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Familiarity with National Immunization Schedule among Mothers of Fifteen to Thirty Months Old Children

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ABSTRACT:

Background & Objectives: World Health Organization established a program called Expanded Program on Immunization (EPI) in 1974 and many countries started implementing EPI. The study aims to identify the familiarity with Immunization Schedule among Mothers of 15 – 30 Months old children by assessing the immunization related knowledge and practice.

Method: A descriptive cross sectional study was carried out in Bharatpur Municipality, Chitwan, Nepal. Non probability purposive sampling technique was used to select 102 sample size. Data were collected by using the semi-structured questionnaire through the interview method. Data were analyzed using SPSS version 20. Descriptive statistics and inferential statistics were used to analyze the data.

Results: The study reveals that Cen percent of the respondents had heard about childhood immunization and Health worker were the main (90%) source of information. In this study, finding shows that 51 % of the respondents had moderately adequate knowledge and 98% of the respondents had adequate practice. It was found that, there was a statistically significant association between knowledge and practice of the respondents.

Conclusion: From this study it can be concluded that for increasing the familiarity with immunization schedule, practice alone is not sufficient. They must be informed about the newly added vaccine.

KEYWORDS: Familiarity, Immunization Schedule, Mothers, 15- 30 months old child

I. INTRODUCTION

Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine. Immunization is a proven tool for controlling and eliminating life-threatening infectious diseases and is estimated to avert between 2 and 3 million deaths each year. World Immunization Week, which is held from 24 -30 April, aims to raise awareness about the critical importance of full immunization throughout life, and its role in achieving the 2030 Sustainable Development Goals. [1] Vaccine preventable diseases (VPD) are considered one of the main causes of sicknesses and deaths among children all over the world, parents' knowledge and attitude towards immunization are likely influence uptake, vaccination is one of the most cost-effective public health tools to prevent infectious diseases. [2]

Nepal has been polio free since 2010 with the last case due to wild polio virus detected in the country on 30 August 2010. Subsequently, the Regional Commission for Certification of Poliomyelitis Eradication declared Nepal polio-free on 27 March 2014. Still, the biggest threat to global polio eradication effort and for maintaining polio free status of Nepal is the risk of importation from any of the currently polio infected countries. The introduction of the pneumococcal vaccine will address one of the major killers of children: pneumonia. Some of the other severe forms of pneumococcal disease are pneumonia, meningitis causing life-long disability such as hearing loss and learning disability. [3]

Statement of the Problem

In 2012, the World Health Organization estimated that vaccination prevents 2.5 million deaths each year. If there is 100% immunization, and 100% efficacy of the vaccines, one out of seven deaths among young children could be prevented, mostly in developing countries. [4] According to Annual report of Department of Health Service 2072/2073; 87 % of children immunized with BCG, 82% with DPT-HepB-Hib3, 79 % with OPV 3, 77 % against MR, 63 % with JE and 66% fully immunized as per NIP schedule. [5]

Immunization remains one of the most important public health interventions and a cost effective strategy to reduce both the morbidity and mortality associated with infectious diseases. Over two million deaths are delayed through

immunization each year worldwide. [6] The economic burden of control of disease in the developing countries by treatment, especially among the vulnerable group such as infant, is enormous and immunization has been recommended as a cost effective measure for interventions in preventive healthcare [7] Immunization is a proven tool for controlling and eliminating life-threatening infectious diseases and is estimated by WHO to avert between 2 and 3 million deaths each year. World Health Organization (WHO, 2016) reported that 115 million infants worldwide received Diphtheria-Tetanus and Pertusis vaccine, there is about 85% of the world's children received one dose of measles vaccine, and received polio vaccine. [8]

