



Treatment Seeking Behavior of Pregnant Women about Malaria in Muzaffargard

Shumaila Nargus ^a, Jaleel Kamran ^b, Khalid Mahmud Khan ^c and Saleem Rana ^{a*}

^a University Institute of Public Health, University of Lahore, Pakistan.

^b Watim Dental College, Rawat, Islamabad, Pakistan.

^c Allama Iqbal Medical College, Lahore, Pakistan.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJMAH/2022/v20i11754

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/91523>

Original Research Article

Received 08 July 2022
Accepted 12 September 2022
Published 17 October 2022

ABSTRACT

Malaria during pregnancy and childhood is the major public health problem and about half of the population is at risk of developing malaria in the world. During pregnancy, it causes severe anemia, low birth weight babies, abortion and many other severe complications. Knowledge plays main role to prevent this disease and therefore in this study health seeking behavior of pregnant women is explored to determine frequency of malaria suspected cases and the reasons for non-utilization of Government health facilities by pregnant women. A total 312 pregnant women were selected through multistage random sampling. A structured questionnaire was used to know about the knowledge and practice of pregnant women about malaria. A survey was conducted Longmalan Village of Muzaffargard. Data was collected and analyzed by using SPSS version 20. Knowledge about malaria was found poor in the majority of the respondents. The major sources of treatment was private health facilities. The major reasons of non-utilization of public health facilities were poor accessibility to transport, lack of trust on public medical providers, and their bad attitude. On the basis of these findings, it was concluded that malaria knowledge has shown to be an important factor for prevention and treatment seeking practices about malaria health education and literacy promotion should strengthen the knowledge about malaria prevention and treatment seeking behavior.

Keywords: Malaria; public health; pregnant women.

1. INTRODUCTION

The health and economy of many developing countries are effected by malaria more than any other disease. There were 5 million increase of malaria cases reported in 2016 than 2015 (211 million), and 216 million cases of malaria in 2016 (World Malaria Report, November 2017). According to WHO report of 2017, 3.3 billion world population is at risk of malaria. Pakistan is one of the developing countries with low/moderate malaria endemicity. 3/4th of population in the rural areas are at risk [1]. Between 2010 and 2016, WHO reported that estimated malaria cases were reduced more than 45%. In Pakistan, Afghanistan, India, Ethiopia, and Indonesia, 85% estimated *vivax* malaria cases occurred in 2016. Over the man's long history, it has been the disease that has most affected his health, economy & policies. It has killed more people than any other disease. It is a serious disease of wide distribution, genus *Plasmodium* has five species (*Plasmodium falciparum*, *P. vivax*, *P. ovale*, *P. malariae*, and *P. knowlesi*) that affect human. *P. falciparum* causes is the most severe form malaria with high fever & chills [2]. The risk of premature delivery, spontaneous abortion, stillbirths, severe maternal anemia, 1/3rd of preventable low birth weight (LBW) babies & maternal death also increases with malaria in pregnancy [3]. *P. vivax* is a wide spread but less dangerous type. Humans are infected with malaria by the bite of more than 30 female mosquitos of *Anopheles* species. Mostly infection during pregnancy in Africa is caused by *P. falciparum*, the most common malarial species in Africa [4]. Annually 1 million or more people die of malaria & these are mostly infants, young children & pregnant women in Africa [5]. Malaria is a threat for pregnant women & their babies, up to 200,000 newborn deaths each year are as a result of malaria infection in pregnancy [6]. Moreover, each year approximately 50 million women living in malaria endemic countries throughout the world become pregnant [7,8].

Now the first-line treatment is AS+Species for all countries in the WHO Eastern Mediterranean Region. Treatment failure rates with AS+SP were less than 10% in Afghanistan, Iran (Islamic Republic of), Pakistan and Yemen.

Muzaffargardis a malaria endemic area, reports reviewed at the Executive District Health Officer showed that there were 6,145 malaria confirmed cases in 2010, 921 in 2011 & 421 up till 31st August 2012 [9].

The aim of the current study is to determine the treatment seeking behavior of pregnant women about malaria.

1.1 Objectives

- To determine frequency of malaria suspected cases in pregnant women.
- To ascertain treatment seeking behavior of pregnant women.
- To determine the reasons for non-utilization of Government health facility.

2. METHODOLOGY

This study was conducted in Muzaffargard, which is located in the South Punjab in Dera Ghazi Khan Division, in Punjab, Pakistan. The District of Muzaffargard was selected for this study because malaria is endemic due to its riverine location & agriculture occupation of its population. All pregnant women in which were estimated to be as 3.4% of the Muzaffargard city's population which was 4227. A descriptive Cross Sectional study was carried out. Adopted from WHO's Malaria case management, operations manual. Pregnant women with "fever history in the previous 3 days with no features of other severe diseases".

2.1 Inclusion Criteria

All pregnant women registered in LHWs register having good & complete records. All pregnant women from the 1st trimester to the last of 3rd trimester in study area. Pregnant women having history of fever were included.

