Cross sectional-survey on community stakeholders of Baldia town Karachi regarding knowledge and cases of Dengue Fever

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Abstract: Aim: Aim of study is identify the need assessment in community regarding awareness of dengue fever to prevention from dengue in community. Aim of study in this survey to collect data of positive cases of dengue in medical and non-medical persons in community to compare the knowledge regarding dengue in medical and non-medical stakeholders. **Background:** There are many peoples suffering from dengue in Baldia town Karachi in august to September 2024 specially due to rainy season. Due to rain there is the issue of stilled water in streets therefore dengue spread in community due to lack of cleanliness. Medical stakeholders are having good knowledge regarding dengue fever as compared to non-medical persons. There is the need of awareness session for community stakeholders regarding prevention of dengue. There are no any resources of sanitation in streets in Baldia town to preventive measures of dengue due to stilled water after rain. **Methodology:** Cross sectional descriptive research study has been conducted in Baldia town to detect the cases of dengue and knowledge of dengue in medical and non-medical stakeholders in community. 50 medical and non-medical community stakeholders in Baldia town were selected according to simple random sampling. Study duration was 1 month 1st Aug to 30th Aug, 2024. Data collection through questionnaire hardcopy form was conducted. Data was analyzed on SPSS Amos-23. Total 14 participants were having positive dengue fever and 36 participants were having negative dengue fever in which 28% positive cases and 72% percent negative cases. Report of positive dengue in 18 to 20years included 4 cases, 21 to 32 years included 6 cases and 33years to 42years included 4 cases. There is need of awareness sessions for preventive practices of dengue in Baldia town Karachi. Cases of dengue in non-medical stakeholders are higher than medical stakeholders its mean medical stakeholders are having knowledge and awareness regarding preventive practices in dengue fever. 14(26.9%) positive dengue cases and 36(67.9%) negative dengue reports. 43 participants are having good knowledge and 7 participants are not having knowledge regarding dengue fever prevention and complications. According to age group dengue fever was higher in age group of 21-32 years old peoples as compared to other age groups.

Keywords: Cases of Dengue, knowledge, Age Group of Adults, Medical and Non-medical persons.

Introduction

Dengue fever is associated with high grade fever with chills on and off in a day, vomiting, anorexia, abdominal pain, headache, vertigo, malaise, fatigue and lethargy in resulting from dengue mosquito bite (aedes Egyptia). Dengue fever spread in community through lack of sanitation, stilled water of rain, impaired sewage and sewerage system and lack of awareness of community stakeholders. Dengue fever is coagulopathy disorder may lead to death due to bleeding. Dengue fever cause lack of platelets in the human body and the function of platelets cells in blood to control the bleeding as per traumatic situation. Platelets also prevent the body from bleeding in traumatic conditions. Awareness about nutrition in dengue is very important in community to prevent from complications of dengue fever. Incubation of dengue fever is 3 to 15 days. Cross sectional study was conducted and published by 2022 in Pakistan to observe the knowledge and attitude of peoples regarding dengue fever death 1108 and 286262 due to outbreak of dengue, lack of knowledge in community stakeholders in this research. (1) Cross sectional study was conducted

and published by 2022 in Pakistan. Original research article published in Brazilian journal of biology in 2022. Research was conducted in malakand region of Pakistan. In this research vectors of dengue fever in medical practitioner. Questionnaire form was distributed for data collection, 81.2% participants was having knowledge regarding dengue fever and 18.8% participants was not having knowledge of dengue fever therefore they could not prevent from complication of dengue fever.(2) Cross sectional study was conducted and published by 2024 in Pakistan to observe the knowledge and attitude of peoples, empirical evidences and epidemic hit areas. (KAPs) Knowledge, Attitude and Practices. It was household cross sectional study. Signs and symptoms of participants Headache: 73.8%, pain in joints: 64.4%, pain in muscles: 51.9%, pain in eyes: 41.8%, bleeding from nose and in stool: 34.3% and Rashes on skin due to thrombocytopenia like petechial, purpura and ecchymosis: 36.1% were identified. (3) Cross sectional study was conducted and published by 2021 in (RMJ) Rawal Medical Journal in Pakistan. (KAPs) Knowledge, Attitude and Practices, sampling technique was convenient sampling and

