**Journal of Neonatal Surgery**
***ISSN(Online): 2226-0439***
***Vol. 14, Issue 30s (2025)***
*https://www.jneonatalsurg.com*

OPEN ACCESS

# A Study To Assess The Effectiveness Of Structured Teaching Programme On Knowledge And Attitude Regarding Immunization Among The Mothers Of Under Five Children In Kurubarapalli

**Archana V[*1], Dr. Rajalakshmi[2]**

[*1]PhD. Scholar, Bharath Institute of Higher Education and Research, Chennai

[2]Principal, Department of Obstetrics and Gynecology, Sri Lakshmi Narayana College of Nursing, Puducherry

***Corresponding Author**:

Archana V

Cite this paper as: Archana V[1], Dr. Rajalakshmi, (2025) A Study To Assess The Effectiveness Of Structured Teaching Programme On Knowledge And Attitude Regarding Immunization Among The Mothers Of Under Five Children In Kurubarapalli. *Journal of Neonatal Surgery*, 14 (30s), 927-933.

## ABSTRACT

**Background:** Immunization is a cornerstone of public health, playing a critical role in avoidance of infectious diseases that disproportionately affect children under the age of five. A study to assess efficacy of structured teaching programmes on attitude and knowledge regarding Immunization between mothers of under five children in Kurubarapalli.

**Methodology:** Research approach was utilized in quasi experimental one group pre-test and post-test design. Target populations for study were selected from Kurubarapalli in Pulliyencheri village. This population was selected by purposive sampling technique. Total samples under study was 30 under five mothers. Data was gathered by organized knowledge questionnaire, which was designated as a study to evaluate effectiveness of structured teaching programme on knowledge and attitude regarding immunization among mothers of under five children. Results were described by utilizing descriptive and inferential statistics.

**Results**: Mean knowledge score exhibited a notable increase from 8.96 (37.33%) in pre-test to 21.73 (90.54%) in post-test, while attitude score rose from 28.9 (41.29%) to 54.03 (77.19%). The statistical significance of these improvements was confirmed through paired t-tests, with t-values of 13.401 for knowledge and 14.21 for attitude, indicating a robust effect of the intervention. Level.

**Conclusion:** Study deduced that a organized teaching programme was effective among mothers of under-children regarding immunization. Stated research hypothesis was accepted.

***Keywords:*** *Knowledge, attitude, Immunization, Mothers, Under five children*

## 1. INTRODUCTION

Immunization is cornerstone of public health, playing a critical role in prevention of infectious diseases that disproportionately affect children under age of five. As per the World Health Organization(WHO), vaccination is one of best public health measures available and can save millions of lives annually. Despite proven efficacy of vaccines, global immunization coverage remains suboptimal, especially in middle and low income nations. In India, where a sizable section of population lives in rural areas, various sociocultural, educational, and economic factors make it more difficult to achieve appropriate vaccination coverage.

Research has demonstrated that educational interventions can significantly enhance knowledge and attitudes regarding immunization among mothers. For example, a study conducted by Pattanashetti showed that after participating in a structured teaching program, 93% of parents rated vaccines as safe, indicating a substantial increase in positive attitudes towards immunization (Pattanashetti, 2023). This aligns with findings from other studies that emphasize importance of educational interventions in improving maternal awareness about immunization and its benefits. However, specific reference to comparative study in context of structured teaching programs and maternal care knowledge does not have direct citation and should be omitted.

Moreover, association between child immunization and maternal education is well-documented. Balogun et al. found that maternal literacy mediates relationship between maternal education and child immunization rates, suggesting that

improving educational levels can lead to better health results for children (Balogun et al., 2017). This is undoubtly relevant in rural environments, where access to information and education may be restricted. Structured teaching programs in Kurubarapalli could serve as an important technique in bridging this gap, providing mothers with necessary knowledge to take well-informed decisions regarding health of their children.

Effectiveness of structured teaching programs is further encouraged by evidence from several studies that demonstrate improvements in health behaviors following educational interventions. For example, study by Lyngdoh et al. noted that community-based interventions, including educational programs, led to certain enhancements in maternal and newborn health behaviors (Lyngdoh et al., 2018). Similarly, a systematic review on health behavior change interventions highlighted the positive impact of educational programs on maternal health practices, strengthening idea that structured teaching can result in improved health results(Hazra et al., 2020).

