

## **An Assessment of Adoption Level of Mothers Regarding Immunization of their Children among Minorities in Rural Areas of District Faisalabad**

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### **Abstract**

**It is well said that children are considered the future masons of the country and healthy brain is found in a healthy body. Healthy generations can be produced by giving knowledge of immunization to mothers. The main objective of the present study was to find out the reasons of non-adoption & incomplete adoption of the immunization practices and to identify the best sources of information about child immunization among minorities. A sample of 160 Christian minorities was selected conveniently from District Faisalabad through multistage sampling techniques. The result showed a significant and strong association between the mother socio-economic status and practice of immunization. A huge majority of the respondents 93.1% tried to immunize their children and 39% respondents could not complete the whole immunization course. A mainstream of the respondents 41.3% got information about immunization through L.H.V/ L.H.W and Vaccinators. Data exhibited that higher income, education, role of advertisement, knowledge about basic health units were the factors that had greatly affected the adoption level of immunization of the children.**

**Key words:** Immunization, religious, minority, adoption, vaccinators and awareness.

### **Introduction**

Immunization is the procedure whereby a person is made immune or opposed to an infectious disease and different types of maladies, typically by the direction of a vaccination. Vaccination arouses the body's own immune system to defend the individual against the following communicable diseases such as diphtheria, pertussis, measles, tetanus, Hepatitis B, polio and tuberculosis (WHO, 2010). The researcher was particularly interested to identify the factors that shape the attitude of the minorities toward immunization. Prevention of the different ailment is

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the need of the hour. Every year millions of the children around the globe are being saved from diseases and demises because of immunization. Immunization is one of the most significant public health attainments of the 20th century in all over the world; because, it has revolutionized the health sector. Vaccines have wiped out smallpox and polio virus from the developed nations, and significantly abridged the number of cases of measles, diphtheria, pertussis and other communicable diseases in the underdeveloped societies (CDC, 2009). In Pakistan, expanded programme on immunization was going ahead in the year of 1978 with the ultimate purpose of declining morbidity and mortality rooted by six vaccine avertable diseases by untiring efforts on the part of the governments of Pakistan. In addition, vaccination against Hepatitis B was included in EPI in July 2001. In 1980, Polio's third coverage was just 2% which was improved to 54% by the efforts of the government of Pakistan in 1990. However, after the tumble of 26 years, mortality from the vaccine escapable diseases is still high in Pakistan. It is noted that in Pakistan the child mortality is higher than other underdeveloped countries (Mangrio, *et al* 2008). According to the information obtained from the vaccination records and mothers' recall, 80 percent of the children aged 12-23 months have received a BCG vaccination, 75 percent have received the first dose of DPT, and 93 percent have obtained at least one dose of polio. Only 59 and 83 percent of children received the third doses of DPT and polio, correspondingly. Withdraw rates between the first and third doses of DPT and of polio are thus 22 and 11 percent, respectively. 60 percent of the children aged 12-23 months have received measles vaccination and 6 percent have not obtained any vaccinations. Overall, 47 percent of children of age (12-23) months are fully vaccinated from common diseases (PDHS, 2007). Polio abolition is a distant goal in Pakistan. Punjab was free of polio in 2007 but by October 2008 a total of 22 cases had been reported. Many cases were reported in Sindh, including Karachi (HRCP, 2008). Infant mortality in Pakistan is 78 deaths per 1,000 live births and under-five mortality is 94 deaths per 1,000 live births because of the low health facilities in the country

such as Pakistan and other allied countries of the world which are under developed. This means that one in every 11 children born in Pakistan die before reaching their fifth birthday because of poor medical facilities (PDHS, 2007). The reasons for failure to accomplish polio annihilation also show the magnitude of non-health sector issues such as access in war and conflict sectors, refusal of parents to vaccinate their children and problems with cross-border movement of nomadic populations from Afghanistan. The peoples' ignorance plays a vital role in the immunization practices among the people of the under developed countries. The need of the hour is that we should have to introduce the knowledge about the immunization practices from the grass root level so that we may be able to achieve the maximum result (Nisar, 2010).

