The Effects of Social Cultural Practices on Parental Decision to Undergo Polio Vaccination in Mwala Sub-County, Machakos County, Kenya

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Summary

BACKGROUND

Immunization is recognized worldwide as a cost-effective public health intervention. However, despite its benefits, children in Kenya are still adversely affected by low or inadequate uptake of immunization. The objectives of the study included examination of the effect of education level of parents, influence of religion and the effects of information access on the choice to vaccinate children against Polio in Mwala Sub-County, Machakos County, Kenya.

MATERIALS AND METHODS

A descriptive survey was carried out with a total of 381 respondents selected using Krejcie and Morgan's formulae. Stratified random sampling technique was employed in selecting 63 respondents from each of the six wards in Mwala Sub-County. Data analysis was done using both quantitative and qualitative techniques.

RESULTS

The study established that parental education levels and religious beliefs influence the parental choice to vaccinate their children to a large extent. These cultural and social factors, as much as their occurrence is outside of health facilities, determine the decision to take children for vaccination.

CONCLUSION

In order for vaccination programs to be effective, social and cultural issues must be addressed by understanding the recipients' social and cultural positioning.

RECOMMENDATION

More engagement with the community ought to be done by the health workers in order to understand their socio-cultural dynamics, dispositions and concerns regarding vaccination. The findings of this study would benefit the policy makers, community workers and health workers.

Keywords: *Socio Cultural Practices, Polio Vaccine, Mwala Sub-County, Machakos County, Kenya*

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Introduction

According to Bbaale (2013) the term vaccination refers to the process in which an individual's immune system is safeguarded from being infected with an infectious disease. This is usually considered as a very important tool for the prevention of infectious diseases responsible for high mortality worldwide.

The World Health Organization (WHO) (2018) explains that vaccination plays a key role in stimulating a person's immune system so that it produces protective antibodies against future infections by a particular pathogen.

Globally, vaccination is accepted as one of the most cost-effective and preventive measures towards reducing childhood morbidity and mortality (Ayieko., 2013 and Shrestha, *et al*., 2016). Ayieko (2013) asserts that owing to the centrality of children's health, programs that encourage the uptake of childhood vaccinations are paramount and as such, a categorical imperative pursued by many countries; especially those that are still developing their health infrastructure. In addition, these programs must be stepped up because the health of a non-vaccinated child is always at stake.

According to Luke (2014), history of disease is punctuated with statistics of many deaths that existed prior to the introduction of vaccines. These diseases ranged from polio, tetanus, and smallpox to whooping cough. The Center for Disease Control (2013) prioritized vaccination strategies as the top ten achievements of the 20th century. In the USA, child immunization programmes have gone a long way in reducing, to very negligible levels, the cases of children succumbing to the diseases (Pruitt *et al*., 2013).

In Africa, the rate of attainment of vaccination coverage was pegged at 74% (Wiysonge, Uthman, Ndumbe & Hussey 2012). However, despite such a percentage, there are still high numbers of infants who do not receive full vaccination, thus vaccination against polio, measles and tetanus record low uptake in many African countries (Wiysonge *et al*., 2012; Njeru, Kagoiyo & Butto, 2017). It therefore, calls for the need to deeply examine the underlying factors which lead to this scenario given the importance of children's health in protecting the community and its future.

In Kenya, as much as many strides have been made with regard to vaccination uptake, there are still several obstacles which hinder full uptake of vaccines. Lisa (2014) affirms that low level of education has been a factor which hinders the decision of parents' acceptance of vaccination. Furthermore, Basel and Shresha (2012) allude to education of parents as a factor which has either encouraged or hindered parents' decision to have their children vaccinated. Therefore, this study sought to unveil socio-cultural factors that affect the parental decision to have their children vaccinated against Polio in Mwala Sub-County, Machakos County.

Materials and Methods

Study Area

This study was carried out in Mwala Sub-County of the larger Machakos County, Kenya. The headquarters of the Sub-County is situated at Makutano. The Sub-County is divided into six wards namely: Mbiuni, Makutano, Masii, Muthetheni, Wamunyu and

Kubauni. It covers an area of approximately 1,018.00 sq. km.

