International Journal of Scientific Reports
Sharma D et al. Int J Sci Rep. 2017 Jun;3(6):156-165
http://www.sci-rep.com

pISSN 2454-2156 | eISSN 2454-2164

DOI: http://dx.doi.org/10.18203/issn.2454-2156.IntJSciRep20172507

Original Research Article

An exploratory study on knowledge and practice regarding family planning and immunization among women attending MCH clinic

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Received: 22 March 2017
Accepted: 19 April 2017

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ABSTRACT

Background: Globally, an estimated 300,000 maternal deaths occur annually owing to causes associated with pregnancy, of which nearly 75% were preventable. Each year, modern contraceptives help women prevent 215,000 pregnancy-related deaths (including 66,000 from unsafe abortions), 2.7 million infant deaths and the loss of 60 million years of healthy life. Vaccination is one of the most cost-effective health interventions available, saving millions of children from illness, disability and death each year. The burden of infectious diseases has been reduced primary due to immunization.
Methods: A cross-sectional study regarding knowledge and practice of family planning and immunization was conducted in a Maternal and Child health (MCH) clinic of Western Regional Hospital, Pokhara. The sample consists of 100 married women of reproductive age group (15-49) years having under five children coming to the clinic using purposive sampling technique.
Results: Knowledge regarding family planning methods were oral contraceptive pills/depot/implant (84%) followed by intrauterine contraceptive device (77%), condom (65%), natural methods (80%), permanent method (92%). Condom was most commonly used among temporary methods. More than 4/5th of the respondents were aware about vaccines as per schedule of Nepal. But 5% of the respondents had neither given any vaccine to their baby and nor taken any dose of tetanus toxoid vaccine during their previous pregnancy.
Conclusions: Still 14% of the respondents were not aware about any methods of family planning and 19% does not know about the vaccines as per schedule of Nepal. So there is a need to increase awareness about the different types of family planning methods and immunization.

Keywords: Family planning, Immunization, MCH clinic, Reproductive age

INTRODUCTION

Globally, an estimated 300,000 maternal deaths occur annually owing to causes associated with pregnancy, of which nearly 75% were preventable.[1] Nearly 170 million women have no access to safe and effective methods of family planning in developing countries.[2] Nearly 1/3 of population growth is due to unplanned pregnancies (facts and figures). Of the 210 million pregnancies occurring each year, nearly 80 million are unintended.[3] Each year, modern contraceptives help women prevent 215,000 pregnancy-related deaths (including 66,000 from unsafe abortions), 2.7 million infant deaths and the loss of 60 million years of healthy life.[4] Another 25 million occur as a result of incorrect or inconsistent use of contraceptive method and method failure.[5] Failure to plan a pregnancy can adversely affect the health of the family as a whole and the health of mothers and children remain a subject of global concern.[6,7]

In Nepal, the concept of family planning was introduced by the Family Planning Association of Nepal (FPAN), set up by a group of social workers in 1959, since then many strategies and planning have taken place and thus there was the development of National Family Planning Strategy in 2012 by Ministry of Health and Population, Family Health Division to further strengthen and address the existing gaps of family planning program in Nepal.[8] However, Nepal Demographic Health Survey (NDHS) 2011 has shown unexpected results on contraceptive prevalence rate (CPR). Although CPR of all methods increased from 48% in 2006 to 50% in 2011, there was a slight decrease in CPR of modern methods from 44.2% to 43.2% during the same period.[9]

Globally 1.5 million children die every year from vaccine preventable diseases, and most of these deaths occur in the developing countries.[10] In Nepal, infant and under-five mortality rates in the past five years are 46 and 54 deaths per 1,000 live births, respectively. At these mortality levels, one in every 22 Nepalese children dies before reaching age 1, and one in every 19 does not survive to his or her fifth birthday.[8] Vaccination is one of the most cost-effective health interventions available, saving millions of children from illness, disability and death each year. The burden of infectious diseases has been reduced primary due to immunization. Life expectancy is also increased due to vaccination.[11] Childhood immunization represents the gateway to provision of comprehensive health care to which all children ought to be entitled. From the early 1980s to the early 1990s, the reported coverage increased from under 20% to approximately 80%, and millions of 6 deaths were estimated to have been avoided as a result during this period.[12]

