



## **A study to assess the effectiveness of the Structured Teaching Programme on Attitude regarding optional vaccines and their preventable diseases among mothers attending Pediatric OPD of HSK Hospital and Research Centre, Bagalkot**

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### **Abstract**

**Aims:** The aims of this study are as follows: (1) To assess the attitude regarding optional vaccines and their preventable diseases among mothers (2) To assess the effectiveness of the structured teaching programme on knowledge and attitude regarding optional vaccines and their preventable diseases among mothers (3) To find the association between attitude regarding the optional vaccine and their preventable diseases among mothers with their elected socio-demographic variables.

**Materials and Methods: Study approach:** This was an evaluative study to assess the effectiveness of structured teaching programme:

**Study design:** This study was pre-experimental 1 group pre-test, post-test design without control group:

**Population** - this study was conducted on mother having a child below 6 months of age residing in Bagalkot:

**Sample** - mothers attending Pediatric OPD of HSK Hospital & Research Centre in Bagalkot were selected:

**Sample size** - A total of 60 mothers were included in this study:

**Tool for data collection** - Likert's attitude scale were used:

**Method of data collection** - the data was collected using self-administration of Questionnaire for Literate mothers and Structured Interview schedule for Illiterate mothers

**Results:** After collection the data are organized and analysed with the help of mean, median and percentage and the socio-demographic characteristics of mothers were as follows: age - out of 60 mothers the highest percentage i.e. 40% were belonging to the age group of 23 - 27 years and lowest percentage i.e. 10.1% of the mothers were belonging to the age group of 33 and above years: educational status - the highest percentage i.e. 33.31% of the mothers were completed PUC and lowest percentage 6.66% had no formal education: religion - the highest percentage i.e. 53.3% mother were belongs to Hindu and lowest percentage i.e. 10.1% were belongs to Christian: occupation - the highest percentage i.e. 43.3% mothers were housewives and lowest percentage i.e. 8.3% were labourers: type of family - the highest percentage i.e. 55% of mother belongs to joint family and lowest percentage i.e. 45% of mothers were belongs to nuclear family: family monthly income - the highest percentage i.e. 33.3% of mothers were having their monthly income between 15,001 - 20,000/- and lowest percentage i.e. 8.33% of mothers were having their income 20,001/- and above: number of children in the family - the highest percentage i.e. 50.1% of mothers were having two children and lowest percentage i.e. 18.33% of mothers were having only one child: history of optional vaccines in the family - out of 60 all i.e. 100% mothers were had no history of optional vaccines in the family: source of information about optional vaccines - majority of the mothers i.e. 68.33% got information from health professionalists and lowest percentage i.e. 31.67% of mothers got information from mass media: pre-test- the highest percentage i.e. 55% of mother were having slightly negative attitude and lowest percentage i.e. 5% were having highly negative attitude: post-test - the highest percentage i.e. 33.33% of mothers were having good knowledge and lowest percentage i.e. 5% were having very poor knowledge: the highest percentage i.e. 58.33% of mothers were having slightly positive attitude and lowest i.e. 5% were with highly positive attitude

**Conclusion:** After thorough study, it is clear that all the mothers of paediatric children especially under-five children need to be educated about the optional vaccine and their preventable diseases and they should also be taught about doubts about the effectiveness of the vaccine or misconception about vaccines. Here the mothers must be adequately educated with frequent health education campaigns.

**Keywords:** Optional vaccines, mothers' attitude, structured teaching programme

### **Introduction**

Child's health includes physical, mental and social-wellbeing. Most parents know the basics of keeping the children healthy like offering them healthy foods, making sure they get enough sleep and exercise and ensuring their safety. It is also important for children to get regular check-ups with their health care provider. These visits are a chance

to check child's development. They are also a good time to catch or prevent problems. A number of conditions, including communicable, developmental and behavioural disorders affect children in particular<sup>1</sup>.

The growth and development of children is a long-term contribution of country as a whole. The key to attain the goal of health for all primary health care emphasizes on the

preventive principles, one of the most cost effective health intervention is vaccine for all infectious disease. Immunization is a high priority area in care of infants and children. High immunization rates have almost eliminated many infectious diseases of the population. A number of infectious diseases can be prevented by timely administration of vaccines when child is effectively immunized at the right age, most of these diseases are either entirely prevented or at least modified so that child suffers from a mild disease without any disability<sup>2</sup>.

At birth infants have protection against certain diseases because antibodies have passed through the placenta from the mother to the unborn child. After breastfed babies get the continuous benefits of additional antibodies in breast milk. But in both cases, the protection is temporary<sup>3</sup>.

