Knowledge and Attitude about health hygiene and preventive measures for malaria among the households in Hardwar city (Uttarakhand)

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Abstract: The present study was conducted in two different economic area i.e. high income group colony (Nandpuri) and low income group Slum area (Valmiki Colony) in Jwalapur region, Hardwar city during monsoon period of 2013. To study the effect of community participation in controlling disease vectors, various aspects of vector borne disease and its control as well as community initiative for maintaining health were analyzed. It was observed that residents of slum area (Valmiki Colony) were more affected with vector borne diseases in comparison to the residents of posh colony (Nandpuri) as having less knowledge and behaviour to the health education and hygiene. Almost cent percent household in Nandpuri Colony were using prevent measure to mosquitoes control and other disease vectors using Mosquito coils, Liquid machines, chemical sprays and maintaining SWM, while in Valmiki Colony only 20% residence were aware about these measures. A significant association was observed between educational status and knowledge of respondents regarding vector born disease. The above findings indicate that various awareness programmes, community participation may play an active role for controlling diseases vector, which needs governmental support and motivation against this epidemic.
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Introduction

Human beings have long been living with malaria. As far back as 2700 BC, medical writing in India and China allude to what is likely malaria, and the disease is also described in the writings of Homer **(Heggenhougen *et al.*, 2003).** In one of the four Vedas of the Hindus, malaria is referred as "a disease most dreaded affliction, king of disease." While Chinese referred to the disease as "Mother of Fevers." The relationship of fever to swamps and low-lying water was also recognized by the Greeks in the sixth century **(Sharma *et al.*, 1996).**

The permanent changes in local malaria endemicity are always due to man-made environmental changes in the areas. Some times the problem arises up to the extant, which takes the shape of epidemic. Entomological, parasitological, clinical related issues are looked into to bring down the morbidities and loss to human lives**. (Dash *et al.*, 2007)**

Infectious diseases are still persisting as a major health problem in India in spite of having national programmes for the control of most of these diseases for half a century now. One of the major problems, which we are still facing, is that of malaria. Malaria kills more than one million people each year were in the world, especially children. The economic burden is also extremely high, accounting for a reduction of 1.3% in the annual economic growth rate of countries where malaria is endemic **(WHO, 2008)**. It is clear that the transmission of malaria is determined by climatic, non climatic and biological factors. The climatic factors include all the independent variables like temperature, rainfall, humidity, etc. While the non climatic factors are human activities, Socio-economic condition like developmental changes, housing and living conditions, adopted control measures, local ecological environment, human behavior and drug resistance in malaria parasites **(Sharma, 1999).**

Over the last one decade the land use and related environmental scenario of district Haridwar has drastically changed due to growth and development projects including growing urbanization and floating population. In the North India, the main vectors of malaria are *Anopheles culicifacies and A. stephensi, A. fluviatilis* **(Saini *et al.*, 2009).** The permanent changes in local malaria endemicity are always due to man-made environmental changes in the areas. Sometimes the problem arises up to the extant, which takes the shape of epidemic.

Materials & Methods

This study was carried out in two different residential areas i.e. high income group colony

(Nandpuri) and Slum area (Valmiki Colony) in Jwalapur region of Hardwar city during monsoon period of 2013. The position of Haridwar city on the globe is latitude 29^0, 58' N and longitude at 78^0, 13' E. A total of 100 randomly selected household were consulted in both localities. Heads of the selected households for collecting information on socio-economic status, environmental conditions conducive to vector born disease, knowledge on causation, transmission, diagnosis and management of malaria; practices followed by them for seeking treatment for fever, prevention and control of malaria. The primitive methods of healthcare amongst the local people were also consulted to correlate the problem of vector borne disease in respect of peoples activates and attitudes.

Results

(a) Case I: Nandpuri Colony- Of the hundred household interviewed, 100 percent of respondents were littiterates, Majority (70.3%) of the households were having a monthly income in the range of Rs. 15000/- to Rs. 45000/-. 100 percent of the respondents mentioned 'mosquito bite' as the cause of the malaria. 60.7 percent of the respondents mentioned that in case of fever among family members, the patient is taken to the private doctor, while 37 percent of the respondents mentioned approaching a Government doctor. Use of preventive measures for protection against mosquito and malaria was reported by 98 percent of the respondents. Majority from this group was using Liquid machines for mosquito. The present findings revealed that 56 percent of the households were not draining the water from the coolers on a weekly basis.

