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ASSESS THE SOCIAL POTENTIAL RISKS INVOLVED IN THE TRANSMISSION OF DENGUE INFECTIONS IN THE RURAL POPULATION OF LAHORE, PAKISTAN

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Abstract:

Objective: To decide the conduct hazards factors related with spread of dengue diseases in a rustic network of Lahore, Pakistan.

Methods: A poll based cross sectional review was directed during May 2019 to April 2020 at Services Hospital, Lahore. The example size was 370. Methodical irregular examining was utilized for choosing the investigation subject, from every family taken as one unit. Test was taken from a sum of 3225 houses to accomplish absolute example of 350 families. All the information was entered and examined by utilizing SPSS programming adaptation 15. Means with standard deviation for mathematical factors and extents for absolute factors are introduced. Chi square test was performed to discover the relationship of conduct chances factors with spread of dengue contaminations in a provincial network of Karachi, Pakistan.

Results: Dengue contamination was clinically analyzed in 203 (58%) patients and were hospitalized during August 2012 to February 2013. Among all patients, higher recurrence was found in the middle age bunch 37 to 54 years for example 44% (n=154). The practices of self-mosquito chomp assurance p<0.01), self-avoidance in breading mosquitoes (p<0.01), thickness of vegetation (p<0.01), practices in regards to absence of self-viability in controlling vector (p<0.01) and absence of preventive measure in network (p<0.01) were altogether connected with transmission of dengue diseases.

Conclusion: The conduct chances factors related with spread of dengue diseases in a country com-munity remembered absence of preventive measure for network, absence of understanding of Health conviction models, absence of information, absence of self-avoidance in breading mosquitoes, high thickness of vegetation and absence of self-viability in controlling vector.

Keywords: *social potential risks involved, transmission of dengue infections, rural population of Lahore, Pakistan.*

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INTRODUCTION:

Globally Dengue is a major public health problem. Currently Dengue infection is endemic in some tropical developing countries the number of outbreaks has been increased and Dengue infection has become endemic in 100 countries [1]. The endemic continents are Africa and America, Southeast Asia and the Western Pacific Dengue infection has multifactorial origin and include in-creased rate of urbanization, uncontrolled vectors on-use of repellent, self-mosquito bite protection self-prevention in breading mosquitoes, density of vegetation, lack of self-efficacy in controlling vector lack of preventive measure in community, health belief model, lack of knowledge, uncovered households water containers In some geographic areas dengue virus (DENV) infections are subclinical or unapparent [2]. The prevalence rates in communities may be high despite low detectable clinical cases severe disease is increased in secondary infections and becomes serious public health problem at community level Community behavior along with individual health belief represents behavioral risk actors in the transmission of dengue infections. The types of surveillance depend on the variability in dengue infection within the community [3]. Self-efficacy at individual and community level in dengue prevention behaviorism very important. Self-efficacy was also measuredly a simple questionnaire in the community Health behaviors refer to beliefs and methodologies of the population directed to maintain health, preventing diseases and timely detection of deviation from the normal for standard health care behaviors [4]. These beliefs have wide variations in the cultures. Human responses are modifiable by various risk factors. These modifiable risk factors include perception, reasoning, habits and skills to execute controls of the diseases the individual and community behaviors for illness and treatment in response to symptoms of disease have variations. The human belief model to avoid a disease by an individual includes belief by them: personal susceptibility to disease, the occurrences of disease would have a reasonable severity on his/her life, particular action will benefit by reducing susceptibility to diseases, overcoming some factors like cost and pain will not reduce the chances of developing a disease The purpose of this study is to determine the behavioral risks factors associated with spread of dengue infections during September 2013 to February 2014 in a rural community of Lahore, Pakistan [5].

METHODOLOGY:

This was a cross-section survey conducted in Lahore. The sample size forth research is 350. Sample size was calculated by Open Epi software Escobar-Mesa have shown70% of the cases concentrated in some localities associated with behavioral risks factors and spread of Dengue infections in the community. A poll based cross sectional review was directed during May 2019 to April 2020 at Services Hospital, Lahore. In order to calculate sample size 70% risk was taken to deter-mine the sample size both in exposed and non-ex-posed groups. The level of significance was 5% and confidence level 95% with the power of study 80%the sample size was 323. Therefore, the final sample size calculated is 350 with the addition of refusal by the patients. The final total sample size calculated was 350.Systematic random sampling was used for selecting the study subject, with each household taken as one unit. The probability systematic sampling technique was used in this study. Sample was taken from a total of 3225 houses to achieve total sample of 350 households.

The information was collected directly through face to face interviews. All the participants of the study were informed about the study and informed consent was obtained from each participant. All the data was entered and analyzed by using SPSS software version. Means with standard deviation for numerical variables and proportions for categorical variables are presented. Chi square test was performed to find the association of behavioral risks factors with spread of dengue infections in a rural community.

