

ASSESSMENT OF KNOWLEDGE REGARDING MOSQUITO BORNE DISEASES AMONG YOUNG ADULTS IN GOA

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ABSTRACT

Introduction: Mosquito borne diseases pose an immense public health concern and its related knowledge, practices and behavior of the young adult population is essential to develop behavioral change communication messages and policymaking for its prevention and control.

Objective: To assess the Knowledge among young adults pertaining to Mosquito Borne Diseases
Methods: A cross sectional study was conducted for one month where in data collected from 104 young adults (18 to 30 years) using a semi structured questionnaire made available via an Online link posted in relevant social networking groups after taking permission from the respective group admins, along with consent form and appropriate instructions. Data collected was analyzed using the 14 SPSS software version.

Results: Of the 46.2% males and 53.8% females, 58.7% were aged between 21-25 years. 82.7% were aware that mosquitos transmit malaria followed by Dengue (76.9%), Chikungunya (48.1%) and Yellow fever (37.5%). Breeding sites quoted were Gutters (70.19%), Tyres (61.53%) and Garbage (33.65%). Elimination of stagnant water (71.15%) and covering water containers (50%) were considered as effective antilarval measures. 47.11% preferred repellent use to prevent Mosquito Bites.

Conclusion: Awareness about Prevention and Control of Mosquito borne diseases and initiation of behavior change communication is essential to reduce the burden mosquito borne diseases.

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INTRODUCTION

Mosquito-borne diseases pose an immense public health concern. Mosquitoes are the best known disease vectors and are considered as one of the deadliest animals. Different diseases are spread by different species of Mosquitoes. For example, diseases like chikungunya, dengue fever, rift valley fever, yellow fever and Zika virus are spread by Aedes mosquitoes; Malaria is spread by Anopheles mosquito and Japanese Encephalitis, Lymphatic Filariasis and West Nile fever are spread by Culex mosquitoes. According to WHO, Vector-borne diseases account for more than 17% of all infectious diseases, causing more than 1 million deaths annually. More than 2.5 billion people in over 100 countries are at risk of contracting dengue alone. More than 400 000 deaths every year occur due to Malaria.

In order to develop a suitable health education strategy, it is necessary to understand the Level of Knowledge regarding the Mosquito borne infectious diseases, Practices the people follow to prevent mosquito bites at home and the attitude towards combating these problem. This in turn will help to determine specific channels for effective communication and result in efficient dissemination of information which is essential to decrease the burden of Mosquito borne diseases.

Objectives

- To assess the Knowledge among young adults (18-30 years) regarding Mosquito Borne Diseases in Goa
- To make suitable recommendations based on the observations

MATERIALS AND METHODS

It is a cross sectional study carried over a period of one month wherein the study participants constituted the young adults in

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the age group of 18 to 30 years including both the sex. The data was collected using a semi structured questionnaire. The Questionnaire was made available via an Online link through social networking site. The Questionnaire link was randomly posted in various social networking groups constituting of young adults after taking permission from the respective Admin of the group. Using the Convenience sampling technique, data of around 104 participants was collected during the study period. The consent form was attached to the Questionnaire and the appropriate remarks i.e. filling of the questionnaire by the young adults (18 to 30 years) and its completeness were clearly mentioned in the Link. Computerized self-administered questionnaire (CSAQ), a computer assisted interview technique, is employed in this study as a mode of data collection. This is a web based modern technique which facilitates faster data collection and can also help to maintain anonymity. Inclusion criteria: All consenting individuals in the age group of 18-30 years of age were included. The study was carried during the period of May 2017 to June 2017.

MATERIALS AND METHODS

Necessary permission was taken as of the group Admins of the particular social networking site. The Questionnaire was made available via an Online link through social networking site (CSAQ). Preferable sites which are highly utilized by the young adults were selected. The details regarding the members of the group were Known from the respective group Admins. The Questionnaire link was randomly posted in various identified and listed social networking groups constituting of young adults. Participants were sensitized about the need for such study, consent and the anonymity of the results.

Data Collection

Questionnaire consisted of open ended questions (for sociodemographic data) and Multiple Choice Questions (Knowledge, Attitude & Practices). A link was created using an Online tool, consisting of the Consent form and Questionnaire. On opening the link, the Consent form would pop-up and once consented the questionnaire was available to be filled. (If not consented, the Questionnaire did not open). Appropriate remarks i.e. filling of the questionnaire by those fulfilling the inclusion criteria and its completeness were clearly mentioned in the Link.

Data compilation and Analysis

On completion participants had to click on the button 'DONE' on the screen and the data was then retrieved in an Excel Worksheet. Data retrieved in the Excel Worksheet was then coded appropriately. Data Analysis was done using SPSS Version 14. Data Analysis was done for the various factors like socio-demographic, knowledge, attitude and practices among the young adults through the CSAQ interview technique.

