniques due to the following reasons:

- they eliciting of deeper and more information
- interviewer skill opportunity and possibility to surmount the hurdle of interviewee resistance which approximates the generation of a sample that is almost identical with the target and general population.
- elimination of missing returns resulting in possibility effective control of samples and the possibility of low level of non-returns.
- the interviewer has control over the identification of persons to answer the questions
- the modulation of interview language to match the educational level and /or ability of the respondent and the consequent elimination of question misinterpretations; and

- it is possible to collect supplementary information regarding the characteristics that are personal about the respondent and his/her environment which provide a context for the interpretation of results.

Weaknesses were also identified by Kothari (1990) which included:

- simultaneous interviewer and respondent bias
- possible inadequacy in the data due to failure to access key officials and
- method consumes a lot of time
- generation of certain emotions by respondent due to interviewer presence which may pretentiously generate an interesting interview interaction with little value to the research
- the need for proper rapport to produce frank and free responses which may however prove to be difficult.

3.6.2 Semi-structured Interview Procedures

The semi-structured interview method was adopted for this research. The approach to data collection used non-standardized questions and procedures emerging from the research process dynamics which were naturalistic and highly interactive (Saunders et.al, 2016). The success of such methods was largely determined by the gaining of physical access and establishment of rapport with interviewees with the cognitive access to interviewees' data being based upon the demonstration of sensitivity.

3.6.3 Data Types

Qualiative data was collected through verbalised expressions in response to interview questions.Quantitative data was delivered through questionnaire responses.

Data that collected was verbal expressions responding to semi-stuctured interview questions.

3.6.4 Data Analysis and Presentation

Saunders (2016) advocates stages of data analyses that are needed for qualitative methods that employ the deductive theory approach. Thematic analysis was suggested by the same author as an approach that can be deployed across all research paradigms including those incorporating quantitative methods.

3.6.5 Thematic Analysis

According to Saunders et al. (2016) thematic analysis entails identification of themes in a large data set which also includes a series of interviews. The themes or patterns are coded for further analysis related to the research question(s). In Braun and Clarke (2006) thematic analysis (TA) is defined as a method for the identification, analysis and reporting of patterns and themes within the data. A theme entails the capturing of something that is of relevance to the research question and is representative of the level of patterned response or meaning in the data set (Braun & Clarke, 2006). Thematic Analysis has been found to be of use in the following circumstances (Saunders et al., 2016). Thematic analysis (TA) has been found useful in the following situations (Saunders et al., 2016).

- where it is necessary for disparate and large quantities of qualitative data to be comprehended
- integration of data from diverse notes and scripts
- where data needs further exploration key patterns and themes need to be first identified.

- The need for the thematic data to be described
- Where there is further development and testing of emergent theories from theme relationships or patterns
- The need to verify and draw conclusions

Braun and Clarke (2006) further defined data forms:

i. Data corpus is all the relating to an identified research project
ii. Data set is in reference to data from the data corpus that is used for a particular research analysis.
iii. The guide offered in data choice from the two approaches depends upon the need to address a specific question or not. The data corpus in the current research would be comprised of all the data on immunization but the data set would comprise all the incidents that are relevant to the subject of enquiry namely, immunization strategy uptake.
iv. The data item is a piece of data that is obtained and when such are combined, they form the data set or data corpus e.g. interview with a clinic nurse is a data item
v. Data extract refers to a single coded chunk of data that has been drawn from a data item.

3.6.6 Stages in Thematic Analysis

Thematic analysis can briefly be summarized as involving familiarization with data, coding, searching for themes and recognition of relationships. Refining of themes follows and is followed by naming of themes and finally proposition testing (Saunders et al., 2016; Braun & Clarke, 2005).

3.6.7 Validity and Reliability of study

A valid tool measures what the researcher sets out to measure the validity and reliability at the beginning and at the end of the research. The questionnaires were understandable and questionnaires were translated in languages that were understandable to the participants. The English and Shona were used to enable the participants to comprehend the questions and make it easy for them to respond (Braun & Wainer, 1988).

The reliability of an instrument is the degree of the dependability and consistency which it measures the attributes. The instruments used in this study were developed by the researcher on this case the researcher used the pre-test before the data collection in order to prepare them for easy participation in this study. The results turned into very steady through the years and an correct illustration of the overall population underneath have a look at is called reliability and if the effects of a have a look at can be reproduced below a comparable method, the research tool is taken into consideration to be reliable (Joppe,2000).

3.7 Ethical consideration

As part of the study, all participants were given an opportunity to decide to participate or not. The researcher shared with the respondents the objectives of the study in order to remove any confusion as well as to help the respondents to make an informed decision. As required by the University, all research instruments were submitted to the Africa University Research Ethics Committee (AUREC) for approval and evaluation. The confidentiality and anonymity of all participants was maintained and no information of the respondents was disclosed. The researcher asked all participants to sign the informed consent form before participation in this study. The researcher asked the permission from

the Administrative office/Provincial Medical Director (PMD) in order to conduct this research in Mutare province, District of Mutare. No harm, safety and protection of the participants was prioritized. The researcher tried always to understand the culture of the community and to be part of them in the process of this study even after accomplishment of the study.

3.8 Chapter summary

The research that was carried out in Mutare District included women participants between the ages of 15 to 55. They were selected from the same District in which they were attending clinic vistations for the immunisation of their children. The key informants from Mutare District department and community leader, Health Worker, Nurses were used to provide information about the uptake of childhood immunisation in Mutare District. This study used the survey methods to approach the participants of this research to their households. Qualitative and quantitative approaches were used as research methods to as data collection methods. Data analysis was done using ANOVA for generating the variance and regression and SPSS 25 version. These helped the researcher to have enough information from the participants and present the data in any form necessary.

CHAPTER 4 DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter focused on the presentation, analysis and interpretation of the data gathered on the topic under study. The study findings were derived from data obtained through the questionnaires that were distributed to the participants from Mutare District. Both quantitative and qualitative techniques were used. The data obtained was analyzed and presented using the SPSS version 25.0 statistical package. ANOVA technique was also used to analysis the variance and regression. The summary statistics, empirical models and the summary of findings are also found in this chapter.

4.2 Response and Response rate

Of the 140 questionnaires that were distributed a total of 137 were received. This high response rate of about 98% is highly acceptable being above 70% threshold which is needed for the generalization and extrapolation of research findings to the entire population (Mbataru & Wanjaru, 2013 citing Mungenda & Mungenda, 2003). The high response rate could be attributed to researcher presence during the administration of the questionnaire. The respondents' response review showed that of the 140 questionnaires distributed 137 were returned and 5 key informants were further followed with interviews. Results showed that Rowa clinic had 50 participants who responded to questionnaires, Bezeley Bridge clinic had 50 participants responded to the questionnaire and Matanda clinic had 37 out of 40 participants who responded to the questionnaire.

4.3 Response Characteristics

Response patterns were divided mainly into demographics and response patterns to questionnaire items. The latter are inclusive of frequencies as depicted by any of pie-charts, bar graphs and tables.

4.3.1 Respondents' Demographics

A cumulative total of 83% are 45 years of age and below and this is the normal child bearing age. Kamal and Esmai (2001) attributed maternal age as one of the factors (Kamau & Esmai,2001).

Table 2: Age of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15-25	31	22.6	22.6	22.6
	26-35	49	35.8	35.8	58.4
	36-45	34	24.8	24.8	83.2
	46-55	19	13.9	13.9	97.1
	>=55	4	2.9	2.9	100.0
	Total	137	100.0	100.0	

(Source: Primary Data)

A cumulative total of 8.8% had at least primary education and this could be an indication of a relatively high level of consciousness to immunisation of children as suggested in the conclusions by Mabrouka, 2011; Fatma & Chizoma (2013); Omer et al., (2014); Soundarya et al., (2014) & Chris et al., (2015). LeVine, LeVine and Schnell (2001) have

attributed education and its relationship to health aspects to the capacity of good knowledge about health care described as the human capital advantage; capacity to develop contacts with more healthcare knowledgeable people with access to healthcare services a phenomenon called social capital advantage.

Table 3: Respondents' level of education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary	12	8.8	8.8	8.8
	Secondary	57	41.6	41.6	50.4
	College	35	25.5	25.5	75.9
	University	14	10.2	10.2	86.1
	None	19	13.9	13.9	100.0
	Total	137	100.0	100.0	

(Source: Primary data)

Educated women have been linked to the cultural capital route which emanates from educated women developing higher and valued skills which imparts self-confidence on them giving them better links with medical providers. One would therefore expect the majority of women in Mutare district to be more conceptually competent and conversant with immunisation issues as the statistics in table 4 showed.

Table 4: Respondents' marital status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	never married	1	.7	.7	.7
	Married	73	53.3	53.3	54.0
	Divorced	23	16.8	16.8	70.8
	Widowed	27	19.7	19.7	90.5
	Other	13	9.5	9.5	100.0
	Total	137	100.0	100.0	

Source: Primary data

Empirical studies in Zimbabwe in 2010 elicited the link between church attended and vaccination with the apostolic churches having the lowest rate compared to other church categories (MHCC & WHO, 2010). Ha et al. (2009) indicated the high probability of children from some group of apostolic churches not being immunized and the participation of 19% as respondents in table 5 comes from other group of apostolic church who allowed their members to attend the immunisation.