Immunization (vaccination) is a way of creating immunity to certain diseases by using small amounts of a killed or weakened micro-organism that causes a particular disease. Children have an immature immune system and have no natural immunity against condition. Therefore, they are at an increased risk for contracting infectious and diseases like mumps, rubella, typhoid and hepatitis B. Even today millions of children die each year from vaccine preventable diseases such as measles, diphtheria, tetanus and pneumonia vaccines are meant to protect the child against a variety of diseases and hence it is every child's right to be vaccinated<sup>4</sup>.

The mother plays a major role in promoting the health of children. Several misconceptions, ignorance and inadequacy of knowledge in relation to optional vaccine are prevalent among mothers especially under five children<sup>5</sup>.

Optional vaccines are those which are given according to one's own choice. Access to immunization services and up to date immunization coverage are essential for protecting every age group from debilitating and potentially life threatening of infectious diseases. The risk of mortality and morbidity is statistically high during childhood period. Prevention is ultimately the most effective defence system in controlling infectious diseases. So the knowledge regarding immunization in prevention of infectious disease among mothers of under-five children is important. Keeping the point of view this study was conducted to assess the knowledge regarding optional vaccines<sup>6</sup>.

### AIMS

1. To assess the attitude regarding optional vaccines and their preventable diseases among mothers.
2. To assess the effectiveness of structured teaching programmer on attitude regarding optional vaccine and their preventable diseases among mothers.
3. To find the association between attitudes regarding the optional vaccines and their preventable diseases among mothers with their selected socio demographic variables.

### Materials and Methods

The present study was conducted on an evaluative approach and pre-experimental one group pre-test, post-test without control group design. The Target population for the present study includes mothers having a child below 6 months of age residing in Bagalkot. The Accessible population for the study includes mothers having a child below 6 months of age who are attending Paediatric OPD of HSK Hospital &

Research Centre, Bagalkot, Karnataka. Paediatric OPD of HSK Hospital & Research Centre, Bagalkot was selected by convenient sampling and 60 mothers were selected by simple random sampling technique, and the data were collected by structured interview schedule with the help of Likert Attitude scale. Data analysis and interpretation were performed using descriptive such as frequency distribution, mean, percentage and standard deviation and inferential statistics such as Chi square test and t' test.

### Results

#### Section-I: Description of socio-demographic characteristics of sample.

Percentage wise distribution of mothers according to their age groups reveals that out of 60 mothers, highest percentage (40%) were belonging to the age group of 23 - 27 years, (26.6%) were belongs to the age group of 18 - 22 years, (23.3%) were belongs to the age group of 28 - 32% and lowest percentage (10.1%) the mothers were belonging to the age group of 33 & above years. It shows that majority mother belongs to the age group of 23 - 27 years (Fig - 5.1).

Percentage wise distribution of mothers according to their educational status reveals that out of 60 mothers, the highest percentage (33.31%) of the mothers was completed PUC, (25.1%) were secondary schooling, (18.33%) were primary schooling and (16.66%) were qualified with graduation and lowest percentage (6.66%) had no formal education. It shows that the majority of mother belongs to PUC (Fig-5.2).

Percentage wise distribution of mothers according to their religion reveals that, out of 60 mothers the highest percentage (53.3%) mothers were belongs to Hindu, (36.6%) mothers were Muslim and the lowest percentage (10.1%) mothers were belongs to Christian. It shows that majority of the mother belongs to the Hindu religion (Fig-5.3).

Percentage wise distribution of mothers according to their occupation reveals that, out of 60 mothers the highest percentage (43.3%) mothers were housewives, (28.33%) were government employees, (20.1%) mothers were private employees, and the lowest percentage (8.3%) mothers were laborers. This reveals that majority of the mothers were Housewives (Fig-5.4).

Percentage wise distribution of mothers according to their type of family reveals that, out of 60 mothers the highest percentage (55%) of mother belongs to joint family and lowest percentage (45%) of mother belongs to nuclear family. It shows that the majority of mothers were living in the joint family (Fig-5.5).

Percentage wise distribution of mothers according to their family monthly income reveals that, out of 60 mothers the highest percentage (33.3%) mothers were having their monthly income 15,001 - 20,000/-, (23.3%) mothers were having their income 10,001 - 15,000/-, (20.1%) of mothers were having 5,001 - 10,000/-, (15%) mothers were having their monthly income below 5000/- and lowest percentage (8.33%) of mothers were having their income 20,001/- and above. It reveals that majority of the mothers were having their monthly income between 15,001 - 20,000/- (Fig-5.6).

Percentage wise distribution of mothers according to number of children in the family reveals that, out of 60 mother's highest percentage (50.01%) of mothers were having two children, (31.66%) were having three & above

children and the lowest percentage (18.33%) of mothers were having only one child. It shows that the majority of mothers were having Two children (Fig5.7).