II. LITERATURE SURVEY

Descriptive cross sectional study carried out to determine the knowledge, attitude and practice of mothers in Kosofe Local Government Area of Lagos State, Nigeria, on childhood immunization. Out of the mothers interviewed, 89.5%, 85.5%, 78.5%, 71.0%, 73.5%, 42.0% and 6.5% of them knew about Bacille Calmette Guerin (BCG), oral polio, diphtheria, pertusis and tetanus (DPT), yellow fever, measles, hepatitis B virus (HBV), and meningococcal vaccinations respectively. However, not more than 54.5% of these respondents actually knew the diseases that these vaccinations prevent in their children even though almost all (95.5%) of them perceived immunization to be beneficial and showed good attitude. Majority of the mothers demonstrated appreciable knowledge, attitude and practice on childhood immunization, more awareness programmes in developing countries are required. [9]

A research study conducted by Farha Azmi, and Dr. Ratna Prakash titled "Assessment of Knowledge towards Immunization among Mothers of Under-Five of U.P India". In this study Knowledge Score was categorized in 3 categories (good, average and poor). Good knowledge score is 10%, Average knowledge score is 23.34%. Poor knowledge score is 66.66%. [10]

III. MATERIALS AND METHOD

A descriptive cross-sectional design was used to assess the familiarity with latest national immunization schedule among mothers of 15 -30 months old children. Altogether 102 samples were selected using non probability purposive sampling technique. The study setting was two ward (ward no. 6 and 13) of Bharatpur Municipality, Chitwan, Nepal. A pretested semi structured interview schedule was used for data collection. A semi structured interview questionnaire, which was categorized into three categories: Section A: Questions related to the socio demographic data, Section B: Questions related to the knowledge regarding the childhood immunization and Section C: Questions related to the practice regarding the childhood immunization. Formal written permission were obtained from concerned authorities i.e from the department of Home Science (Tribhuvan University), concerned ward office of Bharatpur metropolitan city Chitwan and all respondents to conduct main study. The respondents' familiarity with national immunization schedule was determined by assessing the knowledge and practice associated with it. Total knowledge score / practice score was divided into three categories:

- ✓ **below 35%** - Inadequate knowledge / Practice, **36-60%** - Moderately adequate knowledge/ Practice, **Above 60%** - Adequate knowledge/ Practice

IV. RESULTS

Table 1: Socio-Demographic Characteristics of the Respondents

n = 102

Socio – Demographic Characteristics	Major finding	Frequency	Percentage
Age of the respondents	26 – 30 years	41	40.2
Current Marital status of the respondents :	Married	99	97.0
Educational Status of the respondents	Literate	95	93.1
Type of Family	Joint	46	45.1
Occupation of the Respondents:	Housewife	32	31.4
Religion of the Respondents	Hindu	87	85.3
Age of the Child :	26 – 30 months	36	35.3

Table 1 shows that majority (40%) of the respondents belonged to 26 – 30 years of age group while 97 % of the respondents were married. Majority (93%) of the respondents was literate and 45 % of the respondents belonged to the joint family. Most of the respondents (85%) were Hindu. Most (35%) of the children who were under study were from 26 to 30 months age group.

Table 2: Distribution of the Respondents according to Source of Information n= 102

Source of information	Frequency	Percentage
Radio/T.V	66	64.7%
Health worker	92	90.2%
Friends	61	59.8%
Experience	63	61.8%

Multiple Response* (Total response exceeds 100 percent)

Table 2 shows that Health worker were main source of information i.e. 90 %.