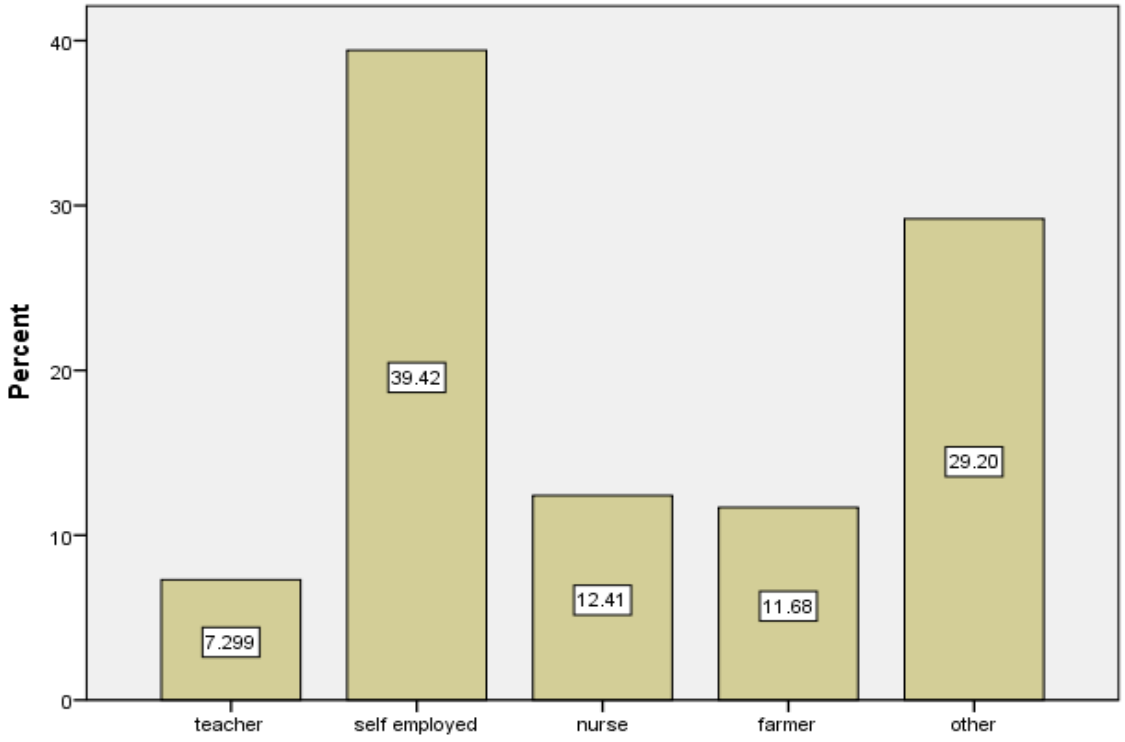
Table 5: Respondents' church of attendance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Catholic	42	30.7	30.7	30.7
	Apostolic	26	19.0	19.0	49.6
	Pentecostal	43	31.4	31.4	81.0
	Muslim	1	.7	.7	81.8
	Other	25	18.2	18.2	100.0
	Total	137	100.0	100.0	

(Source: Primary data)

The sample was comprised participants who were self-employed with the minority being in the nursing and teaching professions. It was possible that professions alone did not mean much at the exclusion of level of education. This was due to the fact that at the time the research was done formal employment levels were critically low in Zimbabwe which implicitly meant high unemployment levels.

Figure 2: Respondents' occupation



Source: Primary data

This necessitated consideration of the occupation criterion jointly with education level and possibly income levels; the latter case would be important where financial resources were key in the childhood immunisation uptake. It was also possible that the occupation inclusive of the 'self-employed' would be significant towards immunisation uptake as economically active people tend to influence and communicate with each other on the pertinent issue under consideration that is, immunisation uptake.

4.4 Presentation of Quantitative Findings

In this section the statistics pertaining to the remainder of the questionnaire were presented. These were divided into sub-headings that addressed themes that the researcher discretionally chose as answering the research questions or contributing to the same.

4.4.1 Childhood Immunisation Uptake

The childhood immunisation uptake was generally above 50% in terms of the children receiving vaccines for BCG, Polio, DPT, measles and hepatitis B as indicated in tables 7 to Table 12.

Table 6: Vaccination against polio 1, 2 and 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	92	67.2	67.2	67.2
	No	45	32.8	32.8	100.0
	Total	137	100.0	100.0	

Source: primary data

Table 7: Shows that children that received vaccination for polio 1,2, and 3 they are 67.2% while those who did not get it, they were 32.8%. which showed that children were being immunized to a great level but more results were needed.

Table 7: Vaccination against BCG

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	95	69.3	69.3	69.3
	No	42	30.7	30.7	100.0
	Total	137	100.0	100.0	

Source: primary data

Table 8: Shows that 69.3% of children received the vaccines for BCG while 30.7% of children did not the vaccine for BCG. The results showed that some mothers gave birth at home.

Table 8 : Vaccination against hepatitis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	92	67.2	67.2	67.2
	No	45	32.8	32.8	100.0
	Total	137	100.0	100.0	

Source: primary data

Table 9: Shows that 67.2% were children who received the vaccines of Hepatitis while 32.8% represented the children did not get the vaccine of Hepatitis. The results were quite informative as indicated in table 9.

Table 9: Vaccination against measles

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	78	56.9	56.9	56.9
	No	59	43.1	43.1	100.0
	Total	137	100.0	100.0	

Source: primary data

Table 10: Showed that children who received the vaccines for measles represented 56.9% while those who did not get the vaccines for measles represented 43.1%. Results showed that much needed to be done in terms of vaccinating children against measles.

Table 10:Vaccination against DPT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	65	47.4	47.4	47.4
	No	72	52.6	52.6	100.0
	Total	137	100.0	100.0	

Source: primary data

Table 11: Shows that 47.4% represented the children who received vaccines for DPT while 52.6 % represented children who did not get the vaccines for DPT. A lot more awareness was needed to ensure that children were vaccinated against DPT in the community.

Table 11:Immunisation program attendance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	97	70.8	70.8	70.8
	No	40	29.2	29.2	100.0
	Total	137	100.0	100.0	

Source: primary data

These results supported the fact that the majority of respondents (70.8%) indicated that they attended immunisation programmes (Table 12) while 29.2% indicated that they did not attend the programme regularly.

Table 12: Complications faced in child immunisation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	21	15.3	15.3	15.3
	No	116	84.7	84.7	100.0
	Total	137	100.0	100.0	

Source: primary data

A small minority of respondents indicating that they faced complications in the immmunisation of their children (Table 12) 15.3% while 84.7% indicated that they did not face any complication in the immunisation of their children.

4.4.2 Predisposing Factors on Childhood Immunisation Uptake (socio-economic effects)

Most respondents indicated place of delivery to have been a health facility compared to the minority who indicated home and other places (Figure 3).

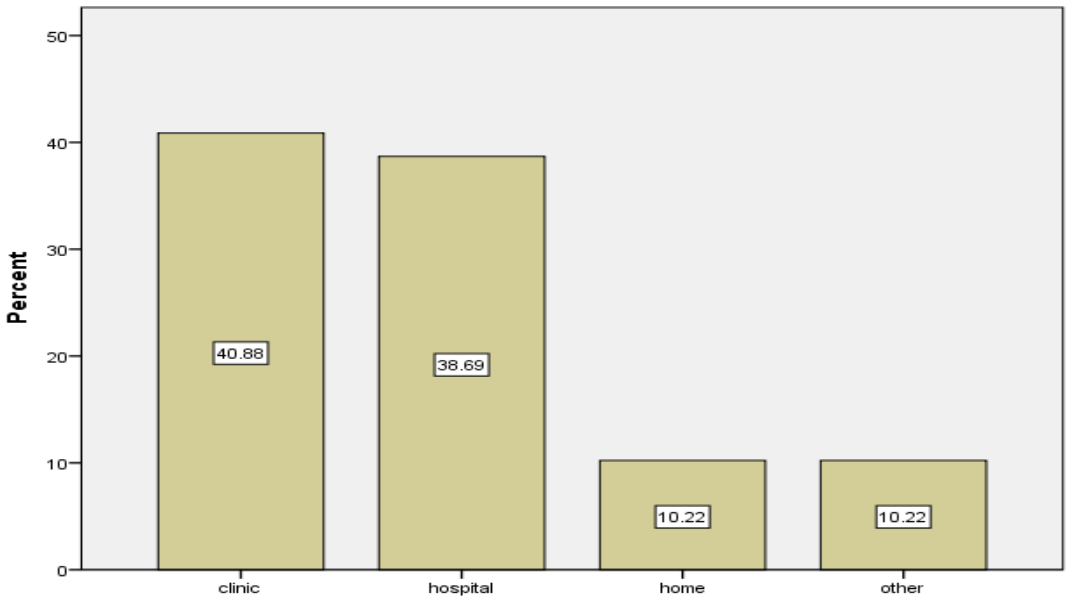


Figure 3: Place of Delivery

(Source: Primary data)

Analysis of results revealed that this could be another empirical testimony to studies by Babalola (2009); Luma (2005); Etana & Deressa (2011); Pandey & Lee (2011) and Mosand et al. (2012) which indicated that those using antenatal health care facilities were likely to immunize their children. The same could explain why higher percentages were immunized against the six diseases in the figures below. This also confirmed the conclusion by Nath et al. (2007) in which children born at home were unlikely to be vaccinated compared to those born in a health facility.

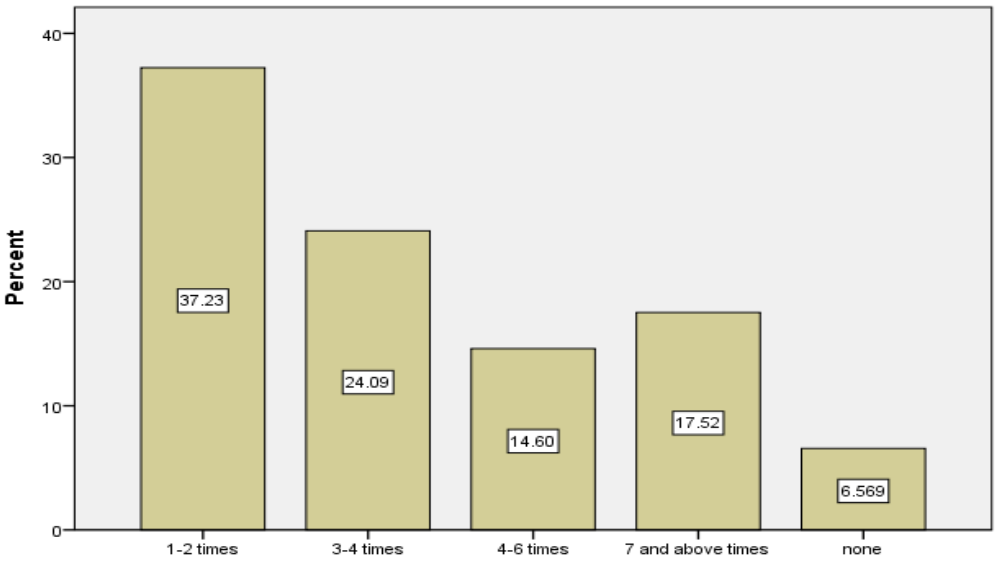


Figure 4: Mass media exposure on additional immunisation information

Source: Primary data

Figure 4: Showed that a high percentage of mothers were exposed to mass media so that they could get more information about immunisation, the results showed that 37.23% were exposed to ANC as part of assisting mothers to have more information about immunisation for their children.

