

# Effectiveness of Health Education on Knowledge Regarding Diseases Preventable Vaccines Among Mothers of Under Five Year Children

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## Abstract

**Introduction:** Childhood is a significant period in the cycle of human life. Advancement of wellbeing and counteractive action of sickness is important for this stage. Communicable diseases are a high hazard for the childhood time frame. In the creating nations avoidance of illnesses by immunization right off the bat in adolescence is as yet a major issue, 5 million are biting the dust and 5 million are handicapped through irresistible malady every year from the get-go in childhood. **Methods:** A Quasi-experimental study with pre/post-intervention phases using the quantitative method of data collection conducted among mothers in rural community, Lahore, to determine Effectiveness of health education on knowledge regarding diseases preventable vaccines among mothers of under five year children. The sample size was 70 by using convenient sampling technique. SPSS version 21 statistical software was used for data analysis and a 95% confidence interval was used in this study with a  $P \leq 0.05$  considered statistically significant. **Results:** Results showed that the total mean of knowledge before intervention was 10.74 but after intervention, the total mean of knowledge was 23.02. The structured teaching programme has increased the knowledge of mothers regarding diseases preventable vaccines of under five year children. **Conclusions:** This study has demonstrated the structured teaching programme in community is much effective to improve the knowledge of mothers regarding diseases preventable vaccines of under five year children. The mean knowledge score on behavioral problems increased significantly after the teaching sessions.

**Keywords-** Effectiveness, Structured teaching programme, Knowledge, diseases preventable vaccines.

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## Introduction

Childhood is a significant period in the cycle of human life. Advancement of wellbeing and counteractive action of sickness is important for this stage (Varghese et al., 2016).

Vaccination is the best apparatus to kill and control dangerous illnesses which are irresistible and furthermore diminishing 2 to 3 million passing's consistently. An expected 22 million newborn children are feeling the loss of the fundamental immunization around the world (Awoh & Plugge, 2016).

Today the vast majority of the guardians have never observed the irritating outcomes of those diseases which are immunization preventable have on a family or community. Diseases preventable vaccines are inconsistently happening in the nation that is the reason it is essential to proceed with the assurance of child by an immunization. Vaccination is the most ideal path by which guardians can shield their children's from numerous hurtful ailments. Particularly in newborn children and little children's, vaccine preventable diseases are intense and may prompt hospitalization or even to death (Alenazi et al., 2014).

In Pakistan there were 198 polio cases in 2011, 58 in 2012 and 83 cases were accounted in 2013. Pakistan has additionally observed an ascent in measles cases in recent years. In 2011, 64 child passed, and in 2012 the number expanded to 306, with Sindh as the most influenced area. It is accounted for that there were 192 passing's from measles in the Punjab territory of Pakistan in 2013 (Bugvi et al., 2014).

The yearly health report of the Pakistan Medical Association (PMA) for the year 2011, that show one child kicks the bucket each moment from communicable diseases. The report likewise uncovers that consistently around 400,000 newborn children pass on in the first year of their life (Asim, Mahmood, & Sohail, 2015).

Parents' knowledge about vaccine schedules is a predictor factor for children's immunization status (Animaw, Taye, Merdekios, Tilahun, & Ayele, 2014).

The negative demeanors among guardians are fundamental because of an absence of information about the significance and safety of vaccines (Esposito, Principi, Cornaglia, & Group, 2014).

Numerous investigations have discovered that guardians' absence of information about immunizations is an issue that prompts low vaccination inclusion (Esposito et al., 2014).

Improving the mother's education level is very important, to empower the first care provider of child in the community. However, health educational messages related to the vaccination of child decrease the mortality rate

in children (Shaikh, Memon, & Ahmed, 2014).

Teaching mothers whose children's are in danger of not finishing the immunization calendar is a significant methodology to improve vaccination inclusion. An instructive program about the significance of vaccination is required, particularly for guardians with a lower instructive level, so as to improve the immunization rate (Al-Lela et al., 2014).

Knowledge is enhanced with reinforcement. Mothers are the essential parental figures of children's and they are the one effectively associated with the health and sickness of the children. On the off chance that the mothers are taught on the wellbeing parts of children's, numerous horrendous ailments can be averted in the nation (Umarani, 2017).

### **Literature Review**

As stated by Alenazi et al in 2014 that parents' knowledge about vaccination and their attitudes towards them are likely influence uptake. Mothers' knowledge about vaccination was found to be quite low and their educational status was significantly associated with child's coverage. Negative attitude, for example mothers fear from vaccination, was found to be significantly affected the vaccination status of their children (Alenazi et al.).

A community-based intervention study from Karachi Pakistan had also proved that health education for mothers of child would positively improve the health of their child by building their knowledge about health (Ali, Pongpanich, & Kumar, 2015).

In opinion of Harvey, Reissland, & Mason that educational interventions were very effective in low and middle-income countries (95%) for vaccination, these interventions increase the mothers knowledge about vaccination (Harvey, Reissland, & Mason, 2015).

As described by Awoh & Plugge, 2016 less than one third of the studied mothers had good knowledge score related to children vaccination. The results of the study may be due to the low level of awareness, lack of educational program in rural areas and their positive attitude toward vaccination may be due to that parents knew that vaccination was mandatory and required for school registration (Awoh & Plugge, 2016).