Figure 1. Knowledge on Name of Vaccine n=102

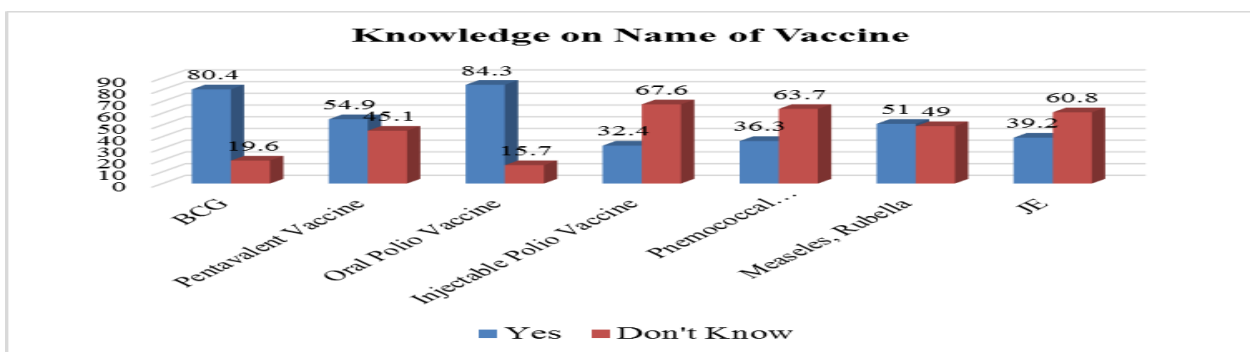


Figure 1 shows that majority of the respondents knew the name of Oral polio vaccine followed by BCG vaccine and Pentavalent vaccine i.e. 84%, 80%, 54% respectively.

Figure 2. Immunization status of the own children n=102

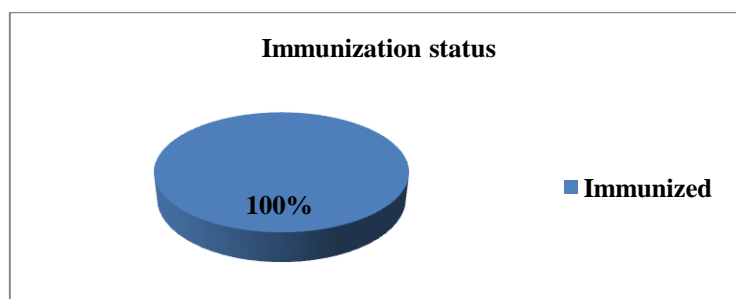


Figure 2 shows that all of the respondents had immunized their children.

Table 3: Distribution of Respondents according to Knowledge Category n = 102

Knowledge category	Frequency	Percent
Inadequate knowledge	15	14.7
Moderately adequate knowledge	52	51.0
Adequate knowledge	35	34.3
Total	102	100.0

Table 3 shows that Majority (51 %) of the respondents had moderately adequate knowledge, while 34 % of the respondents had adequate knowledge related to childhood immunization and 14.7 % still had inadequate knowledge.

Table 4: Distribution of Respondents according to Practice Category n = 102

Practice category	Frequency	Percent
Inadequate Practice	0	0.0
Moderately adequate practice	2	2.0
Adequate practice	100	98.0
Total	102	100.0

Table 4 shows that majority (98%) of the respondents had adequate practice related to national childhood immunization programme.

Figure 3. Completion of Vaccine to the Child

n=102

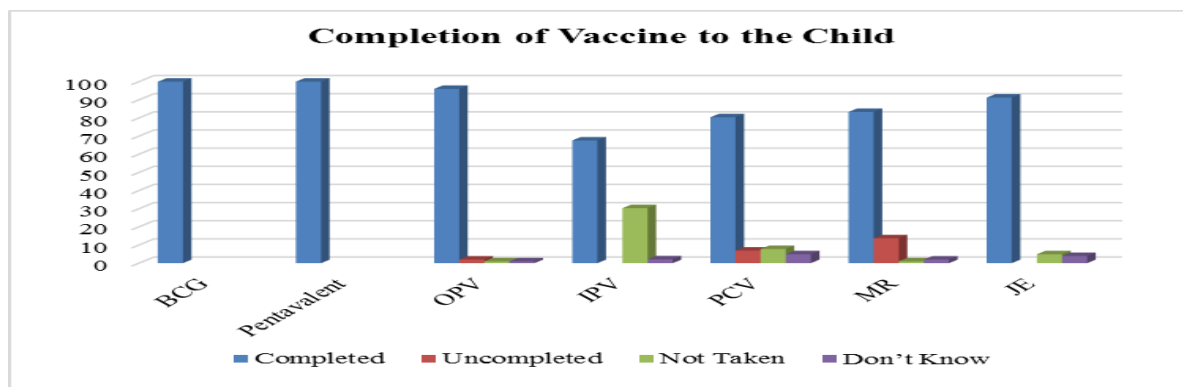


Figure 3 shows that all of the respondents had completed BCG and Pentavalent vaccine to their child while 96 % had completed OPV while majority (30.39%) of the respondents did not taken IPV to their child.