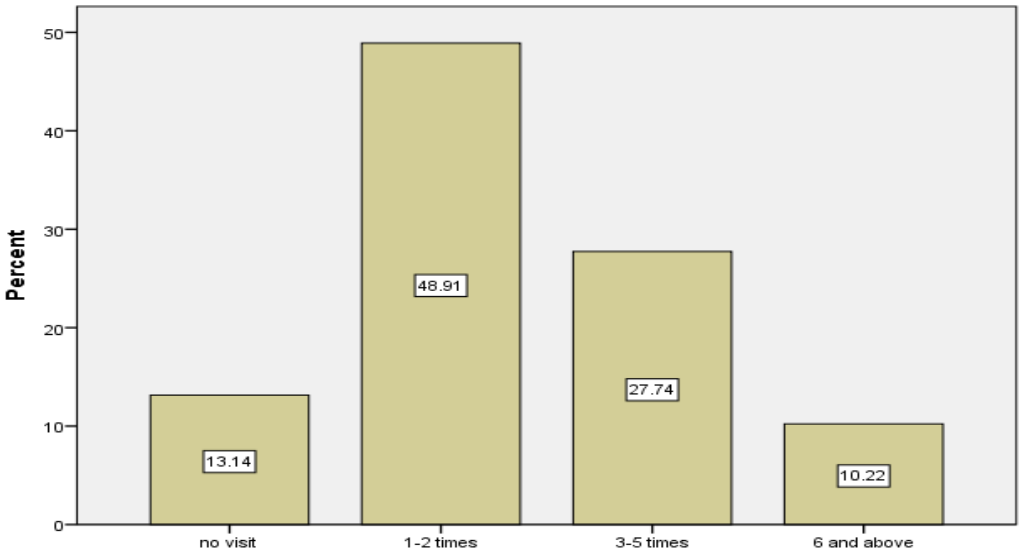


Figure 5 : Frequency of attendance of antenatal care services

(Source: primary data)

Figure 5: Showed that 48.91% represented the mothers who were attending the Antenatal Care services for their children and they were able to access more information and this reflected a high percentage of mothers who attended antenatal care services.

4.4.3 Enabling Factors on Immunisation Uptake

Birth order or spacing was found to be irrelevant in terms of limiting childhood immunisation, contrary to empirical findings in Kenya and the Phillipines by Owino et al. (2009) and Bondy et al. (2009) in which there were strong correlations between a child's birth order and immunisation uptake.

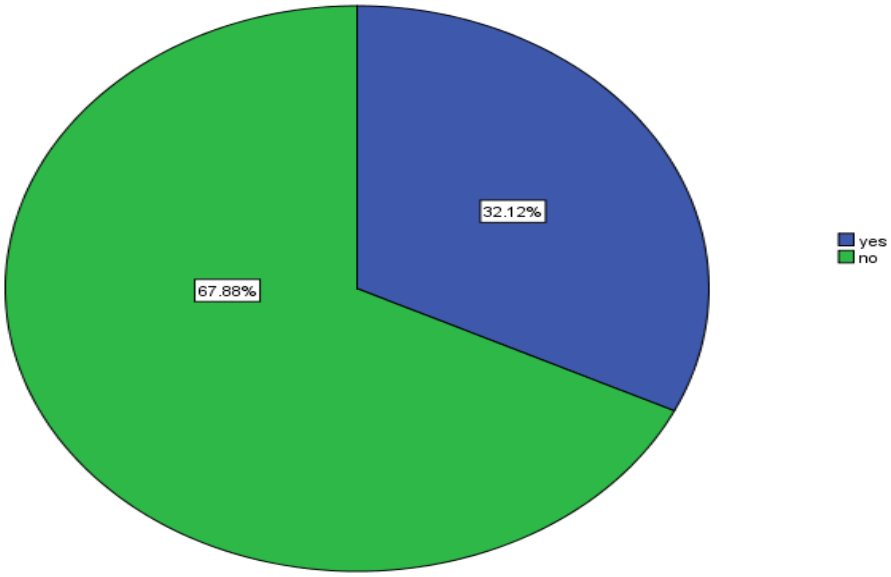


Figure 6: Birth order or spacing impact on childhood immunisation

(Source: Primary data)

The results in Figure above confirmed the empirical pursuits by Kumar (2010) in India. The above results were encouraging as birth order limitation on immunisation was not strong. The foregoing findings on birth order seemed to confirm that enabling factors are enhanced to the extent of birth order was irrelevance in influencing immunisation uptake. This may also underscore the seriousness of immunisation as a health issue as successive births were treated almost equally in terms of approach to child spacing.

4.4.4 Need Factors on Childhood Immunisation

In terms of need factors effects on immunisation strategy it was noted from the majority of respondents that access to a health facility with the sick children was high (Figure 7) and that nurses were mostly assistive in the process of childhood immunisation in the community (Figure 8).

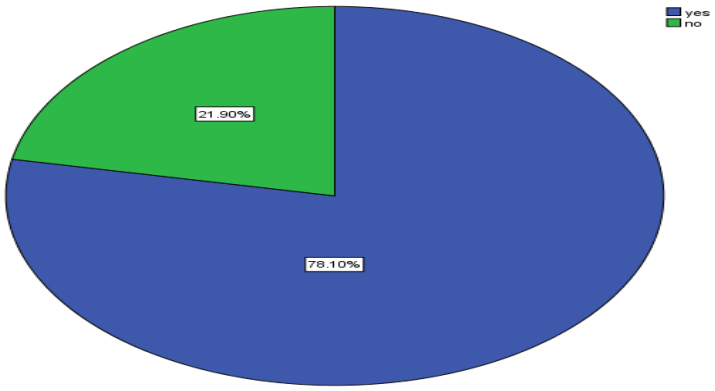


Figure 7: Access to health facility with sick children

(Source: Primary Data)

This was also facilitated by the situation where a large majority of respondents stayed within 5 kilometers or less from the nearest health facility below on figure 9 and with most respondents indicating that they were not restrained by their church organizations from seeking the services to the clinics or health facilities for check-ups to their kids below on figure 10. In the latter case the minority who were restrained could be attributed to a group of apostolic members churches since these were in the minority as indicated in the demographic section. The assistance by nurses in childhood immunisation was accepted by most respondents as contributing to childhood immunisation and as a need factor.

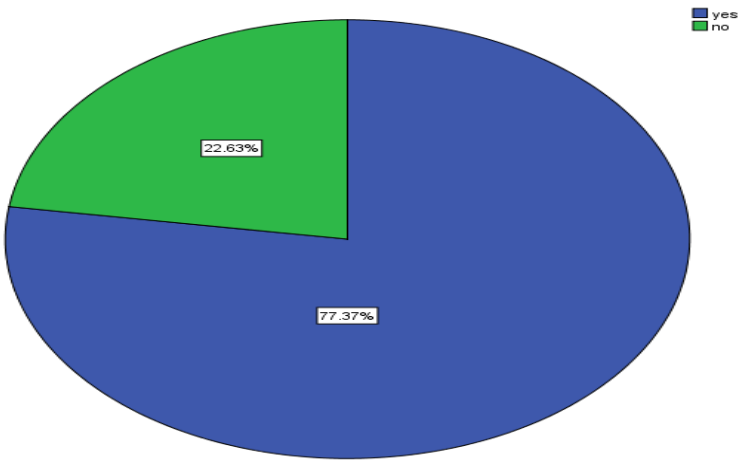


Figure 8: Nurses' assistance in childhood immunisation uptake

(Source: Primary Data)

The assistance by nurses in childhood immunisation, this could be another empirical confirmation other empirical researcher by Ibnouf (2007) and Rup (2008) which found an inverse relationship between distance of home from the medical facility and intensity of immunisation practice. Bosu (1997) also elicited the inverse relationship between vaccination coverage and distance from vaccination clinics. It would appear that a large majority of respondents were accessing high vaccination coverage since most were at distances of 5 kilometres and below from the nearest vaccination centre (Figure 9) below.

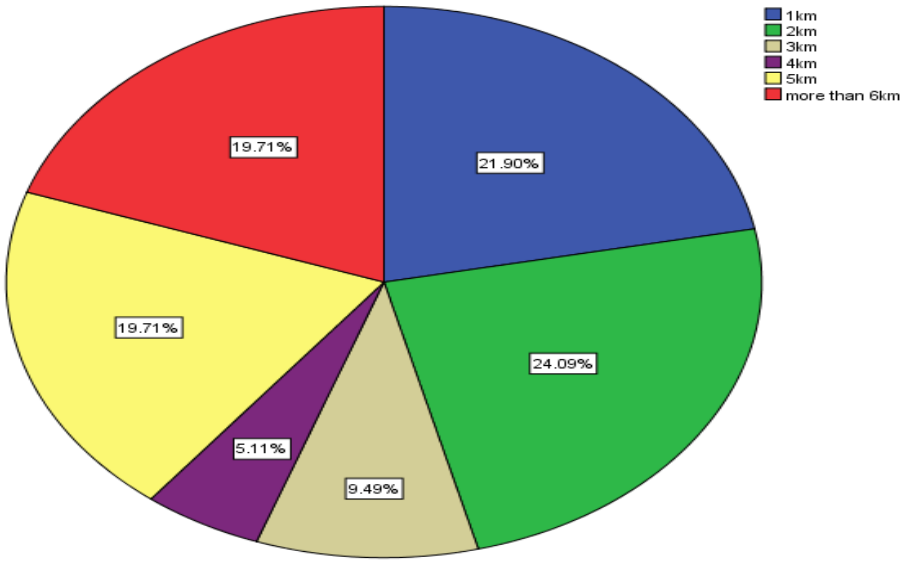


Figure 9: Distance between homestay and clinic/health facility

(Source: Primary Data)

The role of churches was found to be positively significant in terms of allowing members to access health facilities with their children. It is pertinent to note that though the percentage of respondents indicating from apostolic was low at about 20% this is the part of apostolic different from Marange sectors as their churches restricted them do not use immunisation according to their beliefs (table 5). That the restricted proportion in table 5 could be attributed to other apostolic sector different from Marange sector which confirms the Ha et al. (2009) conclusion that children from the same sect were less likely to be immunised.

The payment of money (figure 4.10) for vaccines and the receiving of all types of vaccines (figure 4.11) is key to immunisation uptake as the payment may limit access to the unemployed.

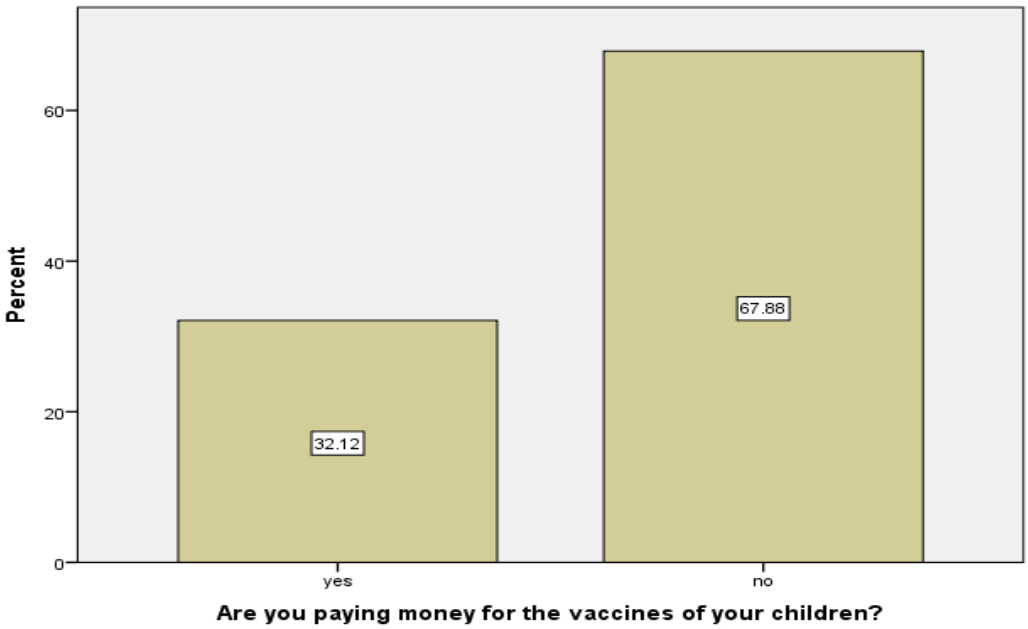


Figure 10: Payment for children's vaccines

(Source: primary data)

However over 30% were paying for vaccines with another category of the same magnitude failing to access all the vaccines. This could also explain the smaller percentages who did not have their children vaccinated against all the five in tables above.