RESULTS:

Dengue infection was clinically diagnosed in203 (58%) patients and they were hospitalized during August 2012 to February 2013. Among all patients, higher frequency was found in the middle age group 37 to 54 years i.e. 44% (n=154), 54 %(n=189) were females and 46% (n=161) were males. Patients with monthly income 10,000were found 77% (n=269).Among all, 18% patients were illiterate, 40%had primary or less education, 16% had only 10years of education, only 10% were graduates and16% were postgraduates as shown in (Table1.).Chi-square analysis shows that behavior regarding use of repellent was significantly associated with the transmission of dengue infections (p<0.01).The behaviors of self-mosquito bite protection (p<0.01), self-prevention in breading mosquitoes (p<0.01), density of vegetation (p<0.01), behaviors regarding lack of self-efficacy in controlling vector<0.01) and lack of preventive measure in community (p<0.01) were significantly associated with transmission of dengue infections. The procedure of percentage calculations was based on column percentages for dengue infection confirmed and absent which were placed in columns and behaviors were the responses as agreed and disagreed for the prevention of dengue

infection in rows Individuals behavior about health belief models (p<0.01), about lack of knowledge p<0.01) and uncovered water container households (p<0.01) were also found significantly associated factors with transmission of dengue infections as shown in (Table 2).

DISCUSSION:

Dengue infection was clinically diagnosed in203 (58%) patients and they were hospitalized for further treatment [6]. Females were found more with Dengue infection in the study. The Dengue spread was more common in patients with low-income< 10,000 about 77% (n=269) and low literacy rate The survey also showed that behavior regarding use of repellent was significantly associated with the transmission of dengue infections at p<0.01 [7]. The behaviors of self-mosquito bite protection self-prevention in breading mosquitoes, density of vegetation, behaviors regarding lack of self-efficacy in controlling vector, and lack of preventive measure in community were significantly associated with transmission of dengue infections at p<0.01The complexity of Dengue is closely related to the behavioral risk factors, characteristics of the environment and spatial heterogeneity of living conditions in the rural areas. This survey also showed that the behavioral risk factors included environmental factors, individual behaviors and community behaviors also [8]. The macro-geographic level of *Aedes aegypti* tent factor and found associated with the spread of infection in the community. The factors were also seen in other studies

The studies also show that at meso-geographic level the house aggregations and household drinking water supplies were of risk in the rural areas. The potable uncovered water storage significantly contributed in *Aedes aegypti b*reeding *Aedes aegypti* breeding showed high preference to the plastic drums in the rural areas. This survey also showed that risk areas of increases are associated with changing habitats this survey also shows that public health programs are needed to control vector in the rural areas [9]. Study have shown improved environmental sanitation can also reduce the threat of the spread of dengue infection in the community Health status, water supply and sanitation need to be looked after before the rain seasons in the community. The biological complexities of vector-borne disease and primary health care systems have been found more significant in lowering the spread of infection Community support and participation is essential but specialized technical skills are also required for behavior change regarding use of repellent, self-mosquito bite protection self-prevention in breading mosquitoes, density of vegetation,

behaviors regarding lack of self-efficacy in controlling vector and lack of preventive measure in community [10].

CONCLUSION:

The behavioral risks factors associated with spread of dengue infections in a rural community included lack of preventive measure in community, lack of comprehension of Health belief models, lack of knowledge, lack of self-prevention in breading mosquitoes, high density of vegetation and lack of self-efficacy in controlling vector

REFERENCES:

1. Stewart Ibarra AM, Luzadis VA, Borbor Cordova MJ,Silva M, Ordonez T, Beltran Ayala E, et al. A sociale cological analysis of community perceptions of dengue fever and Aedes aegypti in Machala, Ecuador. BMC Public Health 2014;14:1135.
2. Sang S, Yin W, Bi P, Zhang H, Wang C, Liu X, etal. Predicting local dengue transmission in Guangzhou, China, through the influence of imported cases, mosquito density and climate variability. PLoS One 2014;7:102755.
3. Buonsenso D, Barone G, Onesimo R, CalzeddaR, Chiaretti A, Valentini P. The re-emergence of dengue virus in non-endemic countries: a case series. BMC Res Notes 2014;7:596
4. Volz EM, Frost SD. Inferring the source of transmission with phylogenetic data. PLoS ComputBiol 2013;12:1003397.
5. Mammen MP, Pimgate C, Koenraadt CJ, RothmanAL, Aldstadt J, Nisalak A, et al. Spatial and temporal clustering of dengue virus transmission in Thai villages. PLoS Med 2008 Nov 4;11:205
6. Wichmann O, Hongsiriwon S, BowonwatanuwongC, Chotivanich K, Sukthana Y, Pukrittayakamee SRisk factors and clinical features associated with severe dengue infection in adults and children during the 2001 epidemic in Chonburi, Thailand Trop Med Int Health 2004 Sep;9:1022-9
7. Menard B. [Geographic changes in exposure to dengue]. Sante 2003;2:89-94
8. Furuya H. Estimation of reproduction number and probable vector density of the first autochthonous dengue outbreak in Japan in the last 70years[Internet]. Environ Health Prev Med 2015 Available from: http://link.springer.com/article/10.1007%2Fs1219 9-015-0488-9. Accessed on Au gust 30th, 2015.
9. Anyamba A, Chretien JP, Small J, Tucker CJ, Linthicum KJ. Developing global climate

anomalies suggest potential disease risks for 2006-2007. Int J Health Geogr 2006;5:60.

10. Yoshida LM, Suzuki M, Thiem VD, Smith WPTsuzuki A, Huong VT, et al. Population based cohort study for pediatric infectious diseases research in Vietnam. Trop Med Health2014;42:47-8.