In addition to knowledge, attitudes towards immunization are critical in determining vaccination uptake. Investigation by Godongwana et al. disclosed that improved knowledge about maternal immunization significantly influenced mothers' attitudes towards vaccination, suggesting that educational programs can effectively change perceptions and increase acceptance of immunization (Godongwana et al., 2021). This is especially important in rural areas like Kurubarapalli, where misconceptions about vaccines may prevail. By addressing these misconceptions through structured teaching, the program can foster a more positive attitude towards immunization among mothers.

Furthermore, the integration of community-based approaches in educational interventions has been shown to enhance their effectiveness. For instance, Saggurti et al. reported that integrating health interventions within women's self-help groups led to substantial improvements in maternal and child health practices (Saggurti et al., 2018). This approach not only empowers women but also creates a supportive environment for sharing knowledge and experiences related to immunization. Implementing a similar strategy in Kurubarapalli could enhance the reach and impact of the structured teaching program.

The importance of maternal knowledge in ensuring complete immunization coverage cannot be overstated. Research indicates that women who are more knowledgeable about immunization are most likely to ensure their children receive all necessary vaccinations. For instance, study by Rahmaningrum et al. dicovered a significant correlation between maternal knowledge and completeness of basic immunization in infants (Rahmaningrum et al., 2020). This underscores need for effective educational programs that equip mothers with knowledge required to navigate the immunization schedule and understand the importance of timely vaccinations.

Moreover, role of healthcare providers in facilitating maternal education about immunization is crucial. Studies have shown that healthcare professionals who are well-informed about immunization can significantly influence mothers' attitudes and knowledge. For instance, investigation by Ahmad et al. emphasized effect of healthcare provider education on maternal knowledge and attitudes towards immunization (Ahmad et al., 2021). Therefore, incorporating training for healthcare providers into the structured teaching program could further enhance its effectiveness.

Organized vaccination education program for mothers of children under five in Kurubarapalli has potential to significantly enhance maternal knowledge and attitudes towards vaccination. By leveraging evidence from existing studies, program can be modified to meet unique needs of the community, which would eventually increase children's vaccination rates and enhance their health. The integration of community-based approaches, training for healthcare providers, and cultural sensitivity will be key components in ensuring the program's success.

## 2. MATERIALS AND METHODS

The study employed a quantitative approach to assess efficiency of an organized teaching program on attitudes and awareness of mothers about immunization for under five children. Quasi-experimental one-group pre-test post-test design was utilized to measure impact of intervention. Research was carried out in Kurubarapalli community area, which served as physical location for study. The target population comprised mothers of children residing in this particular community. A total of 30 mothers participated in study, chosen through using purposive sampling method.

Inclusion criteria for investigation were mothers of under-five children living in Pulliyencheri community region and those whose child was firstborn in the family. The exclusion criteria included mothers who were unable to understand Tamil or English and those with children older than five years. This structured methodology provided a focused approach to assess the outcomes effectively.

**Tools:**

The study comprised three sections for data collection and analysis.

- Section A focused on demographic variables of mothers, gathering baseline data like education, occupation, age, religion, and information sources regarding mandatory immunization.
- Section B assessed the mothers' awareness about vaccination through a structured questionnaire consisting of 24 items, with each correct response scoring one mark, resulting in a total score of 24. Section C evaluated the mothers'

attitudes toward immunization using a 3-point Likert scale comprising 14 items, with a maximum possible score of 70. These sections provided a comprehensive understanding of the demographic, knowledge, and attitudinal aspects of the participants.

**Data collection procedure**

By filing an application and ensuring to follow guidelines and regulations, village administrative officer granted formal prior approval, ensuring that study would not cause any personal or professional issues. Investigation is scheduled to last for two weeks. Sample that met inclusion criteria was chosen by researcher. Before organized teaching program began, researcher compassionately described study's goal and obtained informed consent to utilize structured questionnaire to gauge mothers' level of knowledge. Five mothers were then evaluated based on their knowledge scores.

## 3. RESULTS

Distribution of samples as per to their demographic variables. As per to age of mother, samples belongs to 24-48years and 16(53%) , concerning the mother religion22(74%) samples belongs to Hindu, relating to mother's occupation 19(63%) samples mothers are house wife, relating to mothers education 18(60%) samples, concerning to monthly income 16(53%) samples monthly income is around 4000-5000, concerning the source of information 12(40%) samples of belongs to, concern place of residence 23(77%) sample of belongs to concern source of water23(77%) sample of belongs, relating to no of children 13(44%) sample of belongs to type of house 13(44%).

