Community Knowledge, Attitude and Practice Towards Malaria at District Dir Lower: A Case Study of Tehsil Balambat

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Abstract: The present study was undertaken in tehsil Balambat, District Dir (Lower) Khyber Pakhtunkhwa Pakistan, in order to know about the knowledge, attitude and practices (KAP) of local community towards Malaria. This cross sectional descriptive natured survey was carried out from August through November 2014. A questionnaire consisting of eighteen questions was administered randomly. The data was collected, analysed and interpreted through percentage method. A total of 329 subjects were recruited for the study, comprising of both sexes. The questionnaire was distributed to 207 (62.918 %) males and 122 (37.082%) females. First part of the questionnaire was consisting of personal and socio-demographic variables of the recruited subjects including age (20-50+ years), gender, village, literacy and education level (1-8, 9-12, 13+ years), origin (rural & urban), occupation and economic status (poor, low, mid-low, mid-high and high; no specific indices used rather self-identified) while the second part of the questionnaire was included by different questions regarding Malaria, such as symptoms, transmission, source of transmission, sources, susceptible body parts to mosquito bites, seasonal abundance, future probability, medicines and medication availability in the vicinity of study area, sources of information, governmental campaigns against Malaria (Mass Education and Awareness, Free medical camps and efforts for Malaria eradication), attitude about Malaria severity and questions about different prevention measures for Malaria. The present study concluded that the local populations of Tehsil Balambat, District Dir (Lower) are having elementary knowledge regarding Malaria.

Key words: Community • Balambat • Knowledge • Attitude • Practices • Malaria

INTRODUCTION

Protozoan parasites from genus Plasmodium is the causative agent of Malaria, one the most dangerous tropical infectious diseases around the globe. It is still one of the leading causes for economic losses. In 2006, approximately 250 million observed cases of Malaria resulted in about ten lakh deaths [1]. Despite being control program in different countries of the world embodied to residual indoor spraying campaigns, mass awareness and community involvement, Malaria is still prevalent in different well established and advanced countries of the world such as Malaysia [2-5] and different under developed countries such as countries of sub-Saharan Africa [6], Ethiopia being one of the most prominent [7-9]. The epidemiological patterns of Malaria vary from time to time and from place to place [10-12].

In 2010, about ten lakhs cases of Malaria were confirmed clinically which ultimately led to 1,581 deaths [6].

Malaria mostly occur in those areas having favorable conditions for development and multiplication of the vector [10,13,14]. However, studies have documented elevated rate of malarial transmission in urbanized areas [15-18]. This might be linked with rapid expansion of the cities lacking proper sanitation, poor drainage system for surface water and weak housing system that facilitate transmission of Malaria and interaction of human and mosquitoes [15-18]. Furthermore, it may also be associated with poor health services, migration of malarious folks from rural to urban area, no use of bed nets and residual spraying of insecticides, large number of breeding sites for mosquitoes, miss managed and unplanned schemes of irrigation channels and water reservoirs [10,18].
Keeping in view the ever increasing scenario of elevated urbanization in Pakistan, there is an urgent need to evaluate the potential risks from plasmodial infections. This will provide baseline information for integration of activities for controlling Malaria with urban planning. In parallel with implementing Malaria elimination program, the present study was carried out. This preliminary survey was undertaken at Tehsil Balambat, one of the seven tehsils [19] of District Dir (Lower), Khyber Pakhtunkhwa, Pakistan to assess community KAP (knowledge, attitude and practices) regarding Malaria.

MATERIALS AND METHODS

Data Acquisition: This cross sectional study was a descriptive type survey. Closed ended questionnaire was used during the survey. The questionnaire was administered to 329 respondents and their response rate was 100%. An effort was made to approach as many subjects as possible but on account of scanty time and resources, only 329 respondents were recruited for the study from the study area, Figure 1.

Data Analysis: The data was analyzed and expressed in percentage method after arranging in a systematic way in tabular form. Graphs were documented for each question of the questionnaire individually in order to clarify the acquired data and extracting information more easily.

![Fig. 1: Map of the study area showing sampling sites](image-url)
For preparing the map of the study area (extracted from Ullah and Ahmad [20]) and plotting sampling sites on it, ArcGIS 9.3 platform was used while all other analysis were carried out using SPSS Version 16.

RESULTS AND DISCUSSION

Malaria itself is a challenge for medical research to be eliminated and eradicated completely. Despite continuous efforts by private as well as government sectors and advancement in bio-medical sciences, it is still a persistent infectious disease in tropical and subtropical region of the world. It has been reported worldwide. Therefore research has been carried out all around the globe regarding Malaria with regard to different aspects of the disease such as prevalence, vaccine development and comparative analysis between both sexes.

It was the first study of its nature in tehsil Balambat, District Dir (Lower) Khyber Pakhtunkhwa. The study was aimed to find out the knowledge, attitude and practices of the local populations of the tehsil towards Malaria. A total number of 329 respondents were recruited for the study, comprising of both the sexes. Males constituted the major portion of the recruited subjects, 207 males were approached, while questionnaire was administered to 122 females, Figure 2. The respondents were belonging to 27 different villages of the study area, as shown in Figure 1. Age wise the respondents were divided to five sub age ranges such as <20 who were almost students, 21-30, 31-40, 41-50 and those having age more than 50. The distribution of the respondents in these age class intervals are given in Figure 3.