Table 5: Association of knowledge and Practice with selected variables n=102

Variables	Knowledge category (P value)	Practice category (P value)
Age of the respondents	.023	-.026
Current Marital status of the respondents :	-.170	-.272**

Educational status of the Respondents	-.252*	-.241*
Occupation of the Respondents	.022	.074
Religion of the Respondents	-.065	.049
Level of knowledge of the respondents	-	0.03

****.** Correlation is significant at the 0.01 level

***** Correlation is significant at the 0.05 level

Table 5 reveals that respondent's level of knowledge is statistically significant with age and occupation of the respondents, while level of practice is statistically significant with religion of the respondents. This table shows that as the p-value is <0.05 , there exists statistically significant relationship between knowledge and practice of the respondents.

V. DISCUSSION

This study was carried out to assess the Familiarity with latest National Immunization Schedule among mothers of 15 – 30 months old children. This study revealed that mean age was 26.36 years, while 97 % of the respondents were married. Majority (93%) of the respondents were literate, Most of the respondents (67%) were housewife and 85% were Hindu. This finding also correlates with the finding of research study conducted by Rachna Kapoor and Sheetal Vyas titled "Awareness and knowledge of mothers of under five children regarding immunization in Ahmedabad" showed that mean age of the respondents was 28.4 years, majority (72%) of the respondents were housewives & majority (65%) of them were Hindus.

Finding shows that Cen percent of the respondents had heard about immunization and Health worker were the main (90%) source of information. In this study 99 % of the respondents were able to state that immunization prevents childhood disease and improves the overall health status of the child. Similar type of the finding was found in a cross-sectional study in rural Sheema district in southwest Uganda was done to survey mothers' knowledge and attitudes towards childhood immunizations in which 93.5% of the women were able to state that childhood immunizations protect children from diseases. The finding of this study also correlates with the study conducted by Kapoor, R., & Vyas, S, in which main sources of information of mothers about VPD's was health Worker.

Cen percent respondents had completed BCG and Pentavalent vaccine to their child while 96 % had completed OPV and 30.39% of the respondents did not taken IPV to their child. This finding is also supported by research study conducted by Choudhary, R., et.al., in which finding revealed that 86% (129) had completed their child's immunization on time, whereas 14% (21) had delayed immunization or incomplete immunization. The finding of this study also correlates with a cross sectional survey primary health care clinic at Al-Beida City, Libya titled "Knowledge, attitude and practices of mothers regarding immunization of infants and preschool". Results showed that 81% (n=162) completely immunized their children and 19% (n=38) partially immunized them.

In this study, the finding revealed that there is no statistically significant, relationship between age and knowledge of the respondents as well as between age and practice of the respondents as the p-value is not <0.05 . But in contrast to the result showed in study conducted by Oreagba, I.A., Awodele, O., Akinyede, A., Awodele, D.F., & Dolapo, D.C which revealed that there were significant ($P < 0.05$) relationships between age of respondents, ethnicity, level of education, occupation and practice to immunization. However, there was no significant ($P > 0.05$) relationship between religion and practice to immunization. As the p-value is <0.05 , there exists statistically significant relationship between knowledge and practice of the respondents.

VI. CONCLUSION

From this study it can be conclude that Familiarity of mothers with childhood immunization schedule can directly or indirectly be related to different factors including female education, type of family and socio-economic status. Gaps in both knowledge and practice were identified. Most of respondents had good practice toward newly added vaccine. They must be informed about the newly added vaccine. Educational interventions are required to improve mother's knowledge on the vaccination.

VII. ACKNOWLEDGEMENT

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