In the pretest level of knowledge, 13(43%) samples have inadequate knowledge, 16(57%) samples have moderate knowledge and none of the samples have sufficient awareness about Immunization between mothers of children under five. In pre-test level of attitude, 22(73%) samples have neutral, 8(27%) samples have negative, and none of the samples have positive attitudes about vaccination between mothers of children under five.

In post test level of knowledge, 1(3%) sample has moderate knowledge, 29(97%) samples have adequate knowledge, and none of samples have inadequate awareness about vaccination among mothers of children under five. In post test level of attitude, 25(84%) samples are positive, 5(16%) samples have neutral and none of the samples have negative about vaccination between mothers of children under five.

Table 1 compares attitude and knowledge of mothers before and after an intervention on vaccination. Pre-test mean score for knowledge was 8.96 (37.33%), increasing to 21.733 (90.54%) post-test. Similarly, the attitude score improved from 28.9 (41.29%) to 54.03 (77.19%). The percentage improvement was 53.21% for knowledge and 35.9% for attitude, indicating a significant positive impact.

Table 2 showed that pre-test knowledge mean was 8.96 (SD = 2.798), which significantly increased to 21.733 (SD = 1.526) in post-test. Mean difference was 53.21, and paired 't' test yielded t-value of 13.401, confirming statistically significant improvement.

Tabek 3 revealed that pre-test attitude score was 28.9 (SD = 7.016), which improved to 54.03 (SD = 9.33) post-test. The mean difference was 104.725, with a t-value of 14.21, illustrating a substantial positive change in attitude.

Table 4 revealed correlation between knowledge and attitude. Pre-test r-value was 2.8143, slightly decreasing to 2.3783 post-test. Although both knowledge and attitude improved, their correlation slightly declined, suggesting varied individual responses.

Table 5 revealed that chi-square test examined correlation between demographic factors and knowledge, like education, income, age, and family type. None of the variables were statistically significant (P-value ≤ 0.05), indicating that demographic characteristics didn't significantly influence knowledge levels in this research.

**Table 1: Comparison "between the pre-test and post-test score on the structured questionnaires on knowledge and attitude regarding immunization among the mother of under five" children**

| Variables | Maximum score | Pre-test | | | Pot-test | | | Difference in mean percentage |
|---|---|---|---|---|---|---|---|---|
| | | Mean | SD | Mean % | Mean | SD | Mean % | |
| Knowledge | 24 | 8.96 | 2.798 | 37.33 | 21.733 | 1.5260 | 90.54 | 53.21 |
| Attitude | 70 | 28.9 | 7.016 | 120.4 | 54.03 | 9.330 | 225.125 | 104.725 |

**Table 2: Mean, "standard deviation, mean difference and paired't' value on knowledge regarding immunization among mothers of under five" children.**

| Knowledge | Mean | SD | Mean difference | Df | Paired 't' value |
|---|---|---|---|---|---|
| Pre test | 8.96 | 2.798 | 53.21 | 29 | 13.401* |
| Post test | 21.733 | 1.5260 | | | |

**Table 3: "Mean, standard deviation, mean difference and paired't' value on attitudee regarding immunization among mothers of under five" children.**

| Attitude | Mean | SD | Mean difference | Df | Paired 't' value |
|---|---|---|---|---|---|
| Pre test | 28.9 | 7.016 | 104.725 | 29 | 14.21 |
| Post test | 54.03 | 9.330 | | | |

**Table 4: Correlation between the knowledge and attitude regarding immunization among the mothers of under five children.**

| Group | Knowledge | | Attitude | | 'r' value |
|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | |
| Pre test | 8.96 | 2.798 | 28.9 | 7.016 | 2.8143 |
| Post test | 90.54 | 1.52606 | 54.03 | 9.330 | 2.3783 |

**Table 5: chi-square test on knowledge regarding immunization among the mother of under five children and their selected demographic variables.**

| S.NO | DEMOGRAPHIC VARIABLES | Df | TABLE VALUE | $X^2$ |
|---|---|---|---|---|
| 1. | Age of the mother Mother religion Occupation of mother Education of mother | 4 | 9.49 | 6.14192 |
| 2. | Source of information Place of residence Source of water Family income | 6 | 12.59 | 0.54 |
| 3. | Number of children in family Type of family | 4 | 9.49 | 1.665 |
| 4. | | 8 | 15.51 | 0.01 |
| 5. | | 8 | 15.51 | 4.5456 |
| 6. | | 3 | 2.356 | 0.152515 |
| 7. | | 6 | 12.59 | 7.2308 |

| | | | | |
|---|---|---|---|---|
| 8. | | 4 | 9.49 | 6.30486 |
| 9. | | 6 | 12.59 | 2.56084 |
| 10. | | 4 | 9.49 | 2 |