The study is conducted by (Awadh et al., 2014) on an educational seminar to improve parents' knowledge about vaccination. This study demonstrated that providing a one-hour educational seminar to parents is an effective and practical strategy to improve parents' knowledge about childhood immunization (Awadh et al., 2014).

According to study of Younus, Ijaz, & Mateen in 2017 on the factors associated with delayed or non-immunization in children. The results indicated that educating mothers about the diseases preventable vaccines may be highly effective in increasing the immunization coverage (Younus, Ijaz, & Mateen, 2017).

A study conducted by Umarani, 2017 about the effectiveness of planned teaching programme on vaccination. The findings of study revealed that the post-test knowledge score 26.53% was higher than the pre-test knowledge score 13.5%. Therefore, planned teaching programme was found to be an effective media for educating mothers regarding importance of vaccination (Umarani, 2017).

### **Methodology**

Quasi-experimental with pre and post-intervention phases using the quantitative method of data collection. Data was collected from 70 women using convenient sampling technique. A well adopted questionnaire was used, Participants were well informed. Data was analysed through SPSS 21. The study was 4-5 month (September 2018 to December 2018).

### **Results**

This section presents the outcomes of the study, Profile of the respondents and outcome of questionnaire regarding knowledge regarding Diseases preventable vaccines and also represents the result of paired t-test comparison before and after intervention and results for objective of this study "To evaluate the effectiveness of structured teaching programme on mother's knowledge regarding Diseases preventable vaccines under five year children. According to this table total of 50 respondents participated in the study. It indicates that the majority of the participants were females (100%).The maximum age of respondents was belong to 30 -34 age group (60%) and the minimum 25 -29 age group (40%).

**Table 1: Demographic Characteristic of participants.**

| Table No: 1 Demographic Characteristic |                            |    |       |
|--|----------------------------|----|-------|
| S#                                     | Demographic Characteristic | N  | %     |
|  |                            | 70 | 100%  |
| 1                                      | <b>GENDER</b>              |    |       |
|  | Female                     | 70 | 100%  |
|  | Male                       | 0  | 0     |
| 2                                      | <b>Qualification</b>       |    |       |
|  | Non educated               | 21 | 30.0% |
|  | Primary                    | 46 | 65.7% |
|  | Middle                     | 1  | 1.4%  |
|  | Secondary                  | 2  | 2.9%  |
| 3                                      | <b>Age Group</b>           |    |       |
|  | 22-25year                  | 11 | 15.7% |
|  | 26-29year                  | 13 | 18.6% |
|  | 30-34year                  | 42 | 60.0% |
|  | 35-39year                  | 4  | 5.7%  |

According to this table total of 70 respondents participated in the study. It indicates that the majority of the participants were females (100%). The minimum age of respondents was 25 -29 age group (40%) and the maximum 30 -34 age group (60%).

**Table 2: Paired Samples Statistics.**

| Table No: 2 Paired Samples Statistics |       |    |      |      |
|---------------------------------------|-------|----|------|------|
|                                       | Mean  | N  | SD   | SE   |
| Pre intervention                      | 10.74 | 70 | 2.54 | .303 |
| Post intervention                     | 23.02 | 70 | 2.41 | .288 |

Following table and figure shows the mean, standard deviation, standard error of mean and mean percentages of pre-post score of knowledge and practice, illustrate that the knowledge and practice score mean improved in post intervention phase. That was 10.74% pre-test knowledge and improved at 23.02% level in post intervention phase.

**Table No. 3 Paired Samples Test**

| Table No: 3 Paired Samples Test |                    |      |      |                         |        |       |                |       |
|---------------------------------|--------------------|------|------|-------------------------|--------|-------|----------------|-------|
|                                 | Paired Differences |      |      |                         | t      | DF    | Sig.(2-tailed) |       |
|                                 | Mean               | SD   | S.E  | 95% Confidence Interval |        |       |                |       |
|                                 |                    |      |      | Lower                   |        |       |                | Upper |
| Pre-Post                        | -12.28             | 3.70 | .442 | -13.16                  | -11.40 | 27.75 | 69             | .00   |

## Discussion

All the respondents in this study were females, 100%, a similar study carried out in Ilorin reported the same finding of predominantly female respondents of 99.6% (T. Afolaranmi, Hassan, Bello, & Misari, 2015).

The mean age of the respondents was 32.07 ± 8.71years. This was same as the findings of studies were conducted among mothers in primary health centre of Nigeria and Malaysia. This similarity indicated that the majority of the mothers were middle-aged (Sharif et al., 2015).

The result of pre and post-test of intervention session is 10.74 and 23.02 respectively. Mean knowledge score of pre-test and post-test indicating the effectiveness of health education on diseases preventable vaccines among mothers of under five year children. The statistical paired t-test shows the significant result in enhancing the knowledge scores between pre-test and post-test for all the aspect under study.

Present study findings showed strong positive significant of health education on diseases preventable vaccines among mothers improve the knowledge of mothers. Consistent with our findings another study also showed that educating mothers whose children are not completing the immunization schedule is an important strategy to improve immunization coverage. An educational programme about the importance of immunization is needed, especially for parents with a lower educational level in order to improve the immunization rate (Al-Lela et al., 2014).

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