The National Immunization Program (at the time known as the Expanded Program on Immunization) was initiated in 1979 in three districts with only two antigens (BCG and DPT) and was rapidly expanded to include all 75 districts with all six recommended antigens (BCG; diphtheria, pertussis, and tetanus [DTP]; oral polio vaccine [OPV]; and measles by 1988. In 2003, the monovalent hepatitis B (HepB) vaccine was introduced, which was later administered as a single tetravalent (DPT-HepB) injection. In 2009, a vaccination against *Haemophilus influenzae* type B (Hib) was introduced in phases in the country. Likewise, in 2009, the Japanese encephalitis (JE) vaccine was introduced into the routine immunization program in 16 JE-endemic districts following JE mass vaccination campaigns. Overall, 87 percent of children age 12-23 months was fully immunized by the time of the survey. With regard to specific vaccines, 97 percent of children age 12-23 months had received the BCG immunization and 88 percent had been immunized against measles. The findings show that 3 percent of children 12-23 months did not receive any vaccine at all.[8]

Despite the efforts of government and other health agencies for the provision of the family planning and immunization services free of cost. The contraceptive prevalence rate is only 50% and yet some proportion of vulnerable infants and children in Nepal remain unimmunized. So this study aims to assess knowledge and practice about the family planning methods and immunization service among the reproductive age group women coming to MCH clinic.

METHODS

A descriptive cross-sectional study was conducted in MCH clinic, Western Regional Hospital, Pokhara between 1st January to 1st March 2015. The sample of this study consists of 100 married women of reproductive age group (15-49) years having under five children came to MCH clinic for vaccination using non-probability purposive sampling technique. Women who were willing to participate and available at the time of data collection were included in the study.

The instruments were developed after review of literature and consultation with experts. Instruments were divided into 3 parts: Tool I: socio-demographic proforma, Tool II: knowledge and practice questionnaire on family planning, Tool III: knowledge and practice questionnaire on immunization.

The pre-testing was conducted in women of reproductive age in Manipal College of Medical Sciences, Phulbari-11, Pokhara, Nepal from 20th January to 25th January 2015 among 10 women. The data was collected through questionnaire by interview technique and recorded systematically to facilitate computer entry and data analysis.

Data analysis was planned based on the objectives of the study. Data was compiled, edited, coded, classified and tabulated. It was done to reduce, organize and give meaning to the data by through descriptive statistics using SPSS package 18 version. In descriptive statistics, frequency and percentage were used to describe the data.

Approval to conduct the study was taken from in charge of MCH clinic, DPHO. Individual consent was taken from the respondents after explaining the purpose of the study prior to the data collection. Privacy and confidentiality of all respondents was maintained.

RESULTS

Data was collected by interrogating 100 samples of reproductive age group women having under five child.

More than 3/4th of the respondents were in age group 20-25 years. Less than 1/4th (24%) of the respondents were illiterate. Majority of the respondents (81%) were housewife. Less than half (45%) of the respondents were having family income of Nrs. 10,000-20000. More than sixty (61%) of the respondents were living in nuclear

family. More than half (56%) of the respondents had 1 child (Table 1).

Table 1: Socio-demographic characteristics of respondents (n=100).

Sample characteristics	Frequency (f)	Percentage (%)
Age (in years)		
20-25	76	76
26-30	16	16
31-35	5	5
Caste/ethnicity		
Brahmin	39	39
Chettri	24	24
Gurung/Magar	29	29
Others	8	8
Educational status		
Illiterate	24	24
Able to read and write	18	18
Primary	14	14
Secondary & above	44	44
Occupation status		
Housewife	81	81
Others	19	19
Family income per month (Nrs)		
<10,000	10	10
10,000-20,000	45	35
20,000-30,000	33	33
> 30,000	12	12
Type of family		
Nuclear	61	61
Joint /Extended	39	39
Size of family		
3	61	61
4-5	34	21
>5	5	18
Total number of children		
1	56	56
2	36	36
>2	8	8

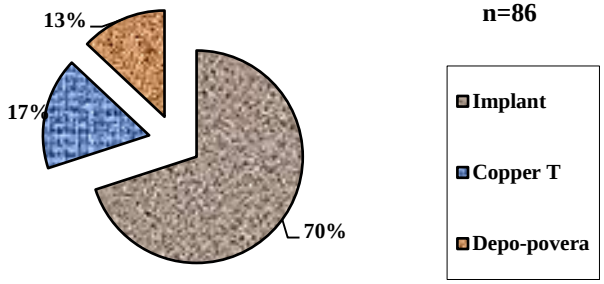

Figure 1: Family planning method work effectively for 3 years.

Majority (83%) of the respondent replied the purpose of family planning. Less than 1/5th (16%) of the respondents know about the recommended time of birth spacing. More than half (59%) of the respondent's source of information was health personnel. Whereas 14% of the respondents were not aware concerning any methods of family planning (Table 2).