### Materials and Methods

Sample of 160 respondents was selected by multi sampling techniques. There are eight towns in District Faisalabad namely Jinnah Town, Lyallpur Town, Chack Jhummara Town, Samundari Town, Iqbal town, Jaranwala Town, Madina Town and Tandlia Wala Town. At the first stage Lyall pur Town was selected randomly out of eight Towns. There are thirty seven Union Councils in Lyal pur Town. Sixteen Union Councils are existing in rural areas out of thirty seven Union Councils. The second stage five Union Councils were selected randomly out of sixteen rural Union Councils. At the third stage thirty two (Christian minorities) respondents from each Union Council were selected by using convenient sampling technique. The sample size was consisted of 160 respondents. Data were collected through face to face interview with the help of a well designed interview schedule. Before actual data collection questionnaire was pre- tested to examine the work ability and sensitively of the questionnaire. Descriptive analysis such as frequency distribution, percentage distribution and cross tabulation was made by using SPSS to describe the data. Relationship among different variable was examined through bi-variate analysis. Significance of relationship was tested through chi- square and gamma test. The relative importance of independent variable in explaining is dependent variable is based upon multivariate analysis (multi linear regression).

### Result and Discussion

The picture presented by the present study is very distressing and alarming on the issue of child death. Data exhibited that 45% respondent's reported experienced death of 1-2 children while another 12.5 % respondent's death of 3-5 child. These figures indicated that minorities too, in spite of all

government efforts are experiencing a very high rate of child deaths. Although about 62.5% respondents were having awareness about child vaccination but still reported high mortality rates. It could be due to high fertility rate as 35% respondents were having more than 6 child. It is grasping that if a women produce more child then the child mortality would be relatively high. Infant and maternal mortality rate in Pakistan is the highest among SAARC countries and other under developing countries. One child dies in the country every minute from transmittable disease (Anonymous, 2007). Infant mortality rate 65.1/1000 and under five mortality rate 95.2/1000 is very high in Pakistan, if we compare with other neighbor countries like India having 30.1/1000 and 78.6/1000, Sri Lanka 18.5/1000 and 12.9/1000, china 20.2/1000 and 29.4/1000 respectively (Anonymous, 2010).

Data exhibited that 41.3% respondents got information about child immunization through L.H.Vs, L.H.W and Vaccinators who visits their homes frequently and made them aware about the importance of immunization. The second major source of getting information about child immunization was electronic media as 20.6% got information via electronic media. Another study, Nisar, *et al* (2010) also identified that the health care staff was the main source of information about immunization. Similar results found by, Hassan *et al* (2010) also pointed out that the LHW and vaccinator were the primary source of information about immunization and they have large potential for ornamental EPI coverage in their catchments area. The result of the present study are supported by the result presented by McCormick, *et al* (1997) also identified the electronic media as a good source about the immunization specially radio and T.V channels. About (60.40%) respondents were illiterate and had no access to print media because they can not read news papers, magazines and advertising material. Some of the respondents living in the far flung areas had no access to other channels like announcement in Masjids which were considered to be the primary source of information at the time of the vaccination at a particular place in rural areas. The similar result was found by Nisar, *et al* (2010) who identified that 64% of mothers were illiterate. The major reason of the low immunization coverage in Pakistan is illiteracy and the mothers do not know much about the importance of vaccination Child health care.

Data revealed that a large majority 93.1% of the respondents tried to immunize their children from communicable and life threatening diseases such as diphtheria, pertussis, measles, tetanus, Hepatitis's B, polio and tuberculosis and only 6.9% respondents' reported non-immunization of their children due to their traditional and superstitious mental approach.

**Table 1 Association between education of the respondents and their adoption level of immunization**

Education of the respondents	Adoption level of immunization			Total
	Low	Medium	High	
Illiterate	67 74.4%	21 23.3%	2 2.2%	90 100%
Up to primary	7 26.9%	14 53.8%	5 19.2%	26 100%
Middle	2 15.4%	6 46.2%	5 38.5%	13 100%
Matric and above	0 .0%	5 25.0%	15 75.0%	100.0%
Total	76 51.0%	46 30.9%	27 18.1%	149 100.0%

Chi-square = 84.64      d.f. = 6      Significance = .000      Gamma = .846

**Table 2 Association between knowledge about BHUs services and their adoption level of immunization**

Knowledge about BHUs services	Adoption level of immunization			Total
	Low	Medium	High	
No	56 86.2%	6 9.2%	3 4.6%	65 100.0%
Yes	20 23.8%	40 47.6%	24 28.6%	84 100.0%
Total	76 51.0%	46 30.9%	27 18.1%	149 100.0%