Study Population and Sample Size

The study targeted parents of children younger than one year who are eligible to visit public health centers for post natal services. The study also targeted public healthcare providers in various health facilities in the Sub-County offering post natal care to the mothers.

The sample size constituted the households in the Sub-County. According to the KNBS (2019), Mwala Sub-County has a total of 45,840 households. The study employed Krejcie and Morgan's (1970) formulae of selecting the sample size. Using this formula, the appropriate sample size for 45,840 was 381. The six locations were stratified and an equal number of households selected. A total of 63 households were selected per ward based on extreme case selection criteria in purposive sampling. This criterion presupposes that selection of respondents is based on their experience, hence only those that vaccinated children in the household met the criteria. In total, 381 households were targeted and in each, the head of the household were targeted.

Data Collection, Procedure, Management and Analysis

Semi-structured questionnaires were given to 63 parents, per ward, within the study area. Only parents of children aged between 3-12 months at the time of the study were interviewed. Purposive sampling was employed to select these parents. The respondents were also required to have lived in the location for more than six months. Quantitative and qualitative data were collected.

Data collected was keyed into SPSS software version 2 and the software run to generate frequencies, percentages and charts. On the other hand, qualitative data obtained from key informants was analyzed using thematic content analysis. It involved identification and analysis of themes and subthemes helping in tracking, examining and recording data patterns or themes associated to the research question (Kothari & Garg, 2014). The qualitative data was used to compliment the quantitative data.

Results and Discussion

Demographic Data:

Gender

In a bid to obtain the relevant information from the parents, gender was considered as a very significant variable in the study. This is because the study targeted both male and female parents. Their distribution is as depicted in Figure 1 in the appendix.

As portrayed in Figure 1, the gender distribution was skewed towards the females (58%) while the males constituted 41% of the total population.

Marital Status

The respondents were also asked to indicate their marital status in order to understand their family dynamics. The responses are as shown in Figure 2. From the responses, half of the respondents were married (50%) while those who were single constituted 33%. A paltry 16% were divorced.

Size of Household

There were questions aimed at finding out the respondents' family size. The results are presented in Figure 3. Majority of the respondents had between one and three members in the household. Another 25% indicated that they had between four and five members while a paltry 0.8% had more than five members.

Level of Education

Higher education levels were assumed to be correlated with higher vaccination uptake because people with better education are presumed to be able to discern the importance of vaccination as compared to those with lower education levels. The findings on the level of education are illustrated in Figure 4.

The findings reveal that a majority of the respondents were educated except for 16% with no education at all. Those with tertiary level of education were 33%, vocational training 0.8% and secondary education 33%. The respondents with primary education as their highest education level were 0.8% only.

Occupation

The study also sought to find out the occupation of respondents since having an income generating activity was considered as a factor that promotes vaccination uptake. Figure 5 summarizes the findings.

The findings reveal that there is a balance in the occupation of respondents; those who had no employment were 33% and at the same time those who indicated that they had employment were also 33%. Informal occupation was represented by 10% and other sectors 10%.

Education Level and Community Engagement in Utilization of Immunization Services

The respondents were asked whether they thought education played an important role in influencing vaccination as shown in Figure 6.

The responses were evidence of the statement that education levels play an important role in vaccination; a majority of the population, 91%, agreed that indeed education plays a critical role in determining uptake of vaccination. Those who were in disagreement, constituted 0.03% of sample size.

Those in agreement indicated that education is a tool of liberation from ignorance to enlightenment and that educated people have been exposed to a lot of knowledge and as such, understand the importance of vaccinations compared to those who were uneducated. Furthermore, educated people were not gullible to repulsive traditional beliefs which could discourage vaccination uptake.

The respondents were asked to respond to the assertion that immunization is higher where parents are more knowledgeable. To this, all the respondents, 100% indicated in the affirmative. As to the question that those from financially disadvantaged homes are less likely to vaccinate their children, 50% answered in the affirmative while 16% answered in the negative, indicating that there was indeed a strong correlation between income levels and vaccination.