Pregnant women with no history of fever or fever for last 3 days with or without symptoms of severe diseases, having same Socio-demographics features were included as comparative group.

2.2 Exclusion Criteria

Pregnant women in the LHW register whose records were not updated.

Two Stage Sampling was done, estimated population of district Muzaffargard was taken as 1,491,915. In the 1st stage, 16 BHUs were selected from the 12 union councils situated at the riverine belt of the Muzaffargard which were the suspected breeding sites of the mosquitoes.

In the 2nd stage by utilizing simple random sampling Longmalan Villiage of Muzaffargard. located in the riverine belt was selected which was having a population of 60,040 with estimated expected pregnant women population as 2,350.

It was a 3 month study. A semi structured standardized questionnaire in Urdu with multiple choices was developed from the questionnaires which have been used in earlier studies & from different articles related to malaria in pregnancy. The questionnaire was pretested in the pregnant women of nearby union council Deen Pur.

3. RESULTS

312 pregnant women were interviewed who gave consent & become eligible for study. For the purpose of analysis we made 3 groups A, B and C, details are shown in Table 1. Results of microscopy are shown in Table 2. Age wise data is shown in Table 3.

Knowledge about malaria was found enough good in 7.3% in group A, 6% in group B and 4.3 % in group C. It showed gradual decrease from group A to group C. On the average only 17.6 % of respondents have good knowledge about malaria. Proportion of good knowledge was found high in group A. Knowledge about malaria

was found satisfactory was 43.3 % in group A, 58.2 % in group B and 56.5% in group C. On an average 53% of the respondents have satisfactory knowledge. Proportion of satisfactory knowledge was found high in group B. Poor knowledge about malaria was found 49.4% in group A, 35.5% in group B and 39.1% in group C. Group A was ranked higher in poor knowledge through an interview and using the questionnaire. On an average knowledge about malaria was found poor in 41.4% of the respondents.

Almost one classical symptom of malaria was recognized in pregnant women. The largest recognition in group A was found about 78% for chills and rigors followed by fever 72%. In group recognition for chills and rigor was 81% and for fever was 76% which was far better from other B and C groups. In group C it was 78% for chills and rigors and 76% for fever. The knowledge about transmission of malaria was found good among all the groups i.e. 98.4% in group A, 95.5% in group B and 91.3% in group C. On the average about 95% of the respondents recognized mosquitoes as malaria transmitter in human beings. 75.2% in group A, 73.1% in group B and in group C 78.3% use bed net as a measure to prevent from mosquitoes' bite which was found about similar within groups. The average 75.5% of the respondents used bed net.

Table 1. Summary of results

Total Sample Size	No of Individuals with Fever		Lab. Confirmed Malaria Cases
	Group A	Group B	Group C
312	226	65	21

Table 2. Results of malarial parasitology

Total No. of positive cases (Lab. Confirmed Malaria Cases)	Individuals with <i>P. vivax</i> infections?? clarify	<i>P. falciparum</i>	Mixed
21	14	4	3

Table 3. Distribution of respondents according to age

Age (Y)	Total Respondents		Group A (With Fever)		Group B (Suspected Malaria)		Group (Confirmed Malaria Cases)	
	No.	%	No.	%	No.	%	No.	%
< 20	24	5.8	16	6.1	3	4.5	1	4.3
20 – 39	268	88.7	194	88.2	59	91	19	91.4
40 – 49	18	5	14	5.1	3	4.5	1	4.3
> 50	2	0.5	2	0.6	0	0	0	0
Total	312	100	226	100	65	100	21	100

In group A the source of treatment seeking about malaria was found government Health Facility after that the source was from private clinic i.e. 37.2% and also a large proportion in this group utilize LHWs as the treatment seeking source of malaria (21.5%). In group B the treatment seeking source of the majority was found from LHWs (27.3%) after that the private clinic was found the other big source of treatment seeking malaria (24.6%). Only 17.5% utilize government Health Facility as a source of treatment seeking about malaria. In the group C situation was found same as in group B i.e. LHWs (27.3%), private clinic (27.3%) and government Health Facility (18.2%). A small proportion of people also utilize the other source like pharmacy traditional healers etc.

In group A the major cause of non-utilization of the government Health facility was found to be difficulty in transportation (29.3%) another cause was found to be they don't trust on government medical workers (21%) and they don't like the attitude of government medical workers (16.6%). This information and results are based on the answers of all respondents. In group B the major cause was found that they don't trust government medical workers (28.4%) and they don't like the attitude of the government medical (workers 22.4%) while the difficulty in transportation was found the 3rd major cause (13.4%). In group C the reasons of non-utilization of Gov. health facilities were found similar as in group B i.e., don't trust on government medical workers (30.4%), don't like the attitude of government medical workers (21.7%) and difficulty in transportation (8.7%).