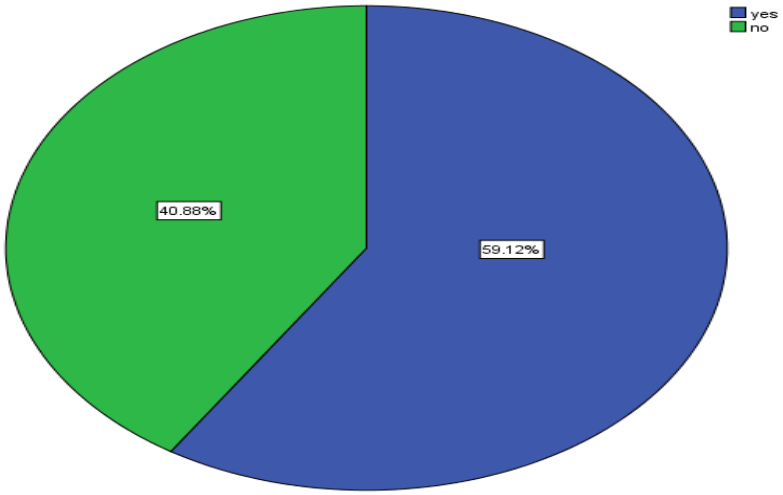


Figure 11: Receiving of all types of vaccines

(Source: primary data)

Figure 11: Shows that 60% of the children had received all types of vaccines while the 40% representing the children who had not received all types of vaccines which showed that the mobilisation of Health facility should be improved.

4.5 Reliability of the Questionnaire

The questionnaire was tested on the reliability. Reliability refers to how consistent is the instruments when the same experiment is going to be repeated again. Hence, the questionnaire reflected that the same results could be obtained by the same instruments without bias. Reliability was measured using Cronbach's Alpha test. An alpha value that was considered to be reliable and was in the range of 0.6 to 1.0 showing high reliability.

The questionnaire was reliable as the alpha value was 0.707 as shown below.

Table 13: Overall Reliability of the questionnaire

Cronbach's Alpha test	Cronbach's Alpha test Based on Standardized Items	Number of Items(N)
.707	.769	19

4.6 Tests of Normality

In relation to whether the results were normally distributed or not, test was done and the results are shown below. Since the respondents where more than hundred the Komolgorov Smirnov Test were used. Most of the data from the below table indicate that the data are not normal and so the route to use is that of non-parametric tests as the p value were less than 0.05.

Table 14: Test of Normality

Tests of Normality[b,d,e,f]

	Uptake	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
Effectsofpredesposing	8.00	.260	2	.			
	9.00	.136	17	.200*	.955	17	.547
	10.00	.308	22	.000	.829	22	.001
	11.00	.205	33	.001	.880	33	.002
	12.00	.230	32	.000	.906	32	.009
	13.00	.462	26	.000	.436	26	.000
	14.00	.303	4	.	.791	4	.086
Effectsofenabling	9.00	.349	17	.000	.642	17	.000
	10.00	.344	22	.000	.720	22	.000
	11.00	.243	33	.000	.836	33	.000
	12.00	.392	32	.000	.659	32	.000
	13.00	.404	26	.000	.661	26	.000
	14.00	.441	4	.	.630	4	.001
Effectsofneedfactors	8.00	.260	2	.			
	9.00	.182	17	.136	.883	17	.036
	10.00	.317	22	.000	.765	22	.000
	11.00	.355	33	.000	.811	33	.000
	12.00	.181	32	.009	.912	32	.013
	13.00	.426	26	.000	.676	26	.000
	14.00	.214	4	.	.963	4	.798

*. This shows that there is a lower bound of the true significance.

a. Lilliefors Significance Correction

4.7 Discussion and Interpretation

4.7.1 Correlation Analysis

Correlation analyses were carried out in order to identify the existence of multi-collinearity which was the existence of a relationship between the independent and dependent variables and its nature as to whether positive, negative or zero. There was a total of three independent variables (predisposing, enabling and need) and one dependent variable (immunisation uptake). Multi-collinearity was revealed when the independent variables were related to each other and at moderate levels this could be regarded as insignificant. However, when severe increases in regression coefficients variances may render difficulty in the interpretation of the same as this implied that they were unstable. Green (2008) recommended the exclusion of variables when multi-collinearity exceeded 0.7.

Table 15: Non-parametric Correlations

Correlations						
			Uptake	Effects of pre disposing	Effects of enabling	Effects of need factors
Spearman's rho	Uptake	Correlation Coefficient	1.000	-.329**	.468**	-.341**
		Sig. (2-tailed)	.	.000	.000	.000
		N	137	137	137	137
	Effects of pre disposing	Correlation Coefficient	-.329**	1.000	-.157	.484**
		Sig. (2-tailed)	.000	.	.062	.000
		N	137	137	137	137

	Effects of enabling	Correlation Coefficient	.468**	-.157	1.000	-.279**
		Sig. (2-tailed)	.000	.062	.	.001
		N	137	137	137	137
	Effects of need factors	Correlation Coefficient	-.341**	.484**	-.279**	1.000
		Sig. (2-tailed)	.000	.000	.001	.
		N	137	137	137	137
**. The correlation is significant at the 0.01 level (2-tailed).						

(Source: Primary data)

In Table 15 above the phenomenon of multi-collinearity was at moderate and below between the three independent variables ,predisposing ,enabling and needs factors and, as pointed out above these can be regarded as insignificant. The next step was to explain the remaining correlations between the three independent variables (predisposing, enabling, need) and one dependent variable i.e. immunisation uptake.

4.7.2 Predisposing Factors and Immunisation Uptake (socio-economic effects)

A moderate and statistically significant relationship was obtained between predisposing factors and immunisation uptake (rho=-0.329 and $p<0.01(p=0.00)$). Because the relationship was negative it means some or all the composite elements of predisposing factors-which included marital status, mother's age, religion, child's age and birth order, antenatal care and place of delivery had a negative impact on immunisation uptake. So far and as noted from literature by Ha et al. (2009) the apostolic sectors like Marange sector do not visiting the facilities for immunized their children but other part of apostolic sector who allowed their members to visit facilities was made up 20% of the respondent sample

which it was a factor as the Marange Sector restrained its members from vising health facilities for immunisation purposes as discerned from Figure 9 above. Other elements of predisposing factors that could contribute to this negative correlation could be the minority who did not visit antenatal centres.

4.7.3 Enabling Factors and Immunisation Uptake

A moderate and positive relationship was elicited from the relationship through correlation between enabling factors and immunisation uptake (rho=0.468 and $p<0.01(p=0.00)$). According to the proposed conceptual model the enabling factors comprise educational level, employment status of mother, wealth status and rural-urban residence. The role of educational level and its positive contribution to immunisation uptake was discussed in the demographic section by Mabrouka (2011); Fatma & Chizoma (2013); Omer et al., (2014); Soundarya et al., (2014) & Chris et al., (2015) and LeVine, LeVine and Schnell (2001). Employment status and wealth status could also have contributed to positive immunisation uptake especially considering that some respondents indicated paying for the vaccines (Figure 10) and more so where not all vaccines (Figure 11) could be obtained these statuses were key in overcoming unavailability as they could source them.

4.7.4 Need Factors and Immunisation Uptake

The relationship between immunisation uptake and need factors was one of negative correlation (rho -0.341 p, 0.1 (p=0.00)). With composite elements of need factors being accessibility, perceived health status and treatment facilities it is necessary to examine the descriptive section and to try and find out which components might have contributed to the negative correlation. It is possible that the perceived health status of children by

respondents was good implying that they did not see any need to visit immunisation facilities and hence the negative correlation. Most facilities were largely accessible as noted earlier but it could be a combination of the few who were far from the immmunisation facilities (Figure 9) and the foregoing who contributed to this negative correlation.

4.8 Regression Analysis

Multiple regression analysis was deployed to assess the relationship between the combined independent variables on immunisation uptake. SPSS version 25 was used to achieve this and multiple regression as a technique can accommodate many variables (Greene, 2008).

4.8.1 Analysis of Variance (ANOVA)

The ANOVA technique is employed in order to assess the goodness of fit i.e. whether one or more independent variables have an impact on a parametric dependent variable (Sawyer, 2009).

Table 16: ANOVA (Source: primary data)

Model of items		Sum of Square	Df	Mean Square	F(Value)	Sig.
1	Regression	68.155	3	22.718	14.302	.000[b]
	Residual	219.204	138	1.588		
	Total	287.359	141			

a. Dependent Variable: Uptake

b. Predictors: (Constant), Effects of need factors, Effects of enabling, Effects of predisposing

(Source: primary data)

The F value of 14.302 at a significance of .000 is less than 0.01 and the regression model is therefore accepted as a good fit for explaining immunisation uptake from predisposing, enabling and need factors.

4.8.2 Model Summary

The R-Square of 0.237 indicates that about 23.7% of immunisation uptake can be explained by the listed independent variables at 0.05 significance level.

Table 17: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.487[a]	.237	.221	1.26033	.237	14.302	3	138	.000

a. Predictors: (Constant), Effects of need factors, Effects of enabling, Effects of predisposing

(Source: primary data)

4.8.3 Model Coefficients

Regression coefficients are an indication of change in immunisation uptake when one unit of independent variable is applied whilst others are held constant. In this study the regression coefficient that would be applicable is

Immunisation Uptake = 10.834 + 0.724 ψ_1 + (ψ2) + (ψ3)

Where 10.834 is a constant

Ψ_1 enabling factors

Ψ2 Effects of predisposing

Ψ3 Effects of need

Therefore

Immunisation Uptake = 10.834 + 0.724 (enabling factors) - 0.121 (Effects of predisposing) – 0.088 (Effects of need)

However, from the table below it shows that the two independent variables namely effects of predisposing and effects of needs do not contribute much. Hence the new regression formula is:

Immunisation Uptake = 10.834 + 0.724 (enabling factors)

The predisposing and need factors do not appear in the equation because they are above the 0.05 level of significance.

