KNOWLEDGE, ATTITUDE AND PRACTICE OF CARE GIVERS WITH CHILDREN UNDER FIVE YEARS OF AGE ABOUT VACCINATION IN SUNSARI DISTRICT, NEPAL

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ABSTRACT

Introduction

Immunization has shown major preventive aspects of infectious diseases, disability and death. Care giver is a person who provides direct care for children, elder people and chronically ill.

Objectives

To assess the Knowledge, Attitude and Practice (KAP) of caregivers in Sunsari district about vaccination of under five children brought for vaccination at different private and government vaccination centers.

Methodology

It is a cross sectional study that was carried out among 100 care givers from different places of Sunsari district for 3 months. The care givers completed a semi structured questionnaire that contains 4 different parts about the demographics, knowledge, attitude and practice of care givers toward immunization.

Results

Most of the care givers have high level of awareness and importance of vaccination, which shows positive attitude and practice. The overall KAP was good among most of the caregivers (87.2%). The higher KAP level was positive associated with female gender, higher educational degree and having higher number of children.

Conclusion

Most of caregivers from three different places of Sunsari districts had good KAP (in sense that most of the caregivers have awareness for quality and basic health standard) towards immunization which was associated with female gender and higher educational degrees. However, educational programs like community awareness and mobilizing Female Community Health Volunteers for providing appropriate knowledge of vaccination which increases the caregivers' knowledge, which might have change cognitive behavior. This study reflects the overall knowledge of caregivers towards immunization process which is very essential in childhood for prospective healthy future of the child.

KEYWORDS

Attitude, caregivers, immunization, knowledge practice, vaccination

INTRODUCTION

During the last few decades, the burden of the infectious diseases has been reduced through immunization. The annual vaccination ranged from 72.6% to 100% and estimated annual burden is 0 to 30.6% DALYs/100,000.[1] Immunization is highly cost effective and play major role in impact of health of the individual in the society. It reduces the hospital stay, treatment expenses & mortality.[1] Hence it is important to give vaccination to every child. The most common vaccine preventable diseases are Rubella, Measles, Diphtheria, Tetanus, Pertussis and Polio.[1, 2] Giving the child the appropriate vaccine would significantly decrease the costs of disease treatment and rates of disease thus enhance a good quality of life for children.[3] The WHO estimated a reduction in the death rate from infectious diseases between 2 and 3 million each year.[4] In Nepal, the vaccines for children are given between births to 5 years of age. The vaccines are mainly given to protect them from different diseases. Despite the major efforts of health authorities to keep knowledge, skill and attitude free of Diphtheria, Pertussis, Tetanus, polio and measles, many physicians face major obstacles from the caregivers about the safety, efficiency and the necessity of regular childhood vaccines.[5] Most of caregiver's knowledge was that vaccines can cause autism and disabilities.[6]

In a global report issued by the Center for Disease Control, it was stated that the general attitude of caregivers was negative among most of them toward childhood vaccination programs.[7] Moreover, some caregivers thought that polio immunization will decrease the fertility rate thus the caregivers attitude plays important role in vaccination process as they are the decision makers for their children [8]. The knowledge, attitude and practice pattern of caregivers toward vaccination from the first day of birth could provide early prevention from many communicable diseases, disabilities as well as other causes of death.[9,10] Hence this study was conducted to assess the knowledge, attitude and practice of caregivers of that specific place.

METHODOLOGY

This is a cross sectional study that was carried out in 100 caregivers from three randomly chosen health centers. Three health centers were 1. Khannar Health Post, 2. Sunsari Community Hospital, 3. Thalaha Health Post respectively from Sunsari District of Eastern Nepal. Khannar Health Post and Thalaha Health Post is government based and it operates health issues of that region, Sunsari Community Hospital is non- government hospital and provides service to public regarding the government immunization plans. The study was conducted from March to May 2019. The sample size was calculated using the reference average prevalence of knowledge and practice 84%[11] and 7.5% difference.

where,

Sample size

$n = Z^2PQ/d^2$

$= 1.96^2 \times 84 \times 16/7.5^2$

= 92, we have taken 8 more samples to replace incompleteness in the sense that if there is any missing information though after collection of data it is not found so. It known that more than required sample size is always considered better. However non-response rate was not estimated as all of the caregivers participated in the study. The inclusion criteria include children age upto 5 years who were taken health centre for vaccination, whereas the exclusion criteria was children having neurological disorders.