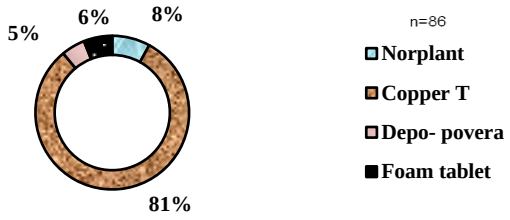

Figure 2: Family planning method work effectively for 12 years.

Table 2: Knowledge questionnaire on family planning (n =100).

Sample characteristics	Frequency (f)	Percentage (%)
Family planning		
Abortion	13	13
Birth spacing	83	83
Family bonding	4	4
Purpose of family planning		
To avoid unwanted pregnancy	81	81
To improve health status	19	19
Recommended time of birth spacing (years)		
2-3	16	16
3-4	31	31
4-5	53	53
Number of children couple should bear		
1	9	9
2	85	85
≥3	6	6
Eligible age of family planning (years)		
15 -20	3	3
20-30	21	21
15-45	66	66
>30	9	9
Heard about FP methods		
Yes	86	86
No	14	14
If yes, source of information		
Advertisement	27	32
Health centres/health personnel	29	34
Midwives	22	25
Relatives/friends	8	9
Types of family planning methods		
Natural methods		
Yes	69	80
No	17	20
Physical methods (condoms)		
Yes	56	65
No	30	35
Intrauterine devices		
Yes	66	77
No	20	23
OCP/implant/depot		
Yes	72	84
No	14	16
Permanent methods		
Yes	79	92
No	7	8

More than 2/3rd of respondents (70%) gave the accurate answer regarding the efficacy of implant (Figure 1).

Most of the respondents (81%) had mentioned working period of copper T (Figure 2).

Many of the respondents (78%) replied that condom helps to prevent from STD/HIV (Figure 3).

Forty one percentages of the respondents had knowledge about content of iron in OCP (Figure 4).

Among temporary methods of family planning, condom was most commonly used i.e. 64%. Less than half of the respondents (44%) had already done vasectomy as permanent methods of FP (Table 3).

Table 3: Practice questionnaire on family planning (n =100).

Characteristics	Frequency (f)	Percenatage (%)
Temporary method of FP used (natural)		
Calender	44	44
LAM	51	51
Cervical mucus	2	2
Temperature	3	3
Other temporary methods used (artificial)		
Condom	64	64
Oral Contraceptive Pills	18	18
Depoprovera	18	18
Permanent methods of FP used		
Yes	44	44
No	56	56
Type of permanent methods used		
Vasectomy	20	45
Minilap	18	41
Laposcopy	6	14
Place of receiving FP methods		
Hospital	46	46
Health post	34	34
PHC	11	11
Clinic	6	6

Table 4: Knowledge questionnaire on immunization (n =100).

Sample characteristics	Frequency (f)	Percentage (%)
Role of immunization		
That prevent from disease	95	95
That make us ill/sick	2	2
That provide energy	2	2
No idea	1	1
Immunization should be given to		
All baby	87	87
Healthy baby	8	8
Unhealthy baby	3	3
Disabled baby	2	2
Source of information on immunization		
Health worker	34	34
TV/Radio	33	33
Health post	21	21
Hospital	12	12
Number of vaccine as per schedule of Nepal		
5	30	30
6	9	9
7	4	4
Don't know	57	57
Name of vaccines as per schedule of Nepal		
Polio, Measles	15	15
BCG, JE	3	3
DPT, Hib, Hepatitis B	1	1
All	81	81
Immunization given after birth		
BCG	94	94
DPT	6	6

BCG is given up to (year)		
1	93	93
3	7	7
BCG is given against		
Tuberculosis	60	60
Measles	2	2
Polio	3	3
Others (Japanese Encephalitis, Diptheria, Pertusis, Tetanus)	25	25

Table 5: Knowledge questionnaire on immunization (n =100).

Sample characteristics	Frequency (f)	Percentage (%)
Side effects of BCG vaccination		
Fever	34	34
Swelling	6	6
Abscess formation	3	3
All	57	57
Disability is due to missing of vaccine		
Measles	2	2
BCG	2	2
Polio	96	96
Polio is given upto (in years)		
1	7	7
5	91	91
6	2	2
DPT is given at		
6 weeks	21	21
10 weeks	24	24
14 weeks	15	15
All of above	40	40
DPT is given against		
Pertusis, Diptheria, Tetanus	48	48
Pertusis, Diptheria, Measles	6	6
Tuberculosis	15	15
All	40	40
Vaccine given at 9 months		
Measles	95	95
DPT	3	3
Others	2	2
Vaccine given after 12 month		
DPT	15	15
PCV	50	50
OPV	10	10
JE	25	25
Preterm baby should be immunized		
Yes	94	94
No	6	6
Booster dose required for different vaccines		
Yes	92	92
No	8	8

Majority 95% of the respondent was alert about role of immunization. But still 1/5th of the respondents didn't not know about vaccine as per immunization schedule of Nepal (Table 4).