RESULTS

Out of the total 104 study participants, 19 of them (18.3%) belonged to the age group of less than 20 years, 61 (58.7%) belonged to the age group of 21-25 years and 24 of them (23.1%) belonged to the age group of more than 25 years. Among the study participants, 48 were males which

constituted 46.2% whereas 56 were females which constituted 53.8% of the total study participants.

Table 1. Socio-demographic characteristics of the study participants

Variables (N=104)	(n)	%	
Age (years)	<20	19	18.3
	21-25	61	58.7
	>25	24	23.1
Sex	Male	48	46.2
	Female	56	53.8

Out of the total 104 study participants, 86 (82.7%) ticked malaria as a mosquito borne disease followed by dengue which constituted around 80 (76.9%), chikungunya 50 (48.1%), yellow fever 39 (37.5%) and Chagas 8 (7.7%). The correct answer constituting of Malaria, Dengue, Chikungunya and yellow fever was given by only 19 of the study participants which constituted around 18.3% of the total study participants.

Table 2. Knowledge regarding diseases transmitted by mosquito borne diseases

Diseases N=104)	n	%
Malaria	86	82.7
Dengue	80	76.9
Chikungunya	50	48.1
Yellow fever	39	37.5
Chagas	8	7.7
Correct Answer*	19	18.3

* Includes Malaria, Dengue, Yellow fever & Chikungunya

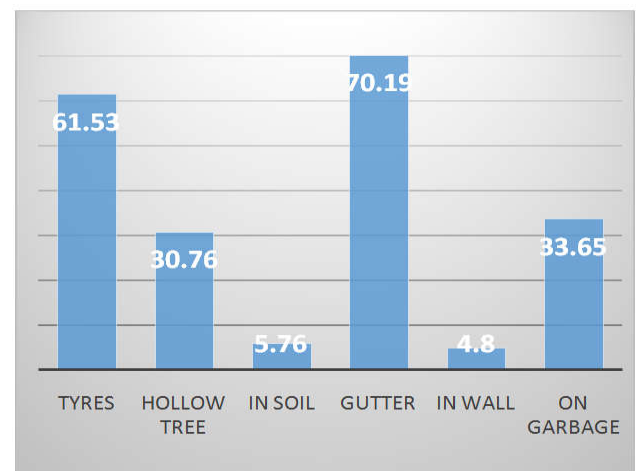


Figure 1. Knowledge regarding the breeding sites of the mosquito

It is observed from the above bar diagram that 61.5% of the study participants opted for tyres as the mosquito breeding site, 30.76% opted for hollow tree, 5.76% opted for soil, 70.19% opted for gutter, 4.8% opted for wall and 33.65% opted for garbage. Majority of the study participants opted for gutter as a mosquito breeding site.

Table 3. Knowledge regarding prevention of mosquito borne disease

Preventive measure more effective to avoid reproduction of larvae and pupa (N=104)	n	%
Elimination of stagnant water	74	71.15
Covering or destroying water collecting containers	56	53.84
Use of fishes	32	30.76
Fumigation	29	27.88
Apply larvicide	21	20.19

It is observed from the above table that 74 (71.15%) of the study participants opted for elimination of stagnant water as the strategy or a preventive measure found to be more effective to avoid reproduction of the pupa and the larvae. This was followed by covering or destroying water collecting containers which was opted by 56 (53.84%) of the study participants. 32 (30.76%) of the study participants opted for use of fishes, 29 (27.88%) opted for fumigation and 21 (20.19%) opted for application of larvicide as a preventive measure to avoid the reproduction of the larvae and the pupa of the mosquito.

DISCUSSION

Out of the total 104 participants, 48(46.2%) were males and 56(53.8%) were females. Majority of the participants belonged to the age group of 21-25 years (58.7%), pursued higher education (83.7%) and were employed (58.7%). Of the 104 participants, majority 86 (82.7%) knew that malaria is transmitted by mosquito followed by 80(76.9%) Dengue, 50(48.1%) chikungunya and 39(37.5%) Yellow fever. Gutters was the most common breeding site (70.19%) followed by tyres (61.53%) and garbage (33.65%). Elimination of stagnant water (74, 71.15%) and covering water containers (52,50%) were considered as the effective preventive measure to avoid the reproduction of larvae and pupa and mosquito bite respectively. Similar studies have been conducted in the community and among rural and urban areas to assess the Knowledge regarding mosquito borne diseases¹⁻³. Adequate knowledge regarding mosquito borne diseases help in prevention of the mosquito bites and hence prevention of disease. This in turn will decrease the mortality and morbidity associated with mosquito borne diseases.

Young population of today are future of tomorrow so assessing their Knowledge would help to make differences in disease occurrence and prevention. Further changes should be brought in the behaviour of the young population through behaviour change communication which will have a lasting impact on the society.

Conclusion

Awareness regarding prevention from mosquito borne diseases is a must. Health education through various modern means of communication must be taken into account to generate awareness and induce behavior change communication. This is essential to reduce the burden of such diseases in our community as well as globally.

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