Percentage wise distribution of mothers according to the history of optional vaccines in the family reveals that, out of 60 all (100%) had no history of optional vaccines in their family. It shows that nobody is aware of optional vaccines (Fig-5.8).

Percentage wise distribution of mothers according to the

**Table 1:** Percentage wise distribution of study subjects according to their attitude scores in pre-test. n=60

Test	Level of attitude	Number (f)	Percentage (%)
Pre-test	Highly positive	00	00
	Slightly positive	10	16.68
	Neutral	14	23.33
	Slightly negative	33	55
	Highly negative	03	5
	Total	60	100

Percentage distribution of study subjects in pre-test reveals that out of 60 mothers, highest percentage (55%) mothers were having slightly negative attitude, (23.33%) mothers were with neutral, (16.68%) mothers were having slightly positive and lowest percentage (5%) of mothers were having highly negative attitude, (0%) had highly positive attitude regarding optional vaccines and their preventable diseases. It reveals that majority of mothers had slightly negative attitude regarding optional vaccines and their preventable diseases (Table 5.1).

**Table 2:** Percentage wise distribution of study subjects according to their attitude scores in post-test. n=60

Test	Level of attitude	Number (f)	Percentage (%)
Post-test	Highly positive	03	5
	Slightly positive	35	58.33
	Neutral	10	16.68
	Slightly negative	12	20
	Highly negative	00	00
	Total	60	100

Percentage wise distribution of study subjects in post-test reveals that out of 60 mothers, highest percentage (58.33%) of mothers were having slightly positive attitude, (20%) of mothers were having slightly negative attitude, (16.68%) of mothers were neutral and followed by lowest percentage (5%) mothers were with highly positive attitude, (0%) had highly negative attitude regarding optional vaccines and their preventable diseases. It shows that majority of the

**Table 4:** Percentage wise distribution of study mothers according to attitude in pre-test and post-test. n=60

Level of attitude	Pre-test (O1)		Post-test (O2)	
	No of respondents	Percentage	No of respondents	Percentage
Highly positive	00	00	03	5
Slightly positive	10	16.68	35	58.3
Neutral	14	23.33	10	16.68
Slightly negative	33	55	12	20
Highly negative	03	5	00	00
Total	60	100	60	100

- Assessment of attitude of mothers in pre-test and post-test regarding optional vaccines and their

source of information shows that out of 60 mothers' majority of mothers (68.33%) got information from health professionalists and lowest percentage of mothers got information from mass media that is (31.67%) (Fig-5.9).

**Section-II: Assessment of attitude scores of mothers regarding optional vaccines and their preventable diseases.**

mothers had slightly positive attitude (Table 5.2).

**Section-III: Assessment of attitude of mothers regarding optional vaccines and their preventable diseases.**

**Table 3:** Significant Difference between pre-test and post-test attitude score of mothers regarding optional vaccines and their preventable diseases. n=60

Test	Mean	Std Error	Mean Diff	SD Diff	Paired t Value	Table value
Pre-test (O1)	16.5	0.457	7.51	3.5	15.31	1.96
Post-test (O2)	24.08					

**H<sub>2</sub>**- There is a significant difference between the pre-test and post-test attitude scores of mothers regarding optional vaccines and their preventable diseases.

As the calculated value (15.31) is higher than the table 't' value (1.96) for the Degree of Freedom 59 and at 5% level of significance, the hypothesis (H)<sub>2</sub> is accepted.

Findings revealing that there is significant difference between pre-test and post-test attitude scores, hence the Structured Teaching Programme is proved to be effective (Table 5.3).

- Section-IV:** Evaluation of the effectiveness of STP on knowledge of mothers regarding optional vaccines and their preventable diseases.
- Comparison of attitude scores of mothers regarding optional vaccines and their preventable diseases in pre-test and post-test.

**preventable diseases.**

Attitude wise comparison of study subjects in pre-test

and post-test reveals the following results. In pre-test, out of 60 mothers, highest percentage (55%) of mothers were having slightly negative attitude, (23.33%) of mothers were having neutral attitude, (16.68%) mothers were with slightly positive, lowest percentage (5%) of mothers were having highly negative and no one had highly positive attitude regarding optional vaccines and their preventable diseases, however after administration of STP (post-test) highest percentage (58.3%) of mothers were having slightly positive knowledge, (20%) of subjects with slightly negative knowledge,

(16.68%) of subjects had neutral, lowest percentage of mothers were having highly positive and no one had highly negative regarding optional vaccines and their preventable diseases (Table 5.4).

It reveals that majority of mothers after post-test were slightly positive attitude towards optional vaccines and their preventable diseases (58.3%).