**Not Significant at P ≤ 0.05 level**

## 4. DISCUSSION

Investigation results indicate significant enhancement in both attitudes and knowledge about vaccination between mothers of children under five following an intervention. Mean knowledge score exhibited a notable increase from 8.96 (37.33%) in pre-test to 21.73 (90.54%) in post-test, while attitude score rose from 28.9 (41.29%) to 54.03 (77.19%). Statistical significance of these improvements was confirmed through paired t-tests, with t-values of 13.401 for knowledge and 14.21 for attitude, indicating a robust effect of the intervention. Furthermore, the correlation between knowledge and attitude, although positive, showed a slight reduction post-intervention (from r = 0.8143 to r = 0.6378). Interestingly, chi-square analysis disclosed no significant relationship between demographic factors and knowledge (P-value ≤ 0.05), suggesting that intervention's impact was independent of the participants' background characteristics.

Success of educational initiatives can be credited with notable improvement in mothers' attitudes and understanding regarding vaccinations. Previous research has consistently shown that enhancing health literacy among parents, particularly mothers, is crucial for improving immunization uptake and related health practices (Sriatmi, 2024; , Parsekar, 2024; , Pattanashetti, 2023). For instance, Ogundele's study emphasizes that increased awareness about adverse events following immunization (AEFIs) correlates with improved health practices and care-seeking behaviors among mothers (Ogundele, 2023). This aligns with findings from Huda, which highlight that attendance at antenatal care (ANC) significantly correlates with improved knowledge and uptake of vaccinations (Huda, 2024). The current study's results reinforce the notion that targeted educational interventions can effectively elevate maternal knowledge and positively influence attitudes towards immunization.

Moreover, findings underscore importance of highlighting social drivers and behavioral of immunization. Parsekar's review identifies that education programs and short-term sensitization can lead to notable enhancement in maternal awareness about immunization outcomes, particularly in low-resource settings (Parsekar, 2024). This is further supported by Paudel's research, which indicates that parents' knowledge and attitudes directly influence their practices concerning childhood immunization (Paudel, 2024). The current study's significant shifts in knowledge and attitude scores reflect potential of structured educational programs to transform perceptions and behaviors related to immunization.

The positive correlation between knowledge and attitude observed in study, despite a slight reduction post-intervention, suggests a complex relationship that warrants further exploration. While the intervention successfully improved both metrics, the diminished correlation may indicate that knowledge alone does not fully dictate attitudes towards immunization. This supports the results from Oli et al., suggesting that while knowledge is essential, other factors such as personal beliefs, experiences, and social influences also play critical roles in shaping attitudes towards vaccination (Oli et al., 2021). The absence of significant associations between knowledge and demographic factors in the current study indicates that the intervention's effectiveness transcended socio-economic and educational backgrounds, highlighting the universal applicability of the educational strategies employed.

Furthermore, the study's results resonate with broader literature emphasizing the necessity of continuous education and support for mothers regarding childhood immunization. For instance, Gunardi's research illustrates the importance of practical training and simulation in enhancing healthcare providers' knowledge about immunization techniques, which indirectly benefits parents through improved healthcare delivery (Gunardi, 2024). Similarly, Takwi's findings advocate for intensified efforts in educating mothers and traditional healthcare givers to ensure comprehensive understanding and acceptance of immunization (Takwi, 2023). The current study's success in improving knowledge and attitudes among mothers serves as a compelling case for the implementation of similar educational interventions across diverse populations.

## 5. CONCLUSION

Study deduced that significant improvements in attitude and knowledge about immunization between mothers of under-five children following intervention underscore critical role of targeted educational programs in enhancing public health outcomes. Findings not only contribute to existing body of literature on maternal health and immunization but also provide

a framework for future interventions aimed at improving vaccination rates. Continuous efforts to educate and empower mothers, coupled with community support, are essential for sustaining these positive changes and ultimately reducing childhood mortality and morbidity related to illnesses avoidable by vaccination.

**Recommendations**

Structured teaching initiatives on immunization should be integrated into routine maternal healthcare visits to ensure continuous education from pregnancy through early childhood. Community health workers and peer support groups should be actively involved in spreading awareness and addressing misconceptions, particularly in rural and disadvantaged areas. Additionally, digital tools like SMS reminders, mobile apps, and social media campaigns can enhance accessibility and engagement, reinforcing positive attitudes toward immunization.