4. DISCUSSION

This study revealed that majority of the respondents interviewed were 20-39 (88.2%) years of age. This indicates that the respondents were adult and of the child bearing age having a relative poor (47%) knowledge about malaria in pregnant women. Different results of similar studies conducted among pregnant women in rural area of Ethiopia were found in which knowledge was found good about malaria in pregnant women [10]. The reasons of different result were different social and demographic characteristics of the population and the educational status which was low in our study. 78-81% pregnant women in our study were aware of at least one classic symptom of malaria in our study while it was 92.7% in the similar study [11]. In some other similar studies where knowledge about malaria was found good but

poor for the consequences of malaria supported the findings of our study that the poor knowledge has a serious implication and is likely to affect the utilization of treatment seeking by the pregnant women [12,13].

In our study it was found that only 50% of pregnant women utilize government health facilities for the treatment of malaria. The major reasons of non-utilization of the government health facilities were found to be difficulty in transportation (29.3%) followed by lack of trust on government medical workers (21%) and dislikeness of attitude of government medical workers (16.6%) might reflect issues of accessibility and quality in government health facilities. Health seeking behavior in different countries regarding malaria treatment was found different [14]. In another similar study where government health facilities were found easily accessible to the pregnant women as on ten minutes of walking distance or by public transport on affordable fare but the utilization is low is likewise our study that the government health facility was available nearby but utilization was poor, we found that this might be due to distrust on and dislikeness of government medical workers [15].

Malaria program coordinator should focus on awareness campaign about knowledge of malaria and radio broadcasting health messages. Answers might have been varied in cross sectional design because it gives information at certain point in different malaria seasons and time. Data was competed from the information given by the interviewers.

5. CONCLUSION

Knowledge about malaria is an important factor for its prevention. Promotion of literacy and health education about malaria transmission and prevention method should be strengthened.

CONSENT AND ETHICAL APPROVAL

Written consent was taken on the prescribed Performa. Confidentiality was ensured. All the ethical guidelines regarding research on human subjects were followed. Institutional Review Board (IRB) University Institute of Public Health, University of Lahore.

COMPETING INTERESTS

Authors have declared no competing interests exist.

REFERENCES

1. Bhatti MA, Azharuddin M, Bhatti S, Islam M. and Khan MA. Malaria in Pregnancy: The Perspective in Pakistan. JPMA. 2007;57(1):17-25.
2. WHO. World Malaria Report 2011. Geneva: WHO; 2011.
3. WHO. 10 facts on malaria. Geneva: WHO; 2012.
Available:<http://www.who.int/features/factfiles/malaria/en/index.html>
4. WHO. Roll Back Malaria Partnership: Malaria in Pregnancy. Geneva: WHO; 2012.
Available:http://www.rbm.who.int/cmc_upload/0/000/015/369/RBMInfosheet_4.htm
5. Korenromp E, Miller J, Nehlen B, Wardlaw Te, Young M. Geneva: WHO; World Malaria Report; 2005.
6. WHO. Lives at risk: Malaria in pregnancy. Geneva WHO; 2012.
Available:<http://www.who.int/features/2003/04b/en/index.html>
7. Richard W, Stekette RW, Bernard L, Nahlen BL, Parise ME, Menendez C. The burden of malaria in pregnancy in malaria endemic areas. Am J Trop Med Hyg. 2001; 64(1-2):28-35.
8. Murphy SC, Breman JG. Gaps in childhood malaria. Neurological sequelae, anemia, respiratory distress, hypoglycemia & complications of pregnancy. Am J Trop Med Hyg. 2001;64(1-2 Suppl): 57-67.
9. Chaudhry DTI. Consolidated Malaria Reports, 2010,2011, 2012 Layyah.
10. Paulander J, Olsson H, Lemma H, Getachew A, Sebastain MS. Knowledge, attitude and practice about malaria in Rural Tigray, Ethiopia. Am J Trop Med Hyg. 2000;61:98-107.
11. Yeneneh H, Gyorks T, Joseph L, Pikerling J, Tedia S. Antimalarial drug utilization by women in Ethiopia: A knowledge, attitude, practice study. Bull World Health Organ. 1993;71:63-72.
12. Enato HFO, Okhamafe AO, Okpere EE. A Survey of knowledge, attitude and practice of malaria management among pregnant women from two health care facilities in Nigeria. Acta Obstetrica. 2007;86:33-36.
13. Nganda RY, Drakely C, Reyburn H, Marchant T. Knowledge of malaria influences the use of insecticide treated nets but not intermittent presumptive treatment by pregnant women in Tanzania. Malar J. 2004;3:42-8.
14. Williams HA, Jones CO. A critical review of behavioral issues related to malaria control in Sub Saharan Africa: What contributions have social scientists made? Soc Sc Med. 2004;59:501-523.
15. Falade CO, Ajavi LO. Knowledge and utilization of intermittent preventive treatment for malaria among pregnant women attending antenatal clinics in primary health care centers in Rural South West Nigeria: A cross sectional study. BMC Pregnancy Child Birth. 2009;9:9-28.

© 2022 Nargus et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:

<https://www.sdiarticle5.com/review-history/91523>