**Section-VI: Association between post-test attitude scores and selected socio-demographic variables.**

**Table-5.11: Percentage wise association between post-test attitude scores and selected socio-demographic variables.**

SI. NO	Socio-demographic variables	Df	Chi-square value	Table value	Level of significance	Association
1	Age	1	0.867	3.84	0.05	Not significant
2	Educational status	1	0.35	3.84	0.05	Not significant
3	Religion	1	0.155	3.84	0.05	Not significant
4	Occupation	1	2.67	3.84	0.05	Not significant
5	Type of family	1	0.186	3.84	0.05	Not significant
6	Family monthly income	1	8.08	3.84	0.05	Significant
7	Total number of children in the family	1	0.115	3.84	0.05	Not significant
8	Source of information	1	0.12	3.84	0.05	Not significant

Chi-square was calculated to find out the association between post-test attitude scores of mothers with their selected socio demographic variables by using contingency table.

There is no significant association between post-test attitude scores and socio-demographic variables: like age, educational status, religion, occupation, type of family, number of children in the family and source of information about optional vaccines but there is significance association between the post attitude and socio-demographic variable like family monthly income. (Table 5.11)

Hence H<sub>5</sub> is rejected for the socio-demographic variables like age, educational status, religion, occupation, type of family, number of children in the family and source of information about optional vaccines at 5% level of significance.

H<sub>5</sub> is accepted for the socio-demographic variables like family monthly income at 5% level of significance.

**Discussion**

Before I take up the present study, I have reviewed many research studies on optional vaccines in various parts of India and Abroad. The research studies influenced me to conduct this present study are as follows.

A telephonic survey (2009) was conducted in US to assess the understanding of vaccine preventable diseases, vaccines, immunization practices and policies. A sample of 1600 of parents with children 6 years of age was taken. 87% of respondents were deemed immunization an extremely important action that parents can take to keep their child well. 25% believed that their child's immune system could become weakened as a result of too many immunizations and 23% believed that children get more immunizations that are good for them<sup>7</sup>.

A non-experimental descriptive research study was conducted with parents or caregivers of children between the ages of 4 months to 2 years (2000) in Madhya Pradesh. A sample of 40 parents were interviewed, 100% believed

immunization schedule hand-out was helpful. Thirty-eight (95%) believed that discussion with the health care providers was helpful. Thirty-seven (92.5%) believed that information currently being provided was sufficient for their needs. The study result indicate that the knowledge of parents had specific details regarding immunization was limited. However, the parents perceived that the information provided and their knowledge about their information was sufficient to meet their health education need. The health care providers perception about the knowledge, parents should have regarding immunization may not be the same as what the parents believed they need to know<sup>8</sup>.

A cross-sectional descriptive design was used. Subjects and Methods: This study included 97 mothers who were visited in four main Maternal and Child Health (MCH) Centres at Minia city. One tool was utilized to collect the necessary data, A structured questionnaire interview sheet. Results: It was found that nearly half 46.4% of higher educated mothers gave vaccination at time compared with 50% of illiterate mothers didn't give their children vaccination at time. And the majority of not working mothers 84.6% didn't give their infants vaccinations at time. It was noticed that all of illiterate mothers didn't know the hazards, compared with 86.4% of educated mothers mentioned that occurrence of disease. The study concluded that many mothers don't come regularly for vaccination of their children. As a result, they miss the due date of vaccination. Low literacy level of mothers is a matter of worry. Some of them don't know about the diseases for which their child is being immunized<sup>9</sup>.

The community based cross-sectional study conducted in the catchment area of department of Community Medicine, Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar. All the children in the age group of 24-60 months were included in the study. Coverage of each vaccine was computed. Analysis of association between immunization coverage and various socio-demographic variables was done using chi square test. Results: Out of the

total children included in the study 53.9% were males and 46.1% were females. Coverage in males was significantly higher as compared to females. The difference of immunization among the rural and urban population was found to be highly significant. The study was concluded that study highlights the need to accelerate efforts in improving the immunization coverage for optional vaccines particularly in rural areas<sup>10</sup>.

After discussing the results, conclusions and recommendations of the above studies with the experts, I have been motivated to conduct the study on mothers of under-five to assess their knowledge regarding optional vaccines and their preventable diseases. After the results of our study, I am hereby recommending future researchers to conduct some descriptive studies with a view to improve their practice towards optional vaccines.

### Conclusion

After seeing the above facts, it is very clear that today's mothers are not good in knowledge so that they are poor in practice of immunizing optional vaccines. In the present days, mothers of under-five are not aware and having negative attitude towards optional vaccines and these optional vaccines are very much important in child's future life to achieve healthy life by preventing optional vaccine preventable diseases.

### Recommendations

An interventional program is necessary for these mothers to impart their knowledge and to practice immunizing optional vaccines.

### Conflict of Interest

Not available

### Financial Support

Not available

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