**Financial support**

No

**Conflicts of Interest**

No

## REFERENCES

[1] Ingale et al. "A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Revised Immunization Schedule among Mothers of underfive Children in Morgiri Village, Patan" International journal of contemporary medical research (2019) doi:10.21276/ijcmr.2019.6.6.30

[2] Muthukumaran "A study to assess the effectiveness of structure teaching program on knowledge and practice regarding prevention of acute upper respiratory tract infection among mothers of under five children in selected hospital, Lucknow" Journal of education technology in health sciences (2022) doi:10.18231/j.jeths.2022.010

[3] Sayed et al. "Effect of Bite-Sized Teaching Sessions on Parent's Knowledge, Attitude, and Practice Regarding Febrile Seizures in Children" Tanta scientific nursing journal (2022) doi:10.21608/tsnj.2022.253969

[4] Chockalingam "Effectiveness of Video-assisted Teaching on Knowledge Regarding Management and Prevention of Febrile Seizure among Mothers of Children Aged under Five Years" Pondicherry journal of nursing (2020) doi:10.5005/jp-journals-10084-12155

[5] Pattanashetti "Assessing The Impact of a Structured Teaching Programme On Maternal Immunization Knowledge for Under Five Children's in Selected Area of Bagalkot" International journal of membrane science and technology (2023) doi:10.15379/ijmst.v10i2.3331

[6] Almutairi et al. "Assessment of Mothers' Knowledge, Attitudes, and Practices Regarding Childhood Vaccination during the First Five Years of Life in Saudi Arabia" Nursing reports (2021) doi:10.3390/nursrep11030047

[7] Dubé et al. "Overview of knowledge, attitudes, beliefs, vaccine hesitancy and vaccine acceptance among mothers of infants in Quebec, Canada" Human vaccines & immunotherapeutics (2018) doi:10.1080/21645515.2018.1509647

[8] Gunardi, H. (2024). Immunization simulation using actual-size infant manikins for medical students in Indonesia. *Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare, 19*(6), 350-357. https://doi.org/10.1097/sih.0000000000000782

[9] Huda, M. (2024). Predictors of uptake of rotavirus vaccination amongst disadvantaged communities in Pakistan. *Global Pediatric Health, 11.* https://doi.org/10.1177/2333794x241235746

[10] Ogundele, O. (2023). Prevalence and patterns of adverse events following childhood immunization and the responses of mothers in Ile-Ife, South West Nigeria: A facility-based cross-sectional survey. *Osong Public Health and Research Perspectives, 14*(4), 291-299. https://doi.org/10.24171/j.phrp.2023.0071

[11] Oli, A., Ogwaluonye, U., Onubogu, C., Ozumba, A., Agbaenyi, O., Okeke, K., & Emechebe, G. (2021). Public knowledge and opinion on childhood routine immunizations in two major cities of Anambra State, Nigeria. *Journal of Multidisciplinary Healthcare, 14*, 247-257. https://doi.org/10.2147/jmdh.s279397

[12] Parsekar, S. (2024). Interventions addressing routine childhood immunization and its behavioral and social drivers. *Frontiers in Public Health, 12.* https://doi.org/10.3389/fpubh.2024.1364798

[13] Pattanashetti, S. (2023). Assessing the impact of a structured teaching programme on maternal immunization knowledge for under-five children in a selected area of Bagalkot. *International Journal of Membrane Science and Technology, 10*(2), 4135-4142. https://doi.org/10.15379/ijmst.v10i2.3331

[14] Paudel, D. (2024). Knowledge, attitude, and practice of parents toward childhood immunization: A cross-

sectional study in Gandaki Province of Nepal. *International Journal of Science and Healthcare Research, 9*(4), 62-70. https://doi.org/10.52403/ijshr.20240411

[15] Sriatmi, A. (2024). Adherence to inactivated polio vaccine immunization for children in Central Java Province. *International Journal of Public Health Science (IJPhS), 13*(3), 1452. https://doi.org/10.11591/ijphs.v13i3.23793

[16] Takwi, R. (2023). Knowledge and practices of female traditional healthcare givers to mothers on the referral system for care and immunization against childhood killer diseases in hard-to-reach areas of Adamawa State, Nigeria. *Texila International Journal of Public Health, 11*(1), 61-71. https://doi.org/10.21522/tijph.2013.11.01.art006