The study included 100 different caregivers having at least one child. The caregivers were interviewed at the health centers, these came to vaccinate their children. This study included face to face interview with the caregivers. The questionnaire was developed after searching the available literature from different search engines including Pubmed, Google scholar, science direct,*.etc.* using the key words including knowledge, attitude, practice, caregivers, mothers, immunization, vaccination. The questionnaire was pre-tested. Pre- testing was conducted from comparable study population and environment in other locality. Face and content validity were established by consulting with 3 subject experts. The questionnaire contained 4 different parts. The first part included questions about the demographics (age, education, working status and number of children). The other 3 parts included questions regarding the knowledge, attitude and practice of caregivers toward immunization. After finishing the questionnaire, all the respondents took handouts that contain all the available correct information about vaccination of children to enhance their knowledge and decrease the misconceptions about immunization. The collected data were analyzed using SPSS, version 23. The descriptive analysis was shown as percentages and frequencies.

The study was approved by institutional Review Committee of Birat Medical College & Teaching Hospital, Morang, Nepal

RESULTS

The age of included caregivers ranged from 20-40 years old with mean ±SD value 31.1±1 years. Majorities (65%) of respondents were between the age group of 20-29 years and 13% caregivers from age group of 30-39 were also shows the medium concern about the vaccination. The least age group respondent of KAP were of age group less than 20

Table.1: On the basis of age group

Age Group	Frequency	Percent
< 20 years	11	11
20-29 Years	65	65
30-39 Years	13	13
≥40 Years	11	11
Total	100	100

Majority of respondents was (35%) had education up-to primary level, whereas 27% of caregivers had higher education degree, 35% of caregivers were having primary education, 19% of caregivers were having secondary education and 19% of the caregivers were having no education at all , as shown in Table 2.

Table.2: On the basis of age group

Education Level	Frequency	Percent
No education	19	19
Primary	35	35
Secondary	19	19
Higher education	27	27
Total	100	100

Most of the caregivers were house wife job i.e. 75%, followed by 16% having private job and 2% doing business as shown in (Table 3).

Table 3: On the basis of Occupation

Job Profile	Frequency	Percent
Housewife	75	75
Private Job	16	16
Business	2	2
Other	7	7
Total	100	100

Most of the decisions were made for vaccination by mutual understanding by both of the parents in 59% of population in our study, followed by 28% relatives, 11% mothers and 2% fathers (Table 4)

Table 4: On the basis of Decision making

Gurdian	Frequency	Percent
Father	2	2
Mother	11	11
Both Caregivers	59	59
other relatives	28	28
Total	100	100

The information about the vaccination were totally dependent upon the FCHV as more than 41% of the information was deliberated by FCHV, 15% by health assistant, 25% by media and only 19% by doctors/nurse (Table 5).

Table 5: On the basis of source information

Source	Frequency	Percent
FCHV	41	41
Health Assistants	15	15
Media	25	25
Doctor/Nurse	19	19
Total	100	100

Table 6: Reason for vaccination

Answer	Frequency	Percent
Yes	60	60
No	40	40
Total	100	100

Table. 7: Information about Correct Age for vaccination

Answer	Frequency	Percent
Yes	66	66
No	34	34
Total	100	100

Table 8: Knowledge about Harmful effects of vaccination

Answer	Frequency	Percent
Yes	10	10
No	90	90
Total	100	100

Regarding the reason for vaccination, only 60% of the respondents know about the reason for vaccination whereas 40% don't know it because of lack of awareness. Similarly 66% of the population knows the correct age of vaccination whereas 34% don't know it.

Knowledge about harmful effects of vaccination was also studied in which 90% of the population doesn't know the harmful effects of the vaccination. The above descriptions were shown in the table 6, 7, 8 respectively.