Parents determine when and what vaccinations their children receive. It was established that parents rarely make these independently (Brunson, 2013). There are many factors that contribute to a parent's decision on whether or not to vaccinate their child. Research suggests that parents are strongly influenced by social networks and particularly people networks in the decision-making process (Brunson, 2013). The majority of the research explains that the most common source of vaccination information is from healthcare providers. With the popularity of social media continuing to increase, it is important to determine how this increased usage impacts their decision-making process on vaccinating their children.

Religion on Parental Decision to Vaccinate Children

Several studies have demonstrated that religion, being the fulcrum of human behavior, dictates life in totality; this includes decisions to vaccinate children or not. The respondents were asked to indicate whether they believed that religion can influence them towards vaccination of their children. According to the results shown in Figure 7, a majority of the respondents (66%) agreed with the assertion that religion influences parents' decision to vaccinate their children. When asked to explain how this happens, the respondents were divided along religious notions.

According to the respondents, the Protestants seem to have an unfettered tolerance to vaccination. Their argument had always been that they support any activity that can lead to the betterment of the lives of humans and if vaccination does so, they fully support it. The contrary is the case when it comes to the Roman Catholics who call for caution in ensuring that people who have ulterior motives do not use vaccination as a platform to achieve them. In some cases, they had to advise their members to shun vaccination of Polio because it was rumored that the vaccine was laced with population control inhibitors.

The respondents were categorical that the stance taken by their various churches directly affected their choices. They did not want to be seen as contradicting the teachings advanced by their various religions. Furthermore, those who believe in traditional African religion were of the view that the vaccines were an affront against their religious views.

To them, vaccines were the cause of death of children and as such, they approached the issue cautiously. In fact, some of the traditional practices that they cited included visiting traditional medicine men. There was a presumption that children are born immune and western medicine always lead to compromise of the immune system of the child.

Information Access by Parents on Choice to Vaccinate Children

Information is an empowering tool that aids people make informed choices pertaining vaccination. As such, the respondents were asked to respond to the assertion that information is an important determinant of the parental choice to vaccinate children. The results are presented in Figure 8.

The findings indicate that 83% of the respondents strongly agreed with the assertion that information plays an important role in the choice to vaccinate. Those who agreed and disagreed constituted 0.08% and 0.08% respectively, affirming the inference that indeed information is a major determinant of parental choice to vaccinate children. Yousef *et al.* (2013) also observed that access to information by parents was paramount in their decision on whether or not to take their children for immunization.

Asked to state the sources of information on vaccination, the responses ranged from media outlets such as radio and television, social media such as Facebook and WhatsApp, *barazas*, community gatherings, announcements through road shows and school communications through school-going children.

Conclusion

The findings from this study have demonstrated that vaccination against Polio is an all-encompassing subject. Success in vaccination programmes requires addressing the education of community members by providing the correct

information. Platforms such as religious gatherings and can be used by health workers to explain to the people about the importance of vaccination and ensure that there is no misleading information given to members of the public.

Recommendations

- Schools should be used as a contact point to parents on information related to vaccination. Health workers should collaborate with schools in order to provide contact with parents in gatherings such as parent's days, Annual General Meetings or even sending their children with information templates.
- The misinformation concerning the intentions of vaccinations should be dispelled and the correct information given to religious leaders.
- Collaboration with religious institutions to ensure that vaccination takes place even in their premises.
- There should be a dialogue between the traditional and alternative medicine and the public health officers so that redundant cultures can be eliminated.