About 60% of the respondent didn't know about the appropriate time of DPT vaccination. Only 1/4rth of the respondents was aware about the time of JE vaccine. Less than 1/2 (48%) of the respondent knows about disease to be prevented from DPT vaccines (Table 5).

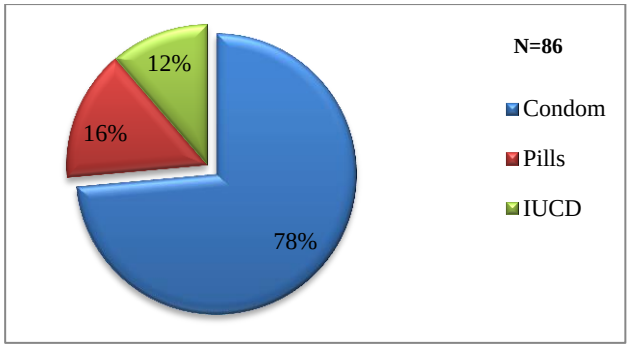

Figure 3: Family planning method prevent from STD/HIV.

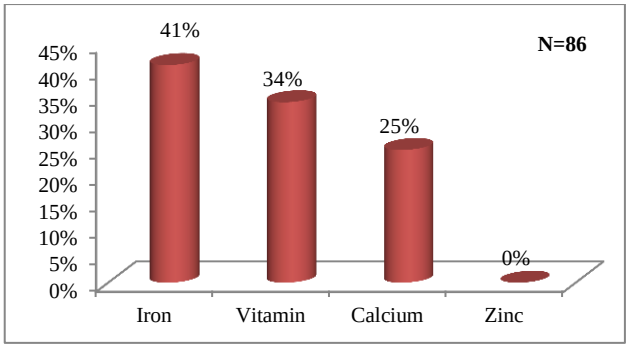

Figure 4: 7 pills in the OCP contains.

Table 6: Practice questionnaire on immunization (n =100).

Characteristics	Frequency (f)	Percentage (%)
Have you immunized the baby fully?		
All	63	63
Some	32	32
None	5	5
What will you do if you miss vaccine?		
Consult with health care worker	50	50
Visit hospital	42	42
No idea what to do	8	8
What do you do if baby is sick on due date of vaccination?		
Consult with health worker	67	67
Take to vaccination centre and take advice there only	31	31
No idea what to do	2	2
Did you receive T.T vaccine?		
Yes	95	95
No	5	5
How many times you receive T.T vaccine during pregnancy?		
Once	23	24
Twice	70	74
Thrice	2	2
Where did you receive the vaccine?		
Hospital	59	59
Health post	41	41

Regarding level of practice, 63% of the respondents have completed all dose of vaccine. Whereas 5% of the child were not given any vaccine. Same percentage of mothers (5%) had not received any dose of T.T vaccine in their previous pregnancy (Table 6).

DISCUSSION

Study findings have been discussed in terms of objectives stated and with the findings of the other studies.

More than 4/5th (83%) of the respondents replied family planning is done for birth spacing alike to the result acquired from Sunsari, Eastern Nepal.[13] Majority (86%) of the respondents were vigilant about any family planning methods similar to the study from Sudan (87%), Nigeria (89%), Dulikhel, Kathmandu (90%).[14-16] They were aware about the family planning methods as the government is focusing more in this area by providing free counseling and family planning measures. The present study reveal that source of information on family planning methods were health personnel (34%), advertisement/mass media (32%) followed by midwives (25%) and personal relations i.e. spouse, friends and relatives (9%). This finding is however in keeping with that Reddy et al (34%) and Bajracharya et al (35.05%) from health personnel.[16,17] Whereas distinguish result was obtained in a study from Indore district and Manipur where television and friends respectively was their chief source of information.[18,19] The role of health care providers as well as advertisement/media should be emphasized more in providing contraception knowledge so as to achieve more knowledge and practice related to the concerned area.