DISCUSSION

The childhood vaccination has shown major aspects of disease and death prevention during the last decades especially among children under five year's old.[11] Thus the KAP of caregivers toward vaccination is important issue to enhance the children health as well as prevention of diseases. Our study reveal that mean ±SD of caregivers was 31.1±1 years. Most of the caregivers (65%) were of age 20-29. Regarding the education of caregivers, 35% of caregivers had primary level education and most of the caregivers were housewives (75%). The decisions for vaccination to children were taken by 59% by mutual co-operation of caregivers. Around 41% of caregivers get information by FCHV and 60% of the caregivers knew the reason for vaccinations.

In the present study, 86% of the children were found to be fully vaccinated for their age and 14% were partially vaccinated. These study findings were similar to study conducted in India (Maharashtra, Delhi).[12]In the study more than 75% of the children were fully vaccinated and 25% were partially vaccinated. Majority of the children (34%) missed one or more doses of the vaccine because of their

illness. Other reasons for missing doses of vaccine were inconvenience, unawareness and unable to access health care services. Child may still be vaccinated if he or she has a low-grade fever, cold, running nose, cough, ear infection or mild diarrhea so that they're protected against serious diseases.[13]

One of the important factors which can affect the parental practice is their knowledge regarding vaccination. A study conducted by Favin et al.[14] showed that lack of knowledge about the importance of vaccines has been one of the main barrier to immunization. In this study, 70% of respondents believed that immunization prevents some infectious diseases. Around 2% of caregivers had a misconception that it is a nutritional supplement which increases growth. Though vaccines *per se* are not nutritional supplements, they do indirectly facilitate growth and development of children. The present study showed a significant association between female gender, high educational degree as well as higher number of children with good KAP results. As for the gender, mothers are the care giver of their children and spend more time with their children than fathers. Also, various studies showed a relation between higher educational level of the caregivers and higher KAP results regarding child immunization.[15] In addition, caregivers having more children were supposed to have higher KAP results.[16] Good parental practice of immunization will reduce the incidence of infectious diseases. In the present study, all children were found to be immunized with BCG at birth. In India, BCG is given within 1 week of childbirth.[17] In our study, all the interviewed caregivers had institutional deliveries. But in some cases BCG is given normally to mother before discharge or at first week of life. While their stay in the hospital, they were given printed vaccination card depicting the vaccines to be given against the recommended age. It is a routine practice that, doctor and other health care workers further emphasize the compliance to vaccination schedule before the mother is discharged. All these factors would explain 100% coverage of BCG. The vaccination card is a very important document for the caregivers to determine which vaccine is due for their child and the provider to check their child's immunization status. Odusanya O et al. have reported that if caregivers could maintain a vaccination card, the child is more likely to get fully vaccinated. In this study, though vaccine card was maintained by all of them (100%), some (14%) missed out one or more doses which could be due to other reasons mentioned earlier.[17] The infant vaccination access to health services and other infrastructure has positively inconsistent by paternal literacy, is associated with better vaccination coverage of infants as per the study conducted Mathew.[18] In Mabrouka et al., study on knowledge, attitude and practices of mothers regarding immunization of infants and preschool children at Al-Beida City, Libya which has more illiteracy rate i.e. 88.23% but, the difference was not statistically significant.[19] Angelillo et al, conducted a study Mothers and vaccination: knowledge, attitudes and behavior in Italy.[20] The study evaluates knowledge, attitudes, and behavior of mothers regarding the immunization of 841 infants who attended public kindergarten in Cassino and Crotone, Italy. 57.8% of mothers were found to have aware about the immunization process. The results showed that knowledge was significantly greater among mothers with a higher education level. In our study, educated mother showed high degree of Knowledge as well. This study helps to guide in exploring health worker regarding immunization and also interactions between caregivers and health workers for better quality of life of children by identifying the problems.

CONCLUSION

Most of caregivers from the study location had good KAP toward immunization which was high among female gender. and among higher educational degrees population. However, educational programs are still in need to increase the caregivers' knowledge and practice especially among illiterate and less educated caregivers living in rural areas.

LIMITATION OF THE STUDY

The sample size was small, so study cannot be generalized.

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CONFLICT OF INTEREST

No conflict of interest

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