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Appendix

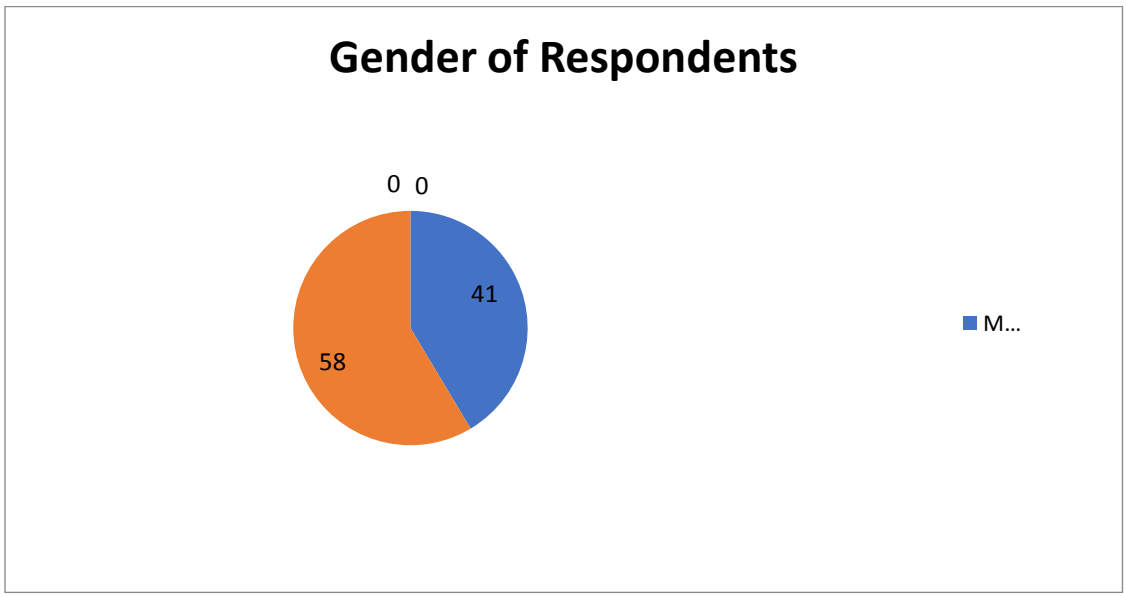

Figure 1: Gender Distribution of the Respondents

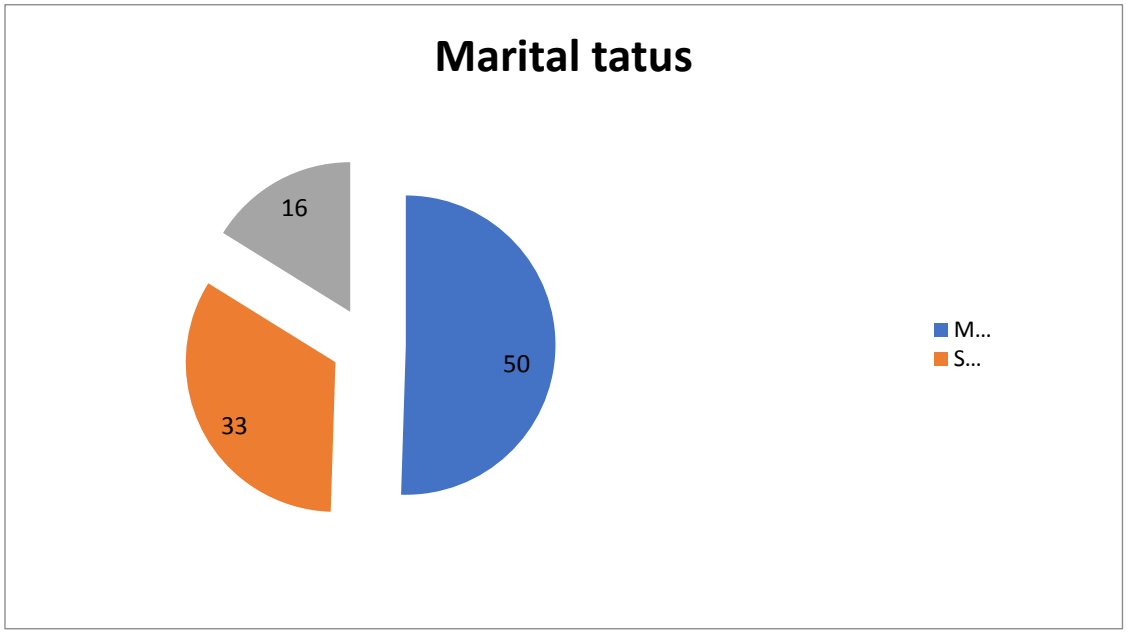

