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“A descriptive study to assess the immunization compliance, common health problems of immunized under five children and perceived maternal barriers for immunization in selected rural areas of Udupi district”.

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"ABSTRACT

A research study titled "A descriptive study to assess the immunization compliance, common health problems of immunized under five children and perceived maternal barriers for immunization in selected rural areas of Udupi district", was conducted by Ms Anusha C.A in partial fulfilment of the requirement for the degree of Master of Science in Nursing at Manipal College of Nursing, Manipal University, Manipal, Karnataka.

The objectives of the study were to: find out the immunization compliance of under five children in selected rural areas of Udupi district, identify the perceived maternal barriers for immunization among mothers of under five children, assess the common health problems of immunized children observed by the mothers of under five children and find the association between perceived maternal barriers with selected demographic variables.

The conceptual framework used for this study was based on Modified Andersen's Behavioural Model of Health Services Utilization.

A descriptive survey approach was adopted for the research study. The sample for the present study were mothers of under five children who have immunization card of their children and had registered in PHC and Anganwadi of Udupi district. Non probability purposive sampling method was used to select subjects for the study.

Administrative permission was obtained from Dean, MCON Manipal and District Health Officer of Udupi district, Karnataka. Ethical clearance from the

Institutional research committee Manipal College of Nursing Manipal and Institutional Ethical Committee of Kasturba Hospital, Manipal was taken. Informed consent was obtained from the participants of the study. The data was collected from January 10th to February 15th of 2017.

The tools used for the data collection were Demographic Proforma, tool to assess compliance of immunization; self-administered questionnaire to assess perceived maternal barriers on immunization, self-administered questionnaire on common health problems of immunized under five children. To ensure content validity of instruments, the instruments were submitted to seven experts and modifications were made as per the expert's

suggestions. The pretesting was done among five mothers who have children less than five years of age.

The reliability of the tool was established by administering the tool to the 20 mothers from Hiriyadka PHC on 15/12/2016 and 22/12/2016. Reliability of compliance for immunization tool was checked by using inter rater reliability test and found to be reliable with score of $r = 0.85$. The tool on perceived maternal barriers was assessed by adopting internal consistency cronbach's alpha was found to be reliable with the score of $r = 0.75$. The reliability of the tool to assess common health problems of immunized under five children was done by using K20 co efficient and was found to be $r = 0.77$.

Analysis was done based on the objectives of the study, using descriptive (frequency, percentage, Mean, Median and Standard deviation) statistics and Inferential (Chi-square) Statistics with the Statistical Package for Social Sciences (SPSS) 16.0 version.

The study revealed that, among 310 mothers, 157 (50.6%) were belonged to the age of 26-30 years. Data on the education of mother shows 108 (34.8%) mothers had secondary school education. Concerning the number of children in the family showed 172 (55.5%) participants had two children and 82 (26.5%) children were less than 6 months of age, data on type of family showed 174 (56%) participants belonged to joint family, 233 (75.2%) mothers were homemakers, 267 (86.1%) were belonging to Hindu religion, 183 (59%) of mothers were belonged to below poverty level, 307 (99%) of mothers had taken their children for the immunization according to the age of the child, 230 (74.2%) of mothers were taken their child to Primary Health Care center for immunization and 200 (64.5%) mothers were not aware on the due vaccine of their child according to the age.

It was found that, among 310 children, 309 (99.7%) children had received OPV at birth, 309 (99.7%) had received BCG within one month after birth, 279 (90.0%) had received Hepatitis B vaccine within 24 hours of birth on scheduled date.

Among 310 children 305 (98.4%) children had received Penta vaccine (DPT, Hep B, Hib) (first dose) and OPV (first dose) at six weeks on scheduled date. Among 286 children, 282 (98.6%) children had received Penta vaccine (DPT, Hep B, Hib) (second dose) and OPV (second dose) at ten weeks on scheduled date. Among 249 children 242 (97.2%) children had received Penta vaccine (DPT, Hep B, Hib) (third dose) and OPV (third dose) and among 93 children, 82 (88.2%) had received IPV at 14 weeks on scheduled date. Among 218 children 210 (96.3%) children had received measles vaccine and Vitamin A (first dose) at nine months on scheduled date.

As per the data among 162 children, 146 (90.1%) had received measles (second dose) at 16-24 months on scheduled date. Data showed that among 175 children, 169 (96.6%) had received DPT booster (first dose), among 161 children 153 (95.0%) had received OPV booster and 169 (98.2%) children had received vitamin A (second dose) at 16-24 months on scheduled date. Data presents that among 12, seven children (54.2%) had not received DPT booster at five years.

The children who received Vitamin A third, fourth, fifth, sixth, seventh and eighth, all of them (100%) had received Vitamin A supplementation on scheduled date.

Mean score of personal barriers was 28.24%, barriers related to knowledge was 34.34% and barriers related to an organization was 21.07% which indicates that noncompliance of childhood immunization were depends upon knowledge of the mothers and organizational factors. Data also showed that Median score on perceived maternal barriers was obtained to the participants were 88 with the standard deviation of 9.76. According to the data, above the median lesser the barriers and maximum 214 (69%) mothers were not having any barriers including Personal Barriers, Barriers related to knowledge and barriers related to organization for immunization and 96 (31%) were having barriers for immunization.

As per the data, none of the children had health problems after the administration of Polio vaccine. Among 310 children, 122 (39.4%) children had fever, 79 (25.5%) children had hardness at injected site, six (1.9%) children had itching at the site of injection and Lymph node enlargement and 40 (12.9%) had Skin ulceration at injected site after the administration of BCG vaccine.

Data also shows among 93 children, eight (8.7%) children had redness at the site of injection, 26 (26.3%) children had fever and two (2.2%) children had skin rashes and 26 (28.3%) had Pain after the administration of IPV injection.

Among 310 children, 99 (31.9%) had fever, 16 (5.2%) children had swelling, 24 (7.7%) had ear pain and two (0.6%) of them had pain and none of them had diarrhea, skin rashes and respiratory problems after the administration of Penta Vaccine.

Among the 216 children who received measles vaccine, 80 (37%) had fever, four (1.3%) experienced rashes on the skin, two of them (0.9%) had swelling of lymph node and three (1.4%) of them had joint pain after its administration and none of the children had experienced any side effects to Vitamin A.

As per the data, there was no significant association between perceived maternal barriers and the age of the mother ($\chi^2(4)=4.32$, $p=0.35$), education of the mother ($\chi^2(5)=4.21$, $p=0.517$), religion of the mother ($\chi^2(2)=1.75$, $p=0.417$) and socioeconomic status of the family ($\chi^2(1)=0.075$, $p=0.934$). Thus the result revealed that there was no significant association between perceived maternal barriers with selected demographic variables.

Vaccination against childhood communicable diseases through expanded immunization programme is one of the best cost effective public interventions available in India. The district Health care workers of Udupi District, functioning effectively in implementing childhood immunization programme and also rural

community are reinforced for the effective implementation of immunization programme. The immunization compliance of all the vaccines was above 90% according to the study results. The reason for incomplete childhood immunization were identified mainly associated with maternal knowledge on immunization which includes; lack of information about all vaccines, adverse events of vaccines, lack of knowledge on due vaccine, issues of child's safety, lack of knowledge on immunization day etc. The result also showed that, there is a need for enforcing maternal knowledge on immunization. Thus the present study concluded that as maternal knowledge on immunization has an influence on childhood vaccination, therefore a positive reinforcement and timely health education regarding vaccines are important by health care professionals to reduce immunization dropout of children.

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