(b) Case II: Valmiki Colony- Of the hundred household interviewed, 40 percent of respondents were littiterates, Majority of the households were having a monthly income in the range of Rs. 2000/- to Rs. 6000/-. 40 percent of the respondents mentioned 'mosquito bite' as the cause of the malaria. 73 percent of the respondents mentioned that in case of fever among family members, the patient is taken to the Government doctor, while 27 percent of the respondents mentioned approaching a private doctor. 40 percent of the respondents also mentioned sleeping outside the house in open places. Use of preventive measures for protection against mosquito and malaria were reported by 20 percent of the respondents. Majority of the respondents were not aware about the medicine(s) used for the treatment of malaria.

Discussion

In case of Valmiki Colony, the poor economic conditions, education status and poor habitation conditions provide supportive ground for mosquito. On account of their poverty and slummy area, they can not afford the Mosquito coils, Liquid machines and a variety of other mosquito repellants and other preventive measures to control mosquitoes. On the other hand in the Nandpuri colony, the peoples live in well maintained housing colonies and can spend an adequate amount of money to repeal the mosquitoes.

A small percentage of people had participated in community action for clearing stagnating water from the drains. However, community is not making any decisions about what, where, when and how to solve malariogenic problems. The community is also not sharing the burden by providing resources such as money, land, building and manpower in this direction. In addition, the community has not developed any code of conduct for maintaining hygiene in the surrounding by taking steps to prevent garbage thrown on streets or to prevent water to stagnate in front of their houses. **Saini *et al.*, 2009** stated that environmental negligence, stagnated water collections due to mis-management of water, lack of drainage and sanitation promote the breeding of Anopheles mosquitoes in urban slums and further increase the chances of spread of malaria. Stagnant water in the coolers also provide breeding grounds for mosquitoes. The present findings are in accordance with the study of **Lieshout, *et al.*,(2004)** and **Tyagi, *et al.*, (2005)** who have observed that climatic condition and socioeconomic status play main role in malaria infection.

Conclusion

Therefore, it can be concluded that socio-economic status, environmental condition and education status of people play an important role in the life style and maintenance of their health care approaches to mitigate and control the occurrence and spreading of disease vectors and disease in particular. Unawareness of community towards the disease and its management lead to their non-co-operation at various stages of malaria control.

It is well known that it is almost impossible task to resolve the economic problems, but Govt. can do much to enhance the improved sanitary facilities to control the root cause of diseases like malaria, besides through compulsory mass education of the relatively illiterates population living in these areas. High literacy would go a long way in controlling these diseases.

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References

1. Dash, A.P., Adak, T., Raghavendra, K. and Singh, O.P. (2007). The biology and control of malaria vectors in India. Curr. Sci. 92(11): 1571-1578.
2. Heggenhougen, H. K., Hackethal, V. and Vivek, P. (2003). The behavioural and social aspects of malaria and its control. http://apps.who.int/tdr/publication/tdr-research-ublications/social-spects-malaria-control/pdf/seb_malaria. pdf.
3. Saini, P., Joshi, B. D. and Sharma, T. (2009). Observations on correlation between rainfall and instances of malaria in Hardwar district of Uttarakhand state. Indian J. Environ & Ecoplan.16 (1):259-262.
4. Sharma, R.S., Sharma, G.K. and Dhillon, G.P.S. (1996). In: Epidemiology and control of malaria in India. Government of India, Ministry of health and family welfare, NMEP, Delhi.
5. Sharma, V.P. (1999). Current scenario of malaria in India. Parassitologia, 41: 349-353.
6. World Health Organization (2008). World malaria report 2008. WHO/HTM/ GMP/2008.1. pp: 1-25.
7. Lieshout, M.V., Kovats, R.S., Livermore, M.T.J. and Martens, P. (2004). Climate change and malaria: analysis of the SRES climate and socio-economic scenarios. Global Environmental Change, 14: 87-99.
8. Tyagi, P., Roy, A. and Malhotra, M.S. (2005). Knowledge, awareness and practices towards malaria in communities of rural, semi-rural and bordering of east Delhi. J.Vect Borne Dis. 42: 30-35.

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