About knowledge regarding family planning methods hormonal (OCP, Depot, Implant) 84% followed by IUCD (77%), Condom (65%). Similar findings were achieve from NDHS and Tuladhar et al showing IUCD (83.2%) and condom (71%) respectively.[8,20] However divergent result was obtained by Kei et al condom (88%), IUCD (67%).[21] The knowledge on OCP, Depot and Implant is same, the reason of which is still questionable. Many 78% respondents reported awareness about additional benefits of condoms other than the family planning methods, whereas significantly lesser (27%) were aware regarding other benefit i.e. curtail the spread of HIV/AIDS and sexually transmitted diseases (STD).[20] The fact that the condom is cheap and readily available could also have contributed appreciably to the awareness about it. Among temporary methods of family planning, condom was most commonly used (64%) similar to the study from Nigeria.[22] Whereas significantly lesser (15%) were using condom as method of family planning.[21] As the respondents were using only some varieties of contraceptive methods so this may be due to fact that the in-depth knowledge on temporary methods of contraception is still lacking. Most of the women (60%) received their family planning information from the hospital comparable result was obtained in the present study.[22]

Majority of the respondent (95%) were aware about the role of the immunization. This findings were consistent with the results reported from several studies 95% (Nigeria), Karachi (97%), Morang Nepal (90.7%), United Arab (85%) and Lagos University (98%).[23-27] Many respondents 87% of the responded replied that immunization is given to all baby followed by 8% healthy baby. This contradict with the finding from Nigeria where 72.9% of respondents believed that immunization is done to healthy baby.[28] The fact attributing to this is that majority were aware about the role of immunization could have contribute the knowledge on it. The chief source of information on vaccine is health personnel (67%) similar to study from Kerala (60%), United Arab (50%).[26,29] Although in one study, more than half of mothers sources were T.V (54.6%).[30]

When the respondents were asked to list the name of vaccine as per immunization schedule 19% were not able name all of the vaccine. Whereas significantly greater percentage (35.4%) of respondents in Mushar community did not know the name of childhood immunization.[25] The fact beyond this is that they were not more updated to name of vaccine because new vaccine were introduced frequently. More than ninety (94%) of the respondents notify the name of the vaccine (BCG) given after the birth and 60% answer about the disease prevented by BCG vaccine. Our finding is at variance with Mushar community where significantly less were aware of schedule and disease prevented by BCG.[25] The possible explanation for the greater prevalence obtained in our study is that we are taking the general community people of Pokhara valley so they might be more aware about the vaccines than the disadvantage group. Ninety six percentage of the respondent were aware about the disability caused due to missing polio vaccine which is comparable to a results obtained from Kerala.[29] This can be attributed to the belief that people suffering from polio would have make the people more alert of the vaccine.

Among the 95% respondents who said that diseases could be prevented by immunization only 63% of the respondents have complete all dose of vaccine to their baby similar to the study from Pakistan and Ishlamabad.[24,31] This may be attributed to the fact that we are taking all age group children <5 years, so there may be children <1 year, whose vaccine is yet to complete. Nearly 5% of the respondent had not provide any vaccine to the baby similar to the study from Mushar community i.e. 6% female respondents did not immunize their children.[25] Nearly 5% of the respondents have not receive the T.T vaccine in their previous pregnancy similar to the study from Ethiopia.[32] The underlying reason of not vaccinating the children and not taking T.T vaccine should be rule out so as to plan the interventions accordingly.

There are several limitations to this study. The study sample size was small and the sampling method used was purposive sampling which may lead to chance of selection of bias. This study was not able to identify the contributory factors of not vaccinating the children and not taking T.T vaccine in their previous pregnancy which is the main pitfall of this study. The study was also not able to find out the association between family planning and immunization with different socio-demographic variables. The study might have been more better if we could have assess only one areas instead of looking both the areas (family planning and immunization).

Despite the good knowledge of respondents on immunization and its benefit still few 5% of the respondents did not provide any vaccine to the baby as well as same percentage didn't receive the T.T vaccine. Regarding family planning methods, 14% of the respondents were not aware about any methods and on the other hand those who have better knowledge on family planning methods have practice in only few contraceptives methods. This shows that still they don't have in-depth knowledge about the family planning methods. So planned educational program can be conducted to make them more aware about types along with its advantage and disadvantage of different family planning method as well as awareness about EPI schedule (number, types, benefits, side effects) so that they won't miss the vaccine. As such the educational level of the mothers needs to be taken into consideration when the program is planned, especially as regards those with a lower educational level.

ACKNOWLEDGEMENTS

The authors are greatly indebted to all the participants of the study.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the institutional ethics committee

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Cite this article as: Sharma D, Kafle R. An exploratory study on knowledge and practice regarding family planning and immunization among women attending MCH clinic. Int J Sci Rep 2017;3(6):156-65.