Chi-square = 57.02      d.f. = 2      Significance = .000      Gamma = .851

Data exposed that 61% respondents completed immunization course of their children and 39% respondents could not complete the whole immunization course because of the discontinuity of the governmental services, far location of vaccination centre, care-giver not knowing the next shot of vaccination and some time fear of temporary side effect of immunization were found as majors barriers towards complete immunization practices. A similar study was conducted by Ahmad *et al* (1999) they calculated that majority of the children 65% fully immunized in three districts of North West Frontier Province (NWFP). The latest data in the EPI (PDHS, 2007) indicated that only 50% of the children were fully immunized from infectious diseases. Punjab province carried out relatively better adoption level about 53% of immunization converge among the children, Balochistan's success remained at the lowest level with 35% (PILDAT, 2010). These comparisons shows that adoption level of immunization among minorities are relatively better as they welcome this offer and accept it finally for the betterment of their child. The findings of the study carried out by (WHO, 2009) and (Nisar, 2010) are also in consonance to the findings of the present study. They also identified that distance to get the services was most frequently identified as a reason for low vaccine coverage in the rural areas, care-givers possess lack of knowledge about

immunizations, misconceptions or fear of vaccination's adverse effect such as sterility and unavailability of vaccine or supplies are the majors barriers towards complete immunization process.

Data demonstrated that (52%) respondents were somewhat satisfied from the existing immunization practices. They highlighted the need of providing vaccine at their door step through qualified and well experienced staff. The relationship between dependent variable and independent variable is also representing a clear picture about adoption level and role of education and knowledge about basic health units.

The present study was comprised of 160 respondents. Out of the total only 6.9% did not adopt immunization, so only those respondents were selected for the cross tabulation who adopted the immunization that were 149 (93.1%) out of 160 respondents.

Table 1, the chi-square value (84.64) shows a highly significant ( $P = .000$ ) association between education of the respondents and their adoption level of immunization. Gamma value shows a strong positive relationship between the variables. Data clearly indicate that majority (74.4%) of illiterate respondents had less adoption as compare to literate respondents. So the hypothesis "Higher the education of the respondents, higher will be the adoption of immunization" is accepted. The similar findings were found Luman *et al* (2003) narrated in his research

that maternal characteristics associated with mother's education he also observed that if the mothers had less than high school education then the adoption level of child immunization would be quite low. Siddiqi *et al* (2007) reported that the EPI coverage of Gadap town, Karachi was relatively low. Education of parents played a momentous role in child's immunization coverage. They concluded that improving the educational status of parents could potentially enhance the immunization coverage. Cockcroft *et al* (2009) revealed that if mothers had any formal education then they would be more conscious to save their children from preventable diseases.

Table 2. The chi-square value (57.02) shows a highly significant ( $P = .000$ ) association between knowledge about BHUs services and their adoption level of immunization. Gamma value also shows a strong positive relationship between the variables. Above results reveals that majority (86.2%) of those respondents who had no knowledge about BHUs services had low adoption level, on the other hand if the respondents had knowledge than majority of the respondents had medium to high level of knowledge. So the hypothesis "If the respondents had knowledge about BHUs services, than their adoption level of immunization will be high" is accepted.

### Conclusion

The study demonstrates that socio economic factors play essential role in adoption of immunization to the children. Adoption level among children was significantly associated with socio economic status of the parents. Those respondents who had better educational attainment living in good ambience, having proper governmental medical facilities and have less child are likely more cognizant about child immunization. L.H.W and vaccinator play an important role in kindle awareness about immunization, because it is a good way to diffuse basic information about child immunization to every mother in proper way at their door step. The main hindrances in the way of completion of vaccination among children are discontinuity of the governmental services, child sickness at the time of booster, not knowing the next shot of vaccination and some time fear of temporary side effect of immunization. So it is suggested that there should be proper planning, monitoring and evaluation for the immunization program. More efforts should be made to hoist the knowledge about vaccination, improve the maternal and child health and their living conditions.

### Suggestions

1. The majority of the rural minorities is uneducated and live in the backward areas. They have no any

basic awareness about the health and immunization of their child. The best way to mobilize the community about the child immunization is community based organizations, seminars, workshops and health programmers held with the participation of NGOs as well as local activists/leaders in their localities and villages.

2. The other best way to mobilize the parents about the child immunization is door to door visit because of the rural minorities have no access to print media and electronic media due to poverty and illiteracy. The government should provide basic information to rural people about their health via LHW/LHVs and vaccinators visiting in their home regularly and providing basic information, like vaccination schedule, importance of vaccination and risks of non-adoption of immunization.

3. Majority of the respondents claimed that all the possible immunization vaccination should be provided to children at their door step as Polio vaccination is provided to every child where they are found. Other immunization vaccination like DPT, Measles, and Hepatitis B expect Polio vaccination is provided to children at fastidious place. That's why a number of children are deprived of getting immunization vaccination by dint of parents' recklessness inattention and laziness to reach that place where the vaccination is provided.

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