A Study to Evaluate the Risk for the Occurrence of Mosquito Breeding among the Households in selected Rural Area of Najafgarh, Delhi

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Abstract: *Malaria is turning out to be the fastest spreading mosquito-borne disease this season. The study to evaluate the Risk for the Occurrence of Mosquito Breeding among the Households in selected Rural Area of Najafgarh, Delhi. The objectives of the study was to identify the entomological monitoring parameters of aedes eagypti in a selected community; Develop and assess the effectiveness of a planned source reduction programme on control of selected entomological monitoring parameters for Aedes mosquito.The nature of study was Pre experimental. The study was conducted in rural area of Najafgarh, Delhi. Data collected using convenient Sampling. The data collected were analyzed and interpreted by using descriptive and inferential statistics.the sample size 30. The study concludes that the planned source reduction programme developed was highly effective in mosquito control especially in the control of Aedes mosquito and recommends far and wide practice of the same by incorporating the intervention in planned homevisits carried out by the community health nurses, student nurses, other health workers and agencies working in the community as well as by the family members by themselves in their own household environment.*

Key Words: *Risk, Source Reduction, Mosquito Breeding, Entomological monitoring parameters, Households.*

1. INTRODUCTION:

Mosquitoes are a perfect example of one of the many organisms that can host diseases Of the known 14000 infectious microorganisms, Mosquitoes are known to carry several different classes of microorganisms, including viruses and parasites. Mosquitoes are estimated to transmit disease to more than 700 million people annually in Africa, America and Asia with millions of resulting deaths. In Europe, and other developed countries, mosquito bites are now mostly an irritating nuisance; but still cause some deaths each year.

40% of the world's population are at risk of Dengue fever an important mosquito borne viral disease. Each year Dengue viruses cause 24000 deaths, 250000 to 500000 cases of haemorrhagic fever, and 50 million cases of Dengue fever. Its importance to public health is growing rapidly as a result of a 30 fold increase in incidence following the geographical expansion of its main vector, Aedes aegypti, since the 1960s.

Dengue is a serious arboviral disease having various uncomfortable symptoms and has become more serious, both in frequency and mortality, in recent years. Aedes aegypti and Aedes albopictus are the vectors of Dengue viruses. The spread of Dengue throughout the world can be directly attributed to the proliferation and adaptation of these mosquitoes. Over the last 16 years Dengue has become more common all over the world.

Dengue and vector control programmes must convince people to remove breeding habitats or, alternatively, to prevent Aedes mosquitoes from having access to water containers and other household items that are its potential breeding sites and the current study also is an effort towards the same. Environmental management, which includes planning, organization, and modification of environmental factors that accelerate disease transmission, can be an effective means of vector control.

Management strategies are often site specific, depending on what type of habitats the mosquito in question prefers, and should therefore focus on destruction and alteration of natural as well as manmade containers responsible for providing larval habitats that produce the greatest number of mosquitoes in each community Mosquito-borne disease, especially Dengue Fever, Chikungunya and Japanese Encephalitis caused serious public health problems in Kerala state.

A study investigated the diversity, seasonal prevalence, distribution and larval habitat of Aedes mosquito species in epidemic prone Kottayam district of Kerala during pre-monsoon, monsoon and post-monsoon seasons, identified high degree of adaptive flexibility to various breeding habitats Dengue and vector control programmes must convince people to remove breeding habitats or, alternatively, to prevent Aedes mosquitoes from having access to water containers and other household items that are its potential breeding sites and the current study also is an effort towards the same. Environmental management, which includes planning, organization, and modification of environmental factors that accelerate disease transmission, can be an effective means of vector control. Management strategies are often site specific, depending on what type of habitats the mosquito in question prefers, and should therefore focus on destruction

and alteration of natural as well as manmade containers responsible for providing larval habitats that produce the greatest number of mosquitoes in each community. As a community health nurse the researcher has a responsibility towards the family and community to encourage them to participate in source reduction and related health education sessions. In this perspective the researcher decided to carry out source reduction programme based on existing local practices, review of literature regarding different alternatives and expert validation for wider practice in the community which is tested for it's effectiveness in this study.

2. OBJECTIVES :
- Identify the entomological monitoring parameters of mosquitoes in a selected community.
- Develop a planned source reduction programme appropriate for current community health nursing practice.
- Assess the effectiveness of a planned source reduction programme on control of selected entomological monitoring parameters for mosquitoes.
- To Disseminate leaflet

3. METHODS USED FOR DATA COLLECTION TOOL:
Section A – A Semi structured Questionnaire to assess the base line information of the family residing in the selected household.
Section B- A structured observation check list, to identify the selected entomological monitoring parameters of mosquito control.