Results of the study revealed that there is still a room of improvement in elevating education and literacy rate in tehsil Balambat, specifically female education as most of the females were illiterate. A peculiar behavior of consistent decrease was observed with increase in higher education for females while an increasing trend was observed among males with respect to higher education, as shown in Figure 4. Figure 5 is showing the literacy level of the recruited subjects.

The study showed that the area is characterized by the old concept of settlement of the respondents in foreign, as in the study area, it has been a trend since very long that most of the people leave their country for earnings and went abroad for the sake of job. The occupation wise results also showed that there are a huge number of jobless masses in the local community, which is seeking attention. The category was led by those involved in manual jobs, as shown in Figure 6. Occupation wise distribution of the females showed that there are very little opportunities of jobs for the females of the region. This may be attributed to the strong fanatic approach of the local masses to not allow women doing jobs or the insecure conditions prevailing in the northern parts of the county. More than half of the females were housewives followed by females from different fields such as LHVs, Doctors and those busy with official jobs such as key punch operatorship or clerical jobs, as shown in Figure 7.

The results showed that most of the male respondents were belong to middle-low and middle-high economic class, both comprising more than 60% of the male respondents as shown in Figure 8. Among the female respondents, majority were belonging to middle-high and middle-low class comprising 31.967% and 22.131% of the total females recruited for the study, as shown in Figure 9.

As the study area is mostly comprised of urbanized areas, so most of the respondents were belonging to urban origin. Of the total 329 recruited subjects, 195 (59.271%) were belonging to urban setup, as shown in Figure 10.

In response to the question of malarial symptoms, more than half respondents (54.103%) replied that Malaria is characterized by fever, followed by chill (14.286). Only 8.207% subject think arthralgia as a symptom to Malaria, as shown in Figure 11.

Regarding transmission of Malaria, the respondents were having enough knowledge. Most of the respondents think mosquito (45.897%) as the basic source of transmitting Malaria. Only 3.951% respondent think polluted water is responsible for Malaria transmission, as shown in Figure 12.

In response to the question dealing with source of transmission of Malaria, majority of the respondents viewed rain (30.091%) followed by polluted water (7.295%) as a source of transmission for Malaria, as shown in Figure 13.

Most of the respondents consider uncovered parts of the body as most susceptible parts of the human body that receives most of the mosquito bites, as shown in Figure 14. Most of the respondents think that summer season (117; 53.199%) followed by rainy seasons or rainfall (54; 16.413%) in any season leads to Malaria epidemics or occurrence, as shown in Figure 15. Of all the 329 respondents 290 (88.146%) respondents think that there is a chance of Malaria in future. Among these 290 respondents, 67 (20.365%) subjects think that there is a high chance of Malaria outbreak in future, as shown in Figure 16.
Fig. 2: Gender wise distribution of the respondents

Fig. 3: Age wise distribution of the male and female respondents

Fig. 4: Literacy rate of the respondents (Males and Females)

Fig. 5: Literacy Level of the respondents (Males and Females)
Fig. 6: Occupation wise distribution of male respondents

Fig. 7: Occupation wise distribution of female respondents

Fig. 8: Distribution of male respondents on the basis of their economic status

Fig. 9: Distribution of female respondents on the basis of their economic status
Fig. 10: Origin of the respondents in Rural and Urban sub categories

Fig. 11: Knowledge of respondents regarding symptoms of Malaria

Fig. 12: Knowledge of the respondents regarding transmission of Malaria

Fig. 13: Knowledge of the respondents regarding sources of Malaria
Fig. 14: Susceptible body parts respondents think for mosquito bite

Fig. 15: Most abundant cases of Malaria with respect to seasons according to subjects

Fig. 16: Future chances, probability of Malaria, respondents think

Fig. 17: Source of Information for the respondents about Malaria
The results of the present study showed that print media (147; 44.681%) is still the most important and approached source of acquiring information as shown in Figure 17.

The results obtained from the current study showed that governmental agencies and sector for health is not playing their role in helping people to combat Malaria. They are not providing any kind of trainings, techniques for eradication of breeding sites and making people aware of danger and threats from Malaria. The government is also a little involved in spraying campaign against Malaria, as shown in Figure 18.
Of the total respondents more than 90% responded that they are having proper medicine and medication facilities in their vicinity against Malaria, as shown in Figure 19.

In response to a question regarding severity of Malaria, 283 (86.018%) of the total respondents consider Malaria as a serious disease, as shown in Figure 20. This study also revealed that people in the tehsil are using some preventive methods for treating Malaria as well, such as 17.021%, 88.450, 13.951%, 21.581%, 30.699%, 15.502% and 2.128% respondents are mosquito bed nets, keeping their houses and surrounding clean, eradicate mosquito breeding sites, use insecticides/ spray, creating fumigation/ smoke, use anti-malarial drugs and medicinal plants respectively for preventing Malaria, as shown in Figure 21.

Recommendation: It is recommended that government and other private sector working for health in the region should arrange seminars, workshops, trainings and campaigns for educating local people regarding ill effects of Malaria. These organizations should provide these local masses with basic awareness and then only it is possible to control, eliminate and eradicate out this menace of the zone.

REFERENCES