Table 18: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	10.834	.841		12.888	.000	9.172	12.497
	Effects of predisposing	-.121	.066	-.154	-1.827	.070	-.251	.010
	Effects of enabling	.724	.147	.381	4.936	.000	.434	1.014
	Effects of need factors	-.088	.066	-.116	-1.332	.185	-.220	.043

a. Dependent Variable: Uptake

(Source: primary data)

By way of interpretation of the above equation it would be understandable to state that a 100% increase in enabling factors would lead to a 72.4% increase in immunisation strategy uptake assuming all the other factors are held constant.

From the above it is possible to hypothesize that in the Mutare District enabling factors are negatively and significantly related to uptake of immunisation factors at beta 0.381.

4.9 Presentation of Data –Qualitative Analysis

The interviews of key informants were semi-structured and involved 5 participants from Mutare District and their profiles were as below:

i. Participant 1(P1) Clinic nurse male
ii. Participant 2(P2) Health worker, male
iii. Participant 3(P3) Community leader
iv. Participant 4(P4) Community service, female
v. Participant 5(P5) District Nurse, female

After being guided by the research questions in accordance with the deductive approach of theory development (Saunders et.al, 2016) and after progressing through the six stages summarized in the methodology chapter. It is during the six stages that some initial and intermediate themes are merged or collapsed with each other so as to possess relevance to the research questions. Some that fail to gain relevance are discarded. An attempt to answer the research questions was made through the following points which will be articulated in the sections that follow. These will include verbatim statements by the key

informants. The key points generated were four after analysis the results and they are categorizing in themes as follows:

- Mother as central figure
- Economic factors
- Conceptual capacity and Cognitive factors

4.9.1 Mother as Central Figure

The immunisation uptake primarily rested with the mother though other factors that could weaken the natural and caring role of the mother. From the findings it can be noted that the uptake was quite good within the district and there was an improvement. Most antigens were available, then we can say 80% coverage within the District which means every year the Health facilities within the community they are trying to reach a high target in order all communities can participated in immunisation programme for the children.

Participant P5 indicated that:

> The mother is the primary target of our communications effort towards the immunisation strategy uptake. She's innately attached both psychologically and physically through the maternal bond to the child. Other factors may come into play but it is patently obvious that the mother is already sold to the future survival of the child. There are other barriers to overcome such some religious denominations in which immunisation may not be viewed negatively per se but that spiritual interventions are believed to be mightier in terms of safeguarding against morbidity and mortality of child population. Some of these religions actually go to the extent of demonising immunisation. Other factors in the mother are also needed such as education (interview with District Nurse officer, February 2020).

Evidence from the key informants showed that there were several organisations helping in immunisation programme such as: AFRICADE, MSF, Plan International, PSI, OPHID, FACT and FHI360. They were also helping with the resource distribution like vaccination

and gas, transport during vaccination campaign and clinic-based outreach support. The District Health Facilities (DHF) commitment and integration of activities by community Sisters and other teams needed to be consistent in their activities. There was need to screen all children eligible for vaccinations and give vaccinations which are due every month. There should be collection of data through the use of T-series in order to calculate coverage on monthly basis. Data should be analysed and to see if target coverage is reached or surpassed, if below coverage then find out the reason for not reaching the target coverage. The District need to help on mobilising so that the all communities can reached.

4.9.2 Economic Factors

Economic factors such as employment, income and wealth status were key to immunisation uptake. Whilst employment category may not have been important in terms of income it was important for network influences. Professions such as nursing and teaching with the latter being significant in the district was perceived by key informants as being key in the community in terms of immunisation uptake. This was because of the education level that is requisite in attaining to such professions and which education level precludes the chance of any ignorance about immunisation uptake. This was captured in the data item from P4 indicated that:

> Teachers and nurses as well as other health workers are key people in spreading the message about campaign and therefore are key community components in terms of educating those with less enlightenment or with distorted understanding and misconceptions about immunisation. The self-employed also generate income and in the process network with others and this diffusion of information is a key input in cross-education about immunisation minus the other detractions such as extremist religious beliefs (interview with Community Nurses on immunisations, February 2020).

Another key informant said that the issue of transport and fuel was a big challenge to reach all as the clinics. The Community Nurse stated the need for more vaccine's objectors. There was also the shortage of staff and poor documentation of records which created missed opportunities and defaulters. Informants also indicated that during summer season, most mothers do not attend the immunisation because they will be busy in their farms which reducing the coverage. Apostolic sector most of them do not allowed their members to immunise their children.

4.9.3 Conceptual Capacity and Cognitive Factors

Conceptual capacity referred to such issues as disease morbidity and mortality as they relate to understanding the key function of immunisation. According to P1 and P3 do not understand that by resisting the immunisation of their children the latter could spread diseases that were vaccinated against.

> People may have rights to religious beliefs, values and questionably practices but when the latter as driven by values and beliefs begin to affect the community through infections by non-immunised children can your religion take responsibility … NO. When infant mortality from such diseases increases as well as morbidity innocent children suffer at the altar of religious worship and" righteousness" it's not fair on the innocent child who still has freedom to discard your religion if they had grown up to be adults….maybe we are being too harsh with some religious sects but there also misconceptions that may emanate from contraindications in which a few may react to certain vaccines but the bigger picture is that the vaccine provides protection to a much larger section of the community(interview with the clinics nurses and community leaders, February 2020).

The conceptual and cognitive factors were also related to the factor of antenatal as the data item from P2 appeared to indicate that:

> If some members of the community especially mothers were to utilise the antenatal clinics they wouldn't struggle with conflicting ideas and misconceptions from some sections of the community as they will be enlightened on the key role and need of immunisation before their child is even born. This type of education would be backed by community health workers and the mass media. Yes, we have networks in the day to day activities especially informal sectors at even rural business centres but how reliable are they, too much information which conflicts or is largely distorted needs a validation system to bring understanding to accurate and reliable levels. Mothers in some cases may need to access freedom in acquiring knowledge on their own instead of relying solely on their husbands who may be victims of conceptual distortions (interview with health workers, February 2020).

Mothers can thus become independent if their educational level is elevated not necessarily educational but practical education on the need for immunisation. The Health Education start during the pregnancy period where she will attend the ANC from there, they will be having all information about immunisation programme. They need to be aware of the need for immunisation uptake. From the findings informants said that 'My village My home' (MVMH) programme enhanced the uptake of immunisation in the communities, in addition to community dialogue programme between the Village health workers and Communities and the door to door outreach programme. Influential leaders and caregivers such as churches leaders were able to influence the community to participate regularly in the programme. There should be a strengthen door to door outreach programme and strengthen defaulter tracking also continue to implement the MVMH strategy in order to make all mother in the communities are participating in immunisation. The village Heads could be in charge of MVMH strategy. There should be easy access of vaccines on issue of distance and religion and more outreaches need to be organized to increase awareness on immunisation and the advantages of this in the communities.

4.10 Summary

The foregoing chapter has executed the presentation of data, analyses and presentation of the same. The response rate followed by the remainder of the demographic section was presented. The descriptive section presented the statistics pertaining to the independent variables and attempts were made to explain trends in relation to the literature review. The major themes relating to immunisation were also explored as obtained from key informants. At the end the regression analysis was carried out after establishing the correlations. The model summary finally elicited enabling factors as key to explaining variation in independent factors towards influencing immunisation uptake at the 5% significance level. The need factors and predisposing factors could not fit into the model summary at the said significance level and so tentatively it could be surmised that the enabling factors were key to immunisation uptake in Mutare District.

CHAPTER 5 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter gives a summary, conclusions and recommendations. It is hoped that the recommendations would be of value in crafting future strategies for immunisation uptake. This chapter also provided the information obtain from the key findings in this research and some recommendations.

5.2 Summary

Those recommendations supported this research based on the data that was collected and analysed. The researcher was confident that conclusions presented in this research would encourage or bring some comments on how the childhood immunisation uptake can be of importance to all communities in the District. The Mutare District would continue to support the communities and be able to access the immunisation for their children. The conclusions made after analyzing the data were based on objectives of the study and each objective gives clear result on how the childhood immunisation in Mutare District is moving forward .Also the recommendations were made after all information being gathered together and the recommendations was made to enhance the results obtained from the field. The study also gave suggestions for further research and what need to be done and what can be improved in Mutare District on childhood immunisation.

5.3 Conclusions

The research set out with the following research objectives based upon corresponding research questions and which were simultaneously addressed below.

5.3.1 The childhood immunisation uptake in Mutare District

Generally, over 56% of the respondents indicated that they had their children immunized against polio 1,2 and 3, BCG, DPT, measles and hepatitis B as illustrated in tables 7 to table 12.

5.3.2 The Predisposing factors on childhood immunisation in Mutare District

According to the research framework the components of predisposing factors were marital status, mother's age, sex of child, child's age with birth order, religion, antenatal care and place of delivery. In terms of correlation with immunisation uptake the predisposing factors had a negative effect on immunisation uptake. This means that predisposing factors were deterrents to immunisation uptake.

5.3.3 The enabling factors on childhood immunisation in Mutare District

Enabling factors as found in the research framework comprised of educational level and employment status of mother were positively correlated with immunisation uptake in Mutare District.

5.3.4 The need factors on childhood immunisation in Mutare District

Need factors as composed of accessibility, perceived health status and treatment facility were also negatively correlated with immunisation uptake. This means that the need factors were deterrence from the uptake immunisation e.g. if educational level is lacking or too low this reduced the immunisation uptake probability.

Additionally, despite having a good uptake in immunisation in Mutare District there was need to enhance the immunisation uptake. All communities needed more information and awareness on immunisation. The role of antenatal Care as a source of awareness needed

to be supported so that they can training more healthcare workers as most of people in the community are getting information from the antenatal Care. The creation of other platforms to reach all communities and adequate health education were emphasized.

5.4 Implications

Based on the study, the community services on immunisation uptake in the whole Mutare District showed a good relationship between the Rural health Clinics as those clinics were the ones that were able to reach the communities easily. The Mutare District was working hard to contribute to the Sustainable Development Goals by ensuring that there was a good access, equity, quality, acceptable, affordable to all communities in Mutare District on uptake of Childhood immunisation in order to achieve a high coverage and prevention occurrence of vaccine preventable disease.

This research argued that the implementation of this programme needed to be administered with policy efficiency to check on the drop outs of vaccinations and mobilization of communities to appreciate the importance of this public health issue. Health interventions like home visits by Village Health Workers or Community Health Workers and regular immunisation outreach sessions could be more useful to all communities as they promote quality childhood immunisation uptake. The healthcare provider was a key important factor in immunisation uptake needed to update the communities and give them advices to protect their children and the health of public in general.

5.5 Recommendations

Some recommendations emerged from the above conclusions. From the model and model summary (Table 17) and Table 18 respectively) it can be noted that the factors in the research model account for 23.7% of the variances in the immunisation uptake. It is evident that a lot needs to be taken into account outside the research framework provisions and this is the subject of further research. However, restricting the recommendation to the research framework we make the following recommendations.

5.5.1 childhood immunisation uptake

At below 80% childhood immunisation uptake needs revamping or be fine-tuned. In addition, the research framework upon which the foregoing research was based on needs to be broadened so as to identify more aspects which can increase the accountability of the variables for immunisation uptake.

