



International Journal of Midwifery and Nursing Practice

E-ISSN: 2663-0435
P-ISSN: 2663-0427
IJMNP 2019; 2(1): 76-78
Received: 07-11-2018
Accepted: 08-12-2018

Alisha Joshi
Lecturer, Chitwan Medical
College, School of Nursing
Bharatpur, Chitwan, Nepal

Anjila Joshi
Supervisor, Child Health and
Women development, Nepal

Taniya Thapa
Lecturer, Chitwan Medical
College, School of Nursing
Bharatpur, Chitwan, Nepal

Correspondence
Alisha Joshi
Lecturer, Chitwan Medical
College, School of Nursing
Bharatpur, Chitwan, Nepal

Knowledge and practices on prevention of malaria in a selected community of Nepal

Alisha Joshi, Anjila Joshi and Taniya Thapa

Abstract

Introduction: Malaria is an infectious parasitic disease transmitted to humans through blood by the bite of female anopheles mosquito being one of the most important causes of morbidity and mortality globally, causing over a million deaths each year, and more than 90% of these occur in Africa and Asia with much suffering and death as well as social and economic problems.

Objective: We aim to assess the knowledge and practice on prevention of malaria so that necessary awareness programs could be recommended if found unsatisfactory.

Methods: A cross sectional descriptive study was done in ward-4 of Butwal sub- metropolitan city, Nepal among randomly selected 267 respondents who participated voluntarily in face to face interview that used structured questionnaire from 10th March to 15th April, 2018.

Results: The findings of the study revealed that nearly half (56.1%) had adequate knowledge and (66.1%) had adequate practice on prevention of malaria. Knowledge and practice of respondents regarding prevention of malaria had significant correlation of 0.54 at $P < 0.05$.

Conclusion: The present study leads to inference that the knowledge and practice is still not satisfactory regarding the prevention of malaria despite its various preventive and control measures.

Keywords: Knowledge, practice, prevention, malaria

Introduction

According to the World Health Organization (WHO), malaria is the world's most important parasitic disease which is endemic in 100 countries and about 2 billion people are at risk. The major risk factors for malaria include poor housing and lack of basic services, poor environmental sanitation and stagnation of water ^[1]. The disease causes widespread premature death and suffering, imposes financial hardship on poor households, and holds back economic growth and improvements in living standards ^[2].

India contributes 77% of the total malaria in Southeast Asia ^[3] In Nepal, Malaria is still a priority public health problem of Nepal where about 84% of the population are at risk. According to the Annual Report Department of Health Services 2072/73 (2015/2016), it has been found that total of 1352 cases were seen in year 2071/2072 whereas 991 cases were seen in 2072/2073 ^[3] Malaria can be controlled by 'early diagnosis and prompt treatment'. Ensuring sustainable provision of clinical services and controlling epidemics of malaria by improving the diagnostic and treatment services offered by Government and private sector health care facilities is important ^[4] Lack of knowledge regarding prevention and treatment for malaria and control measures for mosquito bite are the leading cause for malaria ^[5]

Malaria can be prevented by practicing control measures for mosquito bite. Few studies have been conducted on prevalence and knowledge, practice and attitude on prevention of malaria among community people in Nepal and witnessed none in Butwal sub- metropolitan city thus this study has been chosen to assess the knowledge and practice on prevention of malaria for combating the lack of knowledge and practice in preventing the prevalence of malaria.

Materials and Methods

The descriptive cross-sectional study was conducted to find out the knowledge and practice on prevention of malaria among community people of ward number 4 of Butwal sub- metropolitan city. Total of 267 respondents (using formula $n = \frac{z^2pq}{d^2}$) who are the head of the family from each household were participated in the study. Among 19 wards of Butwal sub- metro Politian city, ward number -4 was purposively selected. Then, the random selection of respondents of each household was done using systematic random sampling out of total 2368 houses.

Structured questionnaire was developed and reliability of the instrument was tested using Guttman Split-half of the instrument which gave satisfactory value of 0.87. Thus, analysis was done using descriptive statistics and inferential statistics.