VALIDATION OF TOOL
Tool was validated by experts (Holy family College Of Nursing) and criteria for selection of sample. The sample was based on availability
- ❖ Sample was households
- ❖ Convenient sampling technique was adopted.
- ❖ Sample size was 30
- ❖ Sample It consisted of household residing in a selected rural area Najafgarh
- ❖ Sampling Technique: convenient Sampling.

PLAN OF ACTION : Permission was taken for conducting source reduction programme from and faculty of Holy family college of Nursing . Date, time & venue was fixed Prepared A Semi structured Questionnaire to assess the base line information of the family residing in the selected household. A structured observation check list, to identify the selected entomological monitoring parameters of Aedes mosquito control source reduction programme was performed. Leaflet was distributed. Assessed the Effectiveness of source reduction programme

IMPLEMENTATION OF THE PROGRAMME: The programme was conducted in community Venue: Rural area, Najafgarh, Time: 9:30am -12:30pm Date: 5th , 6th , 7th July – pre- test was conducted and intervention was done 10th , 11th , 12th July – post test was conducted.

4. ANALYSIS & INTERPRETATION:
I. DEMOGRAPHIC DATA

S.no.	Type of household	Percentage (%)
1.	Nuclear Joint	66 34

The maximum respondents found were living in Nuclear family (66%) and Joint family (34%)

II. OWNERSHIP
Majority of household were their own (82%) and rented houses were (18%)

S.NO.	Ownership	Percentage
2.	Own Rented	82 18

III. SOCIO-ECONOMIC STATUS
Majority of samples belongs to below poverty line (52%) and above poverty line (48%)

S.NO.	Socio-economic Status	Percentage
3.	Above Poverty Line	48
	Below Poverty Line	52

IV. MOSQUITO BREEDING
All samples having mosquito breeding (100%)

S.NO.	Mosquito Breeding	Percentage
4.	All samples	100

V. Visit by health workers or agencies for mosquito control
In majority of household the health worker or agencies visited to houses for mosquito control(80%) and (20%) families in that no visit was there by health worker.

S.NO.	Visit by health workers or agencies for mosquito control	Percentage
5.	Yes	80
	No	20

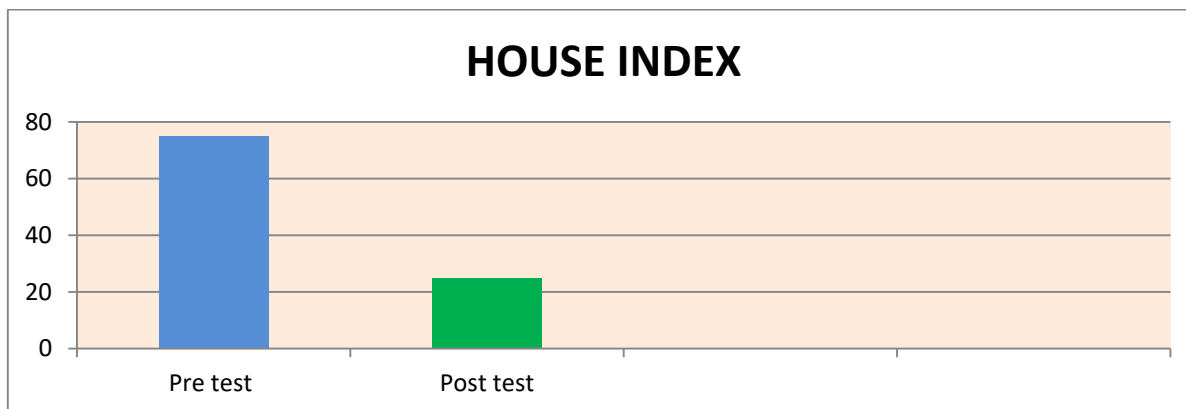**Section II: Entomological monitoring parameters of mosquito control in the selected community**

Figure 1: A bar figure showing difference of pretest house index and posttest house index

6. RECOMMENDATIONS :
* Need to improve nurse patient ratio for better patient care in the centre.
* MCH services must be strengthened in the centre.
* Immunization clinic must have more days in the centre schedule.
* Vocational training can also be implemented in the centre.

7. CONCLUSION:
The most important step in reducing the numbers of mosquitoes is to eliminate their breeding places. This is the source reduction and it comprises minor engineering measures such as filling, levelling and drainage of breeding places and water management. So for effective source reduction we need to know the different areas and different measures for source reduction activities, which is the most acceptable activities of reducing mosquito born diseases.

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