5.5.2 The Predisposing factors on childhood immunisation (socio-economic effects)

The predisposing factors have been negatively correlated with immunisation uptake and are missing in the final equation. This calls for improvements in the sociological issues that comprise the predisposing factors such as demystifying child birth order, access to antenatal care.

5.5.3 The enabling factors on childhood immunisation

Enabling factors emerged as positively correlated with immunisation uptake. It is therefore recommended that other programme be put into place in order to enhance enabling factors for the benefit of immunisation uptake. They also appear as the only

independent variable with impact on immunisation uptake in terms of the equation governing the relationship hence this means that they are really critical.

5.5.4 Need factors on childhood immunisation uptake

With a negative correlation to immunisation uptake need factors need to be improved upon so that they positively affect immunisation uptake. There is need to look into accessibility of perceived health status as well as treatment facility improvements.

As pointed out earlier the limitation in the accountability of the independent variables for the immunisation uptake in Mutare District may call for the broadening of the research framework. This could include an exclusive qualitative research study in which the major themes need to be elicited from the population in the area. This could be followed by quantitative research studies whose research frameworks that is based upon the themes from the qualitative research study.

Alternatively, a further quantitative research study could be embarked upon whereby the components of each of the three factors are employed directly in hypothesis testing. This will additionally identify the main components in each of the three independent variables. In both approaches the aim is the pragmatic need to increase the accountability factor of independent variables beyond the 23.7% in the model equation.

5.5.4.1 My Village My home village strategy

My Village My Home (MVMH) is a community level tool designed to provide the community and Village Health workers a visual depiction of immunisation status of all infants born in a village to be monitored in order the vaccination coverage can be achieved. The use of retrospectively of left-outs and drop-outs measure can enhance the uptake

immunisation in the community. It can measure specific child who drop-outs between various antigens and subsequent doses. Once the left-outs and drop-outs are known in the community, now the area need interventions can be addressed and supported.

The MVMH works well as a due list that is easy to record and identifies and tracks due children for the next visit. The parents/caretakers visiting the center can have a look at the filled-out tool and feel proud looking at the display of their child's name and it can make them to be active and bring their children for vaccination. Other indicators such as the gap between subsequent doses of the same antigen. The timeliness of vaccination tool has been prepared in the local language with a set of self-explanatory instructions on how to use it so that the caregiver or the parents can find when the next vaccine for the children.

5.6 Suggestions of Further Research

These are the following suggestion of further Research:

- Community and government-based approaches to enhance coverage rates include increasing the outreach in all communities and health educational programs need to be implemented as the way of increasing the awareness to all mothers and have more knowledge about immunisation and mass campaigns these can be more effective toward immunisation uptake.
- Interventions need to be provided for example reaching every District for improving the childhood immunisation coverage.
- Enhance the My Village My home strategy for improving the immunisation uptake to all communities in the district and put regulation to make immunisation uptake a requirement for school entry and can increase the immunisation coverage.

- The immunisation policy can be taken as an important public health intervention to protect children from disease and it has to be evaluated to make sure that it has been well implemented and adopted in the place. Religious and cultural belief need to be taken into consideration and emphasis the communities to visit the Health Facilities to immunized their children.
- If the immunisation policy efforts can be more focus on ensuring that all children receive full vaccination, the District or Country could attain more than 90% immunisation coverage as it is the better coverage targeted to all nations.

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Appendices

Appendix 1: Informed Consent in English version

1. Informed Consent

My name is **Desire Niyonkuru a final year (Master's in Public Policy and Governance) student from Africa University**. I am carrying out a research on the Childhood Immunisation uptake in Mutare District. I am kindly asking you to participate in this study by answering the following questions.

2. Purpose of the study

The purpose of the study is to determine the uptake of childhood Immunisation in Mutare District. You were selected for the study because you are suitable people in providing first-hand information about the Childhood Immunisation.

3. Procedures and duration

If you decide to participate you will be required to answer the questions and you are allowed to leave out which ever question you may feel uncomfortable to answer in this research. It is expected that this will take about thirty minutes or forty-five minutes.

4. Risks and discomforts

This study does not include physical, economic, health or legal risk. However, possible risk that is associated with this particular study is that the researcher might ask you to share some very personal and confidential information and you may feel uncomfortable

talking about some of the topics. You do not have to answer any question if you don't wish to do so.

5. Benefits and/or compensation

There are no benefits to be received by your participation as this is an academic research aimed at determining the Uptake of childhood Immunisation Strategy. However, the research will benefit to the general population in Mutare district in the way of better understanding if whole population are able to get this immunisation to their children and to improve policies to ensure that there is outreach for the entire community.

6. Confidentiality

Any information that will be obtained from this study will be kept confidential and it will not be disclosed without your permission. Names and any other identification will not be asked for during the interview.

7. Voluntary participation

Participation in this study is entirely voluntary. As participants, you have the right not to participate at all or leave the study at any time. If you decide not to participate or choosing to leave the study it will not result in any penalty or loss of benefits to which you are entitled and it will not harm your relationship with Africa University.

8. Offer to answer questions

Before you sign this form, please ask any questions on any aspect of this study that is unclear to you. You may take as much time as necessary to think it over.

9. Authorization

If you have decided to participate in this study please sign this form in the space provide below as an indication that you have read and understood the information provided above and have agreed to participate.

---------- ……

Signature of Research Participant or legally authorized representative Date

If you have any questions concerning this study or consent form beyond those answered by the researcher including questions about the research, your rights as a research participant, or if you feel that you have been treated unfairly and would like to talk to someone other than the researcher, please feel free to contact the Africa University Research Ethics Committee on telephone (020) 60075 or 60026 extension 1156 email aurec@africau.edu

Name of Researcher ----------Date……

Appendix 2: Informed consent in Shona version

1.Informed consent

Ini zita rangu ndinonzi **Desire Niyonkuru ndiri mugore rekupedzisira (Master's in Public Policy and Governance). Ndinodzidza paAfrica University**. Ndiri kuita ongororo pamusoro pekubudirira kwechirongwa chekudzivirirwa kwevana kuva munjozi yekufa mudunhu reMutare. Ndiri kukumbira nemutsa kuti mutore chikamu muchiongorora mibvunzo inotevera.

2.Chinangwa chekudzidza

Chinangwa chechidzidzo iyi ndechokuongorora mashandisirwo ehurongwa hwekuchengetwa kwevana. Iwe wakasarudzirwa chidzidzo ichi nekuti uri munhu wakanaka mukupa ruzivo rwekutanga nezvegwaro rwekudzivirwa kwemwana.

3.**Maitiro uye nguva**.

Kana mukabvuma kupindura mibvunzo iyi munotenderwa kusiya imwe mibvunzo yamunoona isingaanyatsi kukuitirai. Kupindura mibvunzo iyi kunogona kutora makumi matatu kana makumi mnomwe nemashanu.

4.Njodzi uye

Ichi chidzidzo hachisanganisire njodzi yemuviri, yehupfumi, yehutano kana yemutemo. Nekudaro, njodzi inogona kuvepo inoenderana neiyi ongororo ndeyekuti muongorori angangokumbirai kuti mugoverane rumwe ruzivo rwezvakavanzika zvehupenyu hwenyu. Hamufanire kupindura chero mubvunzo kana musina kusinunguka kupindura.

5. Zvakanakira uye / kana muripo

Musatarisira kupihwa zvinhu nekuti maita chikamu patsvagiridzo iyi sezvo ichi chiri chidzidzo chekudzidza chakaitirwa kuongororwa kwekusvitswa kwezvirongwa

zvekuchengetedzwa kwevana. Nekudaro kutsvagurudza uku kuchabatsira kune vanhu vese mudunhu reMutare munzira yekunzwisisa zviri nani nekuda kwekudziviriwa kwevana.

6. Kuvanzika

Ruzivo rupi zvarwo ruchawanikwa kubva kuongororo iyi ruchachengetwa pakakavanzika uye haruzoratidzwa pachena pasina mvumo yanyu. Mazita uye humbowo pamusoro pehupenyu hwenyu hazvisi kuzobvunzwa patsvagurudzo yatiri kuita iyi.

7.Kuzvipira kutora chikamu

Kutora chikamu mune chino chidzidzo hakusi kwekumaninkidzwa. Sevatori vechikamu, mune kodzero yekusatora mukana zvachose kana kusiya chidzidzo chero nguva. Kana kukasarudza kusatora chikamu kana kusarudza kusiya fundo pakati hazvizounza chero upi mutongo kana chirango kana kurasikirwa kwebatsiro yamunokodzera uye hazvizokuvadza hukama hwanyu neAfrica University.

8.Govera kupindura mibvunzo

Usati wasaina fomu iri, ndokumbirawo ubvunze chero mibvunzo pane chero chikamu chekudzidza ichi chisina kujeka kwauri. Iwe unogona kutora nguva kuti ufunge nezvazvo

9.Mvumo

Kana wafunga kutora chikamu muchiono ichi ndokumbira kuti musaine fomu iri munzvimbo iri pazasi sechiratidzo chekuti wakaverenga uye wakanzwisisa ruzivo rwakapihwa pamusoro uye wabvuma kutora chikamu ichi.

---------- ---------- ……

Siginecha yetsvagiridzo kana pamutemo anomiririra mumiriri Zuva

Kana iwe uine chero mibvunzo pamusoro petsvagiridzo iyi inopfuura iyo yapindurwa nemuongorori kusanganisira mibvunzo pamusoro pazvaari kutsvaga kana kuti uchiona

kuti hauna kubatwa zvakanaka kana kodzero dzako semunhu ari kutora chikamu kana kuti unoda kutaura neumwe munhu asi muongorori sunungukai kubata Africa University Research Ethics Committee parunhare (020) 60075 kana 60026 yekuwedzera 1156 email aurec@africau.edu

Zita reMutsvagiridzi ----------Zuva……

Appendix 3: AUREC Approval letter

AFRICA UNIVERSITY
(A United Methodist-Related Institution)
INVESTING IN AFRICA'S FUTURE

AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE (AUREC)

P.O. Box 1320 Mutare, Zimbabwe, Off Nyanga Road, Old Mutare-Tel (+263-20) 60075/60026/61611 Fax: (+263 20) 61785 website: www.africau.edu

Ref: AU1214/19

29 January, 2020

Desire Niyonkuru
C/O CBPLG
Africa University
Box 1320
Mutare

RE: UPTAKE OF CHILDHOOD IMMUNISATION STRATEGY IN MUTARE DISTRICT, ZIMBABWE.

Thank you for the above titled proposal that you submitted to the Africa University Research Ethics Committee for review. Please be advised that AUREC has reviewed and approved your application to conduct the above research.