Result

The respondents interviewed in ward-4, Butwal belonged to age group 41-60 yrs 159 (59.6%) followed by 20-40 yrs (27%) and among them (62.2%) were male whereas (37.8%) were female. While comparing the ethnicity status,

Brahmins were found to be the highest among them 107 (40.1%) followed by Chhetri (30.3%). Majority of the respondents (87.6%) were found to be literate. Majority of the respondents (95.6%) had tap water as source of water, (80.1%) had information regarding malaria control and prevention and among them (41.9%) got information from mass media.

The result illustrates less than half of respondents (55.4%) had adequate knowledge and majority (44.6%) had inadequate knowledge on prevention of malaria as shown (Table 1).

Table 1: Frequency and percentage distribution of knowledge scores on prevention of malaria n=267

Range of scores	Level of knowledge	Frequency	Percentage
Median ≥ 15	Adequate knowledge	148	55.4
Median <15	Inadequate knowledge	119	44.6

The result illustrates more than half of respondents (65.5%) had adequate practice and less than half (34.5%) had inadequate practice on prevention of malaria as shown (Table 2)

Table 2: Frequency and percentage distribution of practice scores on prevention of malaria n=267

Range of scores	Level of practice	Frequency	Percentage
Median ≥9	Adequate practice	175	65.5
Median <9	Inadequate practice	92	34.5

Correlation between knowledge and practice was found to be positively correlated with r=0.54 (p<0.05) with df = 265 as shown (Table 3)

Table 3: Median, median percentage, correlation of knowledge and practice scores on prevention of malaria n=267

Variables	Median	Median%	Correlation (r)
knowledge	15	78.9%	+0.54
Practice	9	64.28%	

The result revealed the association between knowledge on prevention of malaria and age of the respondents (p=0.016) whereas, practice on prevention of malaria and age was significantly associated (p=0.034) as shown (Table 4)

Table 4: Association between knowledge and practice on prevention of malaria with socio-demographic variables. n=267

Variable	Knowledge		chi-square	P-value
	Adequate (%)	Inadequate (%)		
Age group (in years)			8.237	0.016
20-40	42	30		
41-60	94	65		
60 and above	12	24		
Gender			2.332	0.127
Male	86	80		
Female	62	39		
Educational Qualification			1.311	0.519
Illiterate	18	15		
Higher secondary	94	68		
Bachelors and above	36	36		
Sanitary Services				0.327F
Inside the house	147	116		
Outside the house	1	3		
	Practice			
	Adequate (%)	Inadequate (%)		
Age Group (In Years)			6.743	0.034
20-40	54	18		
41-60	103	56		
60 and above	18	18		
Gender			2.737	0.123
Male	103	63		
Female	72	29		
Educational Qualification			0.661	0.719
Illiterate	20	13		
Higher secondary	109	53		
Bachelors and above	46	26		
Type of House				0.274F
Brick and cemented	174	90		
Wooden hut	1	2		

F= fisher's exact test, level of significance at ≤0.05

Discussion

A descriptive cross-sectional research design was adopted to find out the knowledge and practice on prevention of malaria among community people of ward number 4 of Butwal sub-metropolitan city. The result of the study indicates that knowledge on prevention of malaria was 55.4%, while a study by Sowmyasudha K, (2018) reported the slight difference in knowledge on cause, diagnosis and treatment of malaria was 41.6%. The finding regarding the practice on prevention of malaria was 43.9% which is contradictory with the findings that showed practice score was 42.5% [6].

In this study, most of the respondents correctly identified the different symptoms of malaria. Identification of *fever* as a symptom of malaria was very high (86.8%). Nearly all of the respondents (98.2%) correctly pointed out being bitten by mosquitoes as the cause of malaria. This figure is, however, very much higher than that reported by the survey (in which only 37% of the respondents reported mosquito bite as the cause of malaria. This difference could be explained by the time gap between the two studies-the survey was carried out about three years before this study [7]. In this study, age ($p=0.016$) was significantly associated with the practice on prevention of malaria of the respondents. This finding was consistent with a study conducted by which revealed that there is significant association between age and practice on prevention of malaria ($p = 0.034$) In this study, gender is not significantly associated with the practice on prevention of malaria of the respondents. This finding was inconsistent with a study conducted which revealed that there is significant association between gender and practice on prevention of malaria ($p = 0.031$) [8].