Figure 2: Marital Status

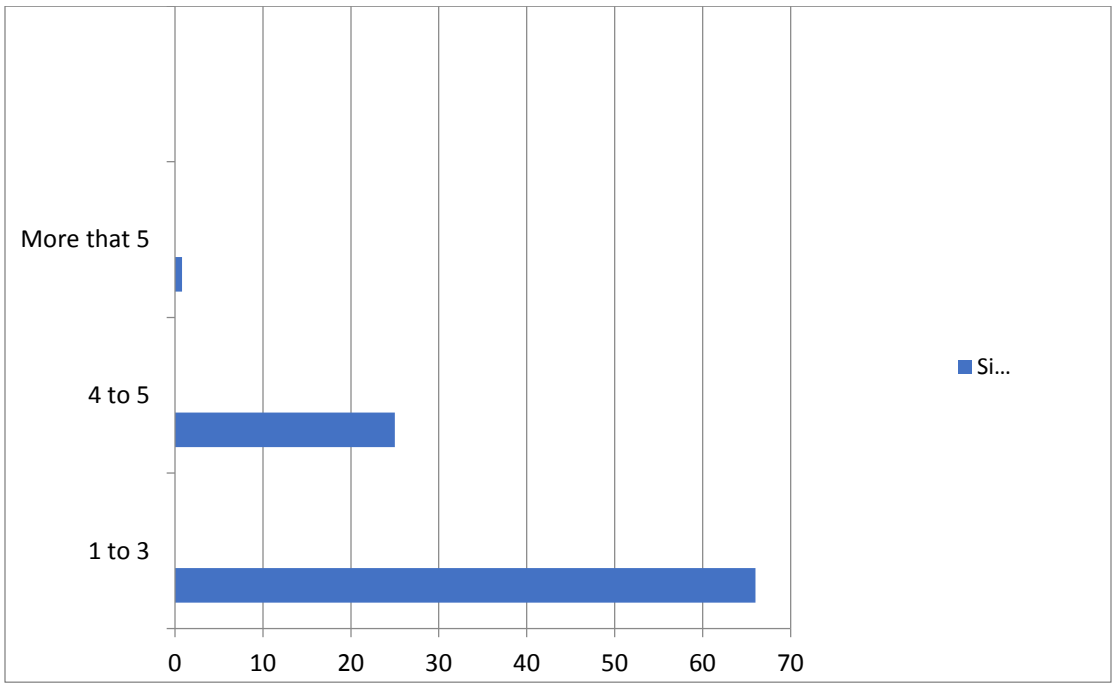

Figure 3: Size of Household

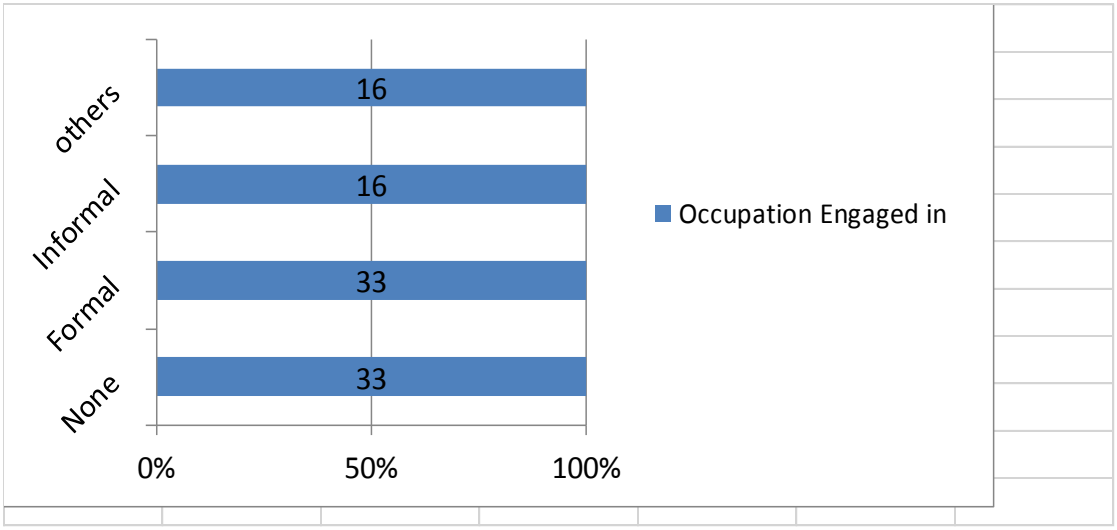