AFRICA UNIVERSITY
RESEARCH ETHICS COMMITTEE (AUREC)
29 JAN 2020
APPROVED
P.O. BOX 1320, MUTARE, ZIMBABWE

The approval is based on the following.

a) Research proposal
b) Questionnaires
c) Informed consent form

- **APPROVAL NUMBER** AUREC1214/19

This number should be used on all correspondences, consent forms, and appropriate documents.

- **AUREC MEETING DATE** NA
- **APPROVAL DATE** January 29, 2020
- **EXPIRATION DATE** January 29, 2021
- **TYPE OF MEETING** Expedited

After the expiration date this research may only continue upon renewal. For purposes of renewal, a progress report on a standard AUREC form should be submitted a month before expiration date.

- **SERIOUS ADVERSE EVENTS** All serious problems having to do with subject safety must be reported to AUREC within 3 working days on standard AUREC form.
- **MODIFICATIONS** Prior AUREC approval is required before implementing any changes in the proposal (including changes in the consent documents)
- **TERMINATION OF STUDY** Upon termination of the study a report has to be submitted to AUREC.

Yours Faithfully

MARY CHINZOU – A/AUREC ADMINISTRATOR
FOR CHAIRPERSON, AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE

Appendix 4: Institutional introductory letter

AFRICA UNIVERSITY

COLLEGE OF BUSINESS, PEACE, LEADERSHIP & GOVERNANCE

A UNITED METHODIST –RELATED INSTITUTION

P O BOX 1320, MUTARE, ZIMBABWE • TEL: (263-20) 60075/60026/61611/61618 • FAX: (263-20) 61785/63284 • EMAIL: cbplgdean@africau.edu;cbplgsec@africau.edu; cbplgadmin@africau.edu

29 October 2019

TO WHOM IT MAY CONCERN

Re: Permission to Undertake Research for Dissertation August - December 2019

Desire Niyonkuru student registration number **129115** is a student at Africa University. He is enrolled in the Masters in Public Policy and Governance and is currently conducting research for his dissertation, which is required for completion of the programme in December 2019. The research topic is **"EXPLORING THE EFFECTIVENESS OF CHILDHOOD IMMUNIZATION STRATEGY IN MUTARE CITY: THE CASE OF MUTARE DISTRICT, ZIMBABWE."**

Desire is expected to undertake his data collection from August – December 2019 before the dissertation can be submitted to the College in December 2019. The student will share with you the results of this research after its approval by the College.

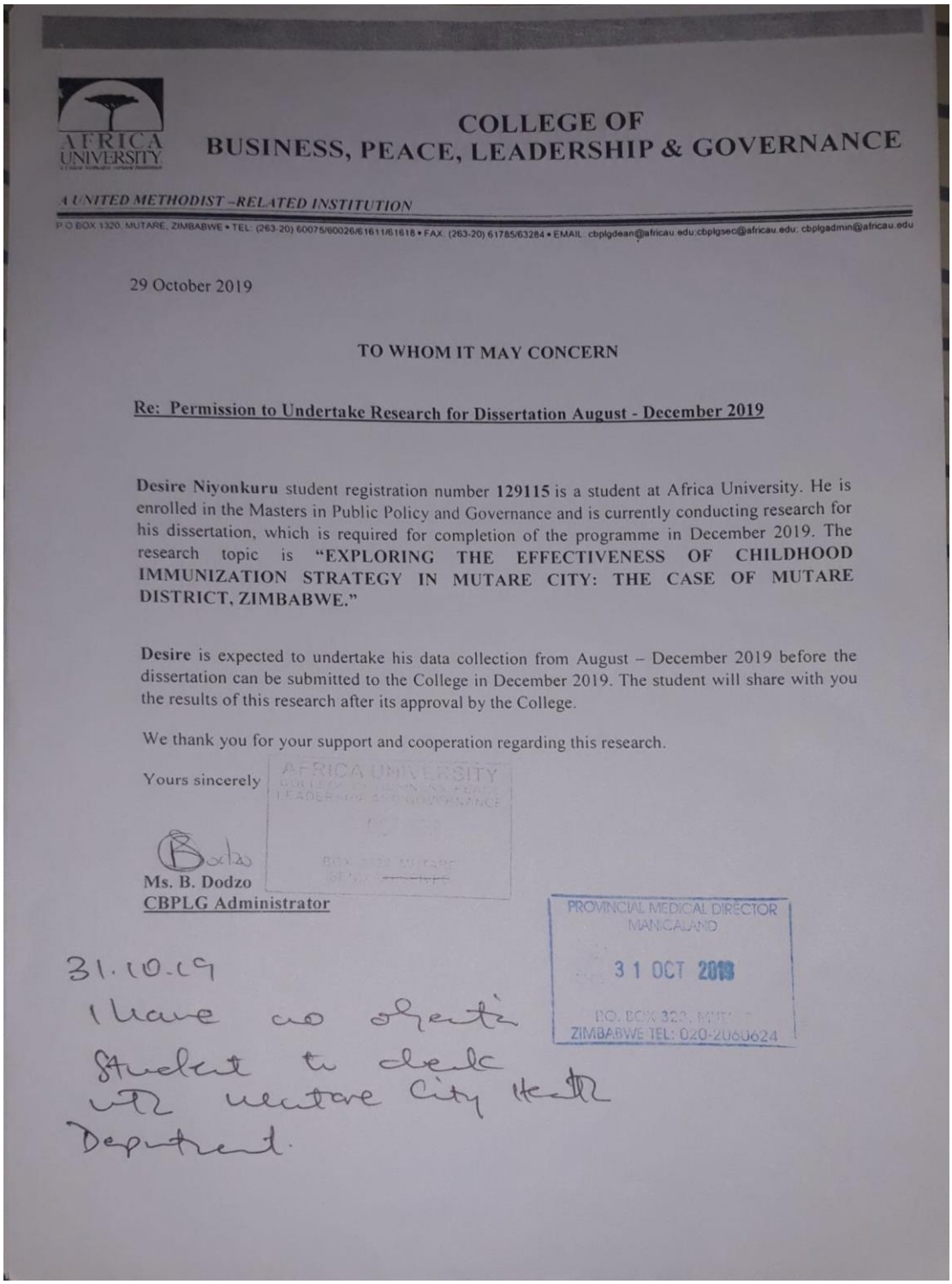
We thank you for your support and cooperation regarding this research.

Yours sincerely

AFRICA UNIVERSITY
COLLEGE OF BUSINESS, PEACE LEADERSHIP AND GOVERNANCE
29 OCT 2019
BOX 1320, MUTARE
SEND / ~~RECEIVED~~

Ms. B. Dodzo
CBPLG Administrator

Appendix 5: Authorization from the Ministry of Health and Child Care



AFRICA UNIVERSITY

COLLEGE OF
BUSINESS, PEACE, LEADERSHIP & GOVERNANCE

A UNITED METHODIST –RELATED INSTITUTION

P.O BOX 1320, MUTARE, ZIMBABWE • TEL: (263-20) 60075/60026/61611/61618 • FAX: (263-20) 61785/63284 • EMAIL: cbplgdean@africau.edu;cbplgsec@africau.edu; cbplgadmin@africau.edu

29 October 2019

TO WHOM IT MAY CONCERN

Re: Permission to Undertake Research for Dissertation August - December 2019

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Desire is expected to undertake his data collection from August – December 2019 before the dissertation can be submitted to the College in December 2019. The student will share with you the results of this research after its approval by the College.

We thank you for your support and cooperation regarding this research.

Yours sincerely

AFRICA UNIVERSITY
COLLEGE OF BUSINESS, PEACE, LEADERSHIP AND GOVERNANCE
BOX 1320, MUTARE
ZIMBABWE

Ms. B. Dodzo
CBPLG Administrator

PROVINCIAL MEDICAL DIRECTOR
MANICALAND
31 OCT 2019
P.O. BOX 323, MUTARE
ZIMBABWE TEL: 020-2060624

31.10.19
I have no objection
Student to deal
with Mutare City Health
Department.

Appendix 6: Key informants' interviews in English version

Interviews guide for the key informants (District Nurse, Community services, Community leaders, Health worker, Clinic Nurses)

My name is Desire Niyonkuru, a Master student in Masters in Public Policy and Governance at Africa University. I am carrying out my research on uptake of childhood immunisation in Mutare District. I therefore kindly request your response to the questions below, if you have any queries, please share

Instructions: You can share with me your opinions on these questions

1. Is the campaign happening in the District before the vaccination distributed?

If it is there, how does it happen?

……,……

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……

2. To what extend is the uptake of childhood immunisation in your department?

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3. Are you facing any challenges on the immunisation program in your District?

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4. Are there other organization assisting in this immunisation program in the District?

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5. What other programs or policies have you implemented to ensure everyone in the community is participating in the immunization process?

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6.What do you recommend to be done on childhood immunisation strategy in the District?

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……

7.what are the predisposing, enabling and needs factors on childhood immunisation uptake in the District?

……

……

……

8.Are there any interventions provided in order to make this strategy to be successful?

Appendix 7: Key informants interviews guide in Shona version

Makurukota akakosha kubvunzurudza

Zita rangu ndinonzi Desire Niyonkuru, ndiri mudzidzi paAfrica University ari kuita Masters in Public Policy and Governance. Ndiri kuitawo tsvagurudzo pamusoro pechirongwa chekudzivirirwa kwevana kuva munjozi yekufa mudunhu reMutare. Nokudaro ndinokumbirawo kubatsirwa nekupinduura mibvunzo, kana mune zvamungada kuziva sungukai kubvunza

Unogona kugovana neni maonero ako pamibvunzo iyi

1. Mushandirapowo uri kuitika muDunhu musati mavhiza agovaniswa?

Kana zvirimo, zvinoitika

sei……..…….

……

……

2. Semaonero ako chirongwa ichi chiri kubudirira here munharaunda menyu ?

……

……

……

3. Pane zvipingaidzo here zvamuri kusangana nazvo munharaunda pakudzivirirwa kwevana?

……

……

……

……

4. Pane here rimwe sangano rinobatsira muchirongwa chekudzivirirwa kwevana mudunhu iri?.....

.....

.....

.....

5. Ndezvipi zvimwe zvirongwa zvamakaisa kuitira kuti munhu wese agone kuva nechekuita mukudzivirirwa kwevana kuzvirwere

……

……

……

……

6. Chii chauri kukurudzira kuti chiitwe pane chirongwa chekudzivirira kwevana muDunhu

……

……

……

……

7. Ndeapi mhedzisiro inobatanidzwa nekufungidzira, kupa simba uye zvinoda zvinhu pazvinhu zvekugamuchirwa kwevana muDunhu

……

……

……..……...……

……

8. Pane chero kupindira kwakapihwa kuitira kuti zano iri ribudirire

Appendix 8: Questionnaires for participants English Version

Questionnaires for participants

My name is Desire Niyonkuru, a Master student in Masters in Public Policy and Governance at Africa University. I am carrying out my research on uptake of childhood immunisation strategy in Mutare District. I therefore kindly request your response to the questionnaire that I will administering. If you have any queries, I refer you to my Supervisor or Research Committee.