In this study, it has been reported that there is a significant co- relation between knowledge and practice on prevention of malaria ($r=0.5$) among the respondents. The finding was inconsistent with a study conducted by Luygia Faridah Mwanje (2015) which revealed that there is no significant relationship between knowledge about malaria and practices towards malaria (Fisher's exact=0.074) [9].

In this study, Awareness of the different methods of protecting mosquito bites, especially that of mosquito nets, in this study is high (84.6%) which is almost in agreement with the result found in Kafta-Humera, Tigray region, Mosquito nets were recognized by the participants of this study for avoiding getting bitten by mosquitoes, avoiding getting malaria and protecting other insects/ pests (e.g.: lice, fleas, bed bugs, etc). The perceived advantage that mosquito nets protect against other insects may give the nets an added value and thereby enhance their acceptability and importance [10].

Summary and Conclusion

The summary of the observation is as follows

On the basis of all the information collected and analyzed, the study has come up with the conclusion that more than half respondents had adequate knowledge on prevention of malaria and likewise, more than half of respondents had adequate practice.

It has been found that knowledge and practice on prevention of malaria is positively co-related. Likewise, among the socio demographic variables, the associated factors of knowledge and practice on prevention of malaria among respondents is found in age.

In conclusion, based on the findings of this study, it is evident that the level of awareness of the respondents regarding the cause, symptoms and preventive measures of malaria was high. Yet, misconceptions about the cause of malaria were not uncommon. Though the vulnerability of children under five years to malaria was highly recognized, the vulnerability of pregnant women to the disease was underestimated. The advantages of sleeping under mosquito nets were also well recognized. Use of mosquito net as protective measure against mosquito bites in the 12 months preceding the study was high. However, use of other preventive measures was low.

Appropriate behavioral change communication interventions should be implemented to clear the misconceptions related to the cause of malaria and to raise the awareness on the vulnerability of pregnant women. Interventions which are well recognized but less used by the people such as environmental sanitation must be given attention and their use concomitantly with mosquito nets be encouraged by health extension workers and other health educators.

References

1. Autino B, Noris A, Russo R, Castelli F. Epidemiology of malaria in endemic areas. *Mediterranean journal of hematology and infectious diseases*. 2012; 4(1):e2012060.
2. WHO. Rolling Back Malari. The World Health Report, 1999.
3. Services GoNMoHDoH. Annual RepoRt Department of Health Services 2072/73 (2015/2016), 2016.
4. Ashwani Kumar NV, Tanu Jain, Aditya Dash P. Burden of Malaria in India: Retrospective and Prospective View. *American Society of Tropical Medicine and Hygiene*, 2007.
5. Jan Kolaczinski KG, Abdullah Fahim, Simon Brooker, Mark Rowland. *The lancet*, 2005.
6. Sowmyasudha K, Krishnababu G, Sujatha P, Satyanarayana K. A study on knowledge attitudes and practices on mal aria among tribal communities of East Godavari district, Andhra Pradesh. *International Journal of Community Medicine and Public Health*. 2018; 5(7):2865-72.
7. Anene-Okeke CG, Isah A, Aluh DO, Ezeme AL. Knowledge and practice of malaria prevention and management among non-medical students of university of Nigeria, Nsukka. *International Journal of Community Medicine and Public Health*. 2018; 5(2):461-5.
8. Sabin LL, Rizal A, Brooks MI, Singh MP, Tuchman J, Wylie BJ *et al*. Attitudes, knowledge, and practices regarding malaria prevention and treatment among pregnant women in Eastern India. *The American journal of tropical medicine and hygiene*. 2010; 82(6):1010-6.
9. Mwanje LF. Knowledge, Attitudes and Practices on Malaria Revention and Control in Uganda, 2013.
10. Ayalew Astatkie. Knowledge and Practice of Malaria Prevention Methods among Residents of Arba Minch Town and Arba Minch Zuria District. *Southern Ethiopia. Ethiop J Health Sci*. 2010, 185-93.