Figure 4: Highest Level of Education

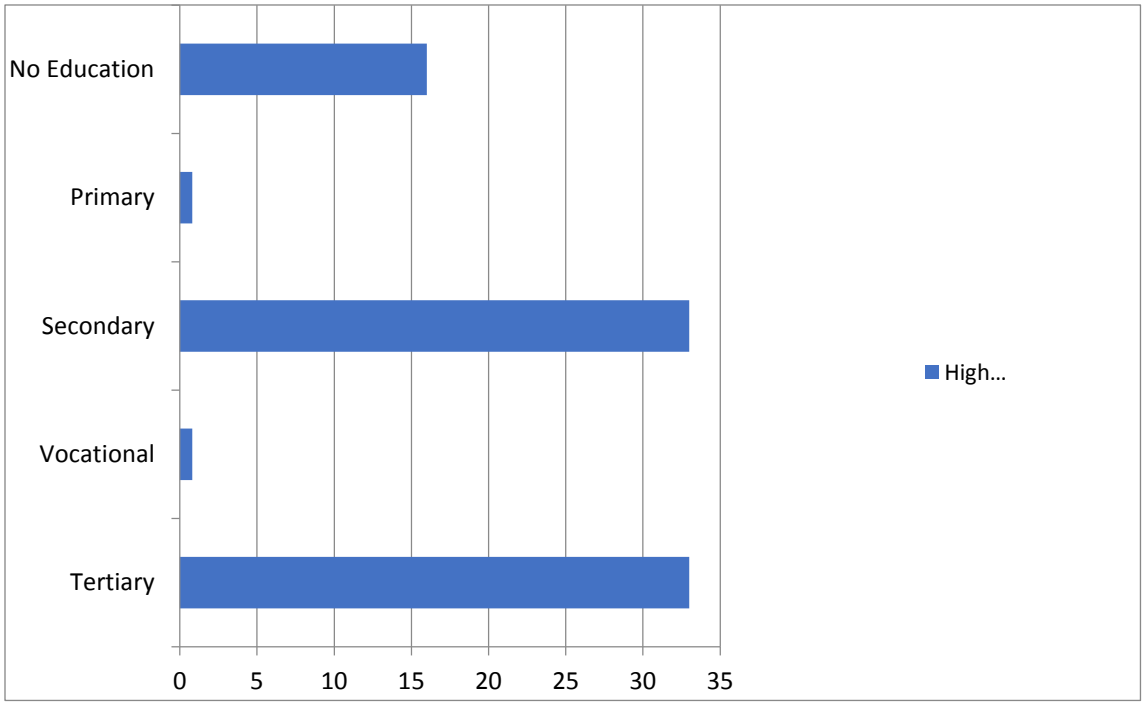

Figure 5: Occupation of Respondents

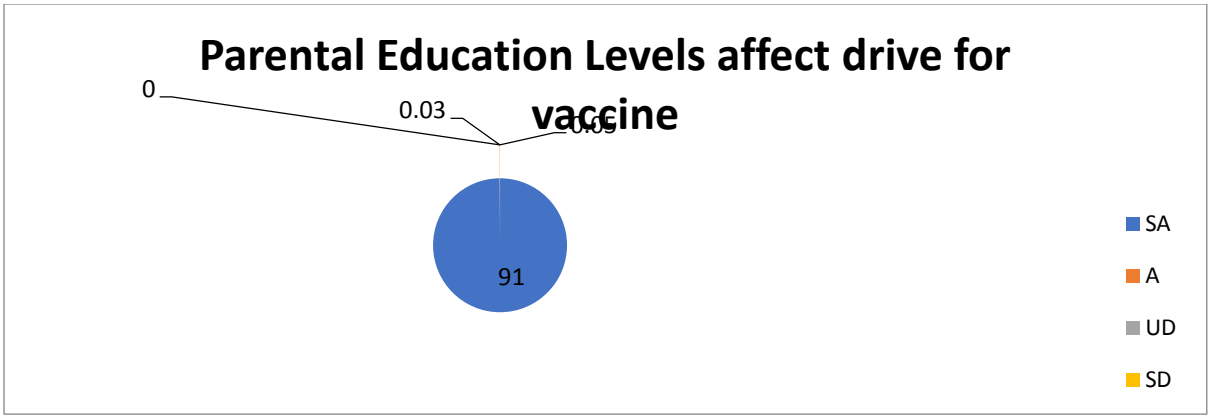

Figure 6: Parental Education Level