Section A: Demographic data about the respondent

Instructions: Please put your tick in the box to indicate your best answer and where you need to share you can just explain.

1.**Indicate your age group**

A.15- 25Ages ☐ C.36-45Ages ☐ E.55 Ages-above ☐

B.26-35 Ages ☐ D. 46-55 Ages ☐

2.What is your level of education

A. Primary ☐ C. College ☐ E. None ☐

B. Secondary ☐ D. University ☐

3.Please indicate your marital status

A. Never Married ☐ C. Divorced ☐ E. Other ☐

B. Married ☐ D. Widow ☐

4.Indicate the church you are attending

A. Catholic ☐ C. Pentecost ☐ E. Marange Church ☐

B. Apostolic ☐ D. Muslim ☐ F. Other ☐

5.Please indicate your occupation

A. Teacher ☐ C. Nurse ☐ E. Other ☐

B. Self-employed ☐ D. Farmer ☐

Section B: The Uptake of Childhood Immunisation in Mutare District

Instructions: Please tick the best answer and where you need to explain, just share your ideas

1. Please indicate if your children have received those vaccines:

A. Polio (1,2 and 3) ☐ C. Hepatitis B ☐ E. DPT ☐

B. BCG ☐ D. Measles ☐

2. Are you attending the Immunisation program?

A. YES ☐ B.NO ☐

IF, NO: why

…….....

……

……..

3. Is there any complication you are facing about immunisation for your children in the place? A.YE☐ B NO☐

If Yes, please share

…….... ……

……

…….

4.Do your children have the health vaccination card?

A. YES ☐ B. NO ☐

IF NO, please share

……..**.....**

……

……..

5.To what extend the uptake of childhood immunisation progressing in your location in Mutare,District?.....

.....

.....

Section C: The predisposing factors on childhood immunisation uptake in the Community in Mutare District

Instructions: You indicate your answer by ticking and if possible, share your ideas

1.Please indicate the place of delivery

A. Clinic ☐ C. Home ☐

B. Hospital ☐ D. Other ☐

2. How often are you interested on mass media exposure for more information on immunisation programme?

a. 1-2 times ☐ c. 4-6 times ☐ E. None ☐

b. 3-4 times ☐ d .7 and above times ☐

3.How many times do you attend the Antenatal Care services for your children?

a. No visits ☐ b .1- 2times ☐ c .3- 5 times ☐ d. 6 and ☐ above

4.what are predisposing factors on immunisation uptake in your homestay in Mutare,District?……

…….……

……

5.What is your view on improvements about this immunisation uptake in Mutare District?

……

……

……

Section D: The enabling factors on childhood immunisation uptake in Mutare District

Instructions: Please answer by explaining or ticking the good answer

1.Do you think birth order or spacing can cause a problem on childhood immunisation?

A. Yes ☐ B. NO ☐

2.Do you think unemployed are failing to uptake the childhood immunisation?

……

……

……

3.What are the effects of enabling factors on childhood immunisation uptake in the District of Mutare?

……

……

……

4. Do you think the Nurses are assisting in this process of childhood immunisation strategy in your community?

A.YES ☐ B. NO ☐

5. How do you get information about the Childhood immunisation programme?

……

……

……..

Section E: The effects on needs factors on childhood immunisation uptake

Instructions: You indicate you answer by ticking, if it is to explain, you can just down

1. Are you able to access the health facility when your children are not feeling well?

A YES ☐ B NO ☐

If NO. please share

……

……

……

2. What is the distance between your homestay and the clinic or health facility?

A 1KM ☐ C3KM ☐ E 5KM ☐

B 2KM ☐ D4KM ☐ F More than ☐

3. Does your church allow you to attend the clinic or Hospital for baby check-up? Answer:

A.YES ☐ B.NO ☐

IF NO, please share

……

……

4. Are you able to access the clinic for vaccinations program?

A.YES ☐ B.NO ☐

IF NO, please share

……

……

……

5.what are the needs factors on childhood immunisation uptake in Mutare District?.....

.....

.....

6.Are you paying money for the vaccines of your children?

A. Yes ☐ B.NO ☐

IF yes, how much? please share

……..

……

……

7. Are you able to receive all types of vaccination required on time for your children?

A. YES ☐ B .NO ☐

8. What do you think the Ministry of health and Child care can improve in your community on childhood immunisation program?

……

……

……

THANK YOU

Appendix 9: Questionnaires for participants in Shona Version

Mibvunzo inotungamira maparticipants

Zita rangu ndinonzi Desire Niyonkuru, ndiri mudzidzi paAfrica University ari kuita Masters in Public Policy and Governance. Ndiri kuitawo tsvagurudzo pamusoro pechirongwa chekudzivirirwa kwevana kuva munjozi yekufa mudunhu reMutare. Nokudaro ndinokumbirawo kubatsirwa nekupinduura mibvunzo, kana mune zvamungada kuziva sungukai kubvunza.

Ndima yekutanga A: Data rehuwandu hwemunhu anopindura

Makai mhinduro yenyu mukabhokisi ako kuratidza mhinduro munotenderwa kutsanangura mhinduro dzenyu

1. Taridzai makore enyu

A.15-25 makore ☐ C.36-45 makore ☐ E. 55 makore pamusoro ☐

B.26-35 makore ☐ D.46-55 makore ☐

2. Makadzidza kusvika papi?

A. kutanga ☐ C. koreji ☐ E. Zvimwe ☐

B. Sekondari ☐ D.Univhesiti ☐

3. Ratidza mamiriro ako.

A.Hausati wamboroorwa ☐ C. Makasiyana ☐ E. Zvimwe ☐

B. Wakaroorwa ☐ D. Makafirwa ☐

4. Ratidza chechi yaunopinda

A. Catholic ☐ C. Pentecost ☐ E. Zvimwe ☐

B. Mapostori ☐ D. Marange ☐

5. Ratidza Mabasa Yenyu

A. Mudzidzisi ☐ C. Kuzvshandira ☐ E. Zvimwe ☐

B.Mukoti ☐ D. Murim ☐

Chikamu B: **Kuwezera kwechirongwa chekudzivirirwa kwevana maMutare**

Makai mhinduro yenyu mukabhokisi ako kuratidza mhinduro munotenderwa kutsanangura mhinduro dzenyu.

1. Ratidza kana vana vakabaiwa majekiseni aya

A.Polio(1,2&3) ☐ C.Hepatitis B ☐ E.Ckikuku ☐

B.BCG ☐ D.DPT ☐

2. Muri kupinda here muchirongwa chekudzivirirwa kwevana

A. Hongu ☐ B. Kwete ☐

Kana mhinduro iri kwete,nei?.....

.....

.....

3.Pane dambudziko rauri kutarisana nara kana nguvu yekuti mwana anobayiwa majekiseni here?

A. Hongu ☐ B. Kwete ☐

Kana mhinduro iri hongu,tsangura

……

……

4.Vana vane kadhi rezvehutoano here?

A.Hongu ☐ B.kwete ☐

Kana kwete,nemaka yei,Tsanangura

……

……

5. Inoshanda sei hurongwa hwekudzivirira kwehuwana munzvimbo yako mudunhu reMutare?

……

……

……

Chikamu C: Mhedzisiro yezvinhu zvinokonzeresa pakusvirwa kwehumwana kugamuchira

Makai mhinduro yenyu mukabhokisi ako kuratidza mhinduro munotenderwa kutsanangura mhinduro dzenyu

1. Taridzai vana vako wakaberekera kupi ?

A.Kiriniki ☐ C.Imba ☐

B.Chipata ☐ D.Zvimwe ☐

2. Kangani kaunoteerera social media kuti uwane kuti uwane ruzivo nezvcirongwa chekudivirira va na?

a. 1-2 times ☐ b. 3 - 4 times ☐ c. 4 - 6 times ☐ d .7 kupfuura ☐

3,Kangani kawakashanyira Antenatal Care uine nhumbu uye nepwanga wane mwana?

a. handina kumboshanya ☐ b .1- 2times ☐ c .3- 5 times ☐ d. 6 kupfuura ☐

4. Ndeipi mhedzisiro yezvinhu zvinokonzeresa kuti utore hutachiwana mumusha mako kuMutare District?

……

……

……

5. Maonero auri kuita pamusoro pekuvandudzwa kwemwana uyu mudunhu reMutare

……

……

……

Chikamu D: **Mhedzisiro yezvinhu zvinogonesa pahutachiona hwehutachiona hwevana**

Makai mhinduro yenyu mukabhokisi ako kuratidza mhinduro munotenderwa kutsanangura mhinduro dzenyu

1.Munofunga kuti kupatsanura vana pakubereka kunoita dambudziko pakuzovadzivirira

A. HONGU ☐ B.KWETE ☐

3. Munofunga here kuti vanhu vasingaendi kumabasa havagoni kushandisa zvakakodzera kudzivirirwa kwevana

……

……

……

4.Ko ndezvipi zvinokurudzira kuti chirongwa chekudzivirwa kwevana chibudirire

……

……

……

5.Vanamukoti vari kubatsira here muchirongwa ichi chekusimudzira utano hwevana munharaunda yenyu here?

A.Hongu ☐ B. kwete ☐

6. Iwe unowana sei ruzivo rwezvechirongwa chekudzivirirwa kwevechidiki?

……

……

……

Chikamu E: Mhedzisiro yezvinhu zvinodiwa pazvinhu zvekutemera mwana hutachiona

Ndokumbira upindure nekutsanangura kana kuteya mhinduro yakanaka

1. Munokwanisa kuwana here mushonga wekubatsira mwana here kwamunogara?

A. Hongu ☐ B. Kwete ☐

Kana mhinduro iri kwete,Tsanangura

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2.Kubva kumba kwaunogara nekuchipatara pakareba sei?

A. 1KM ☐ B. 2KM ☐ C.3KM ☐ D.4KM ☐ E.5KM ☐ F .Inopfuura ☐

3. Chechi yako inobvumidzwa here kuenda kuchipatara kunoongororwa kwemucheche wako? A.Hongu ☐ B.kwete ☐

Kana,kwete,Tsanangura……

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4 .Unokwanisa here kuwana kiriniki ye vaccination chirongwa

A.Hongu ☐ B. Kwete ☐

Kana,kwete,tsanangura……

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5. Ndedzipi dzimwe mhedzisiro yezvinhu zvinodiwa pazvinhu zvekugamuchirwa kwevechidiki paMutare District?

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7. Uri kubhadhara here mari yekudzivirira vana vako?

A.Hongu ☐ B. Kwete ☐

Kana,iri hongu,murikubhara yakawandasei

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8. Munokwanisa kuwana mushonga wekudzivirira vana nenguva here?

A. Hongu ☐ B. Kwete ☐

9. Chii chaunofunga Ministry of Health and Child Care inogona kugadzirisa munharaunda yenyu pamusoro pezvekudzivirirwa kwevana?

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TATENDA