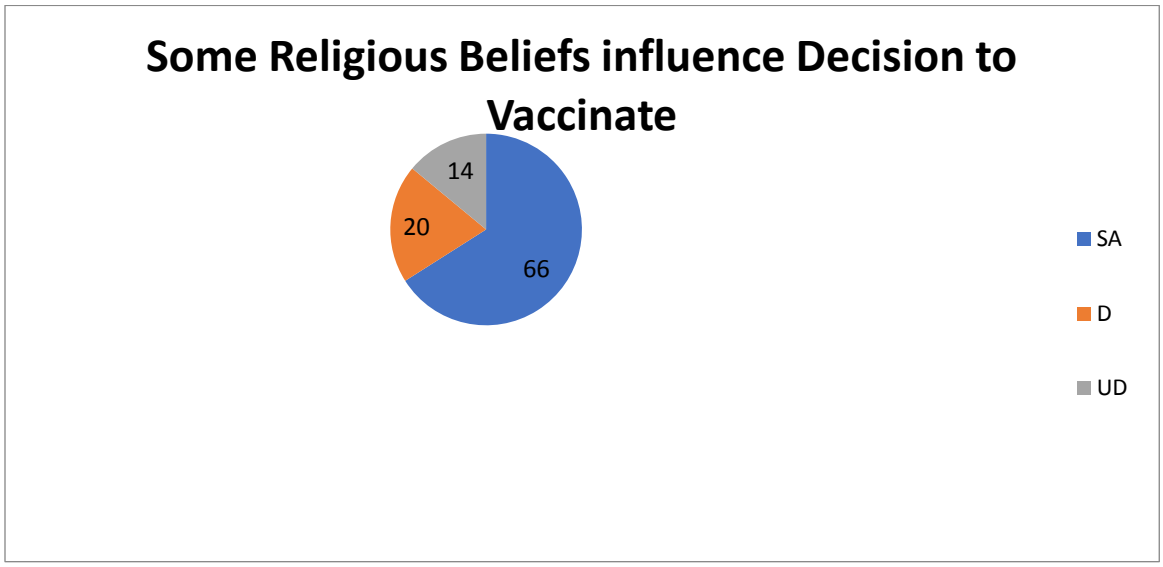

Figure 7: Influence of Religion on Vaccination

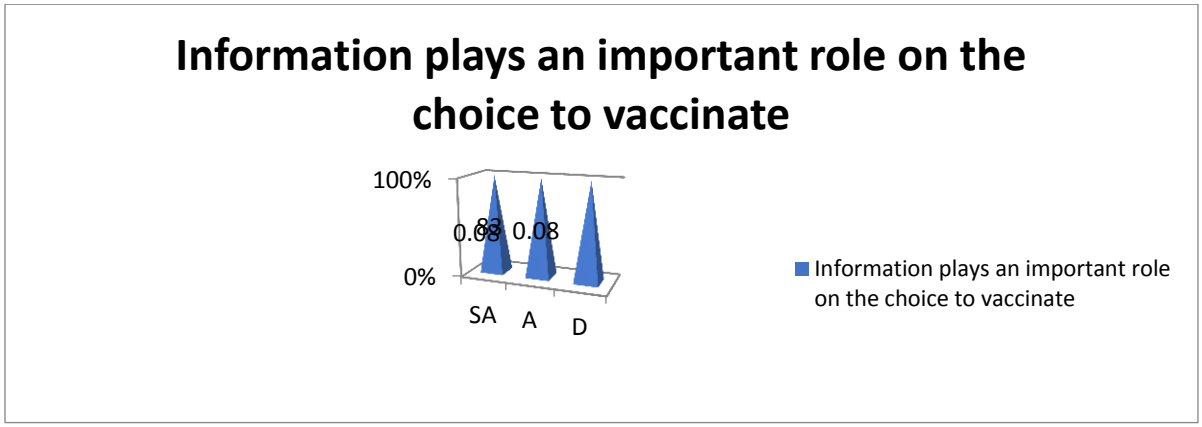

Figure 8: Role of Information in Vaccination