sample size was 120 participants. Conclusion of the study is that the participants in this research are well aware regarding dengue fever and they were having insight and awareness regarding prevention from complication of dengue fever like bleeding episodes. 38(31.6%) of 15 to 25 years, 60(50%) of 26-35years, 16(13.3%) of 36 to 45 years and 6(5%) of 45 and above years of age. (4) Cross sectional study was conducted and published by 2020 in Pakistan to observe the knowledge and attitude and practices of prevention of peoples. This research was conducted in Peshawar by faculties of Peshawar medical University department of community medicine. Sample size was 200 participants of community stakeholders during the era of COVID-19 Pandemic. Sampling technique was simple random sampling and questionnaires hardcopy forms were filled out after observation. Fever in 57% of participants, rashes in 20% participants, muscle pain in 28% participants, joint pain in 26% of participants. 60% of respondents were aware regarding dengue fever. (5) Cross sectional study was conducted and published by 2023 in Pakistan to observe the knowledge and attitude and practices. Published in research square 2023. Data collection process was questionnaire forms of google were distributed according to simple random sampling. Sample size was 140 respondents. Questionnaire form consists of four sections. 80% participants of the study included in 15 to 30years of age group in community. Conclusion of the study was that lack of knowledge regarding dengue fever in participants of community stakeholders therefore they could not manage complications of dengue fever. They could not prevent themselves from dengue fever exposure. (6) Cross sectional study was conducted and published by 2023 in Pakistan to observe the knowledge and attitude and practices in PJMHS journal. The research study was conducted in Iqra university north campus department of pharmacy. Conclusion of research study is that knowledge and practices of peoples were improved through awareness sessions and mass media. (7) Review article has been published by 8 Feb, 2022 in (frontier microbiology) journal in Pakistan Regarding awareness of community about vector borne diseases. There was lack of knowledge and preventive practices in community regarding dengue. There is need of awareness session for community to prevent from zoonotic diseases.(8) Cross sectional study was conducted and published by 2024 in Pakistan to detection of dengue fever. The study was conducted in Hyderabad city of Sindh Pakistan and published in MDPI open access journal.(9) Cross sectional study was published by 2022 in Technical journal UET Taxila in Pakistan to detection of dengue fever. The research study was conducted by faculty of Department of University of management and technology Lahore Pakistan. Researchers conducted qualitative interviews in this study to evaluate the issues of migration in Pakistan. Causes of migration was divided. Peoples were well aware regarding diseases like dengue and malaria through mosquitos in slum areas therefore they migrated. One of the cause was vector diseases included

dengue into three domains social, economic and environment Slum to urban areas. (10) Retrospective case control study conducted in Pakistan and published in springer link by 2022 regarding mosquito bite viral diseases. Researchers conducted research about experiment arbovirus, dengue and chikungunya in urbanization. (11) Cross sectional study was conducted and published by 2023 in Pakistan to observe the knowledge and attitude and practices. Research was conducted in Haripur hazara Khyber Pakhtunkhwa. Prevalence of dengue was observed. Published in journal of infection and public health. 12 large outbreaks in Pakistan were noted regarding dengue. Morbidities 28626 and death 1108 due to dengue virus. The data of 761 participants of study who were selected according to simple random sampling and cross sectional descriptive survey. Variables consists of age, signs and symptoms and sex.(12) Cross sectional descriptive study regarding cases of dengue in Pakistan in international journal of tropical diseases by 2024. This research was conducted by medical staff of AKUH Karachi. Sample size was 500 individuals 18years above adults. Data was analyzed by SPSS Amos 25 version. 3.8% reinfection incidence, 19% coinfection in dengue. Signs and symptoms were bleeding from gums and nose and melena, nausea, vomiting, high grade fever on and off with chills, restlessness, renal injury and pain in joints. Conclusion of study is that low incidence and coinfection in the research study has been observed regarding dengue fever.(13) Cross sectional descriptive study was conducted in Pakistan regarding awareness of dengue fever for future perspectives and published in international journal of surgery global health. Evidence based strategy used in this study, researcher motivated to community for urbanization and community engagement to improve practices of personal hygiene and sanitation to prevent from mosquito borne diseases like malaria and dengue fever. The research wanted to inform to government for improving preventive measures for mosquito borne disease in all over the Pakistan. (14).

Method and Materials:

Design of Study: Cross sectional Descriptive

Study Setting: Community of Baldia town Karachi

Study Duration: 1 Month (1st August to 30th August, 2024)

Inclusion criteria: in this study only age group of 18 years old to 42 years old adult male and female participants are allowed. Participants will be medical and non-medical person both are allowed.

Sample Size: 50 community stakeholders

Sampling Technique: simple random sampling

Variable: Medical stakeholders, Non-Medical stake holders, Age groups, Gender, Dengue Fever cases of positive reports, Exposures.

Setting of Research Study: Baldia town sector C/3 Karachi.

Research Instrument: Questionnaire survey form, SPSS, Knowledge about dengue fever and literature review.

Data Collection: Data collection through visiting community and filling hardcopy questionnaire form according to simple random sampling.

Data Analysis: SPSS, Chi-square, mean standard deviation and range of data, frequency of data

Results

Table 1: Mean, Rang and standard deviation statistics of overall variables in research study

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Gender	50	1.00	1.00	2.00	1.3600	.48487
knowledge	50	1.00	1.00	2.00	1.1400	.35051
Exposure	50	1.00	1.00	2.00	1.5800	.49857
Medical	50	1.00	1.00	2.00	1.6800	.47121
Dengue	50	1.00	1.00	2.00	1.7200	.45356
age group	50	2.00	1.00	3.00	2.1400	.75620
Valid N (list wise)	50					

Table 2 (a): dengue fever positive or negative in medical and non-medical stakeholders.

Descriptive Statistics						
	N	Range	Sum	Mean	Std. Deviation	Variance
Medical	50	1.00	84.00	1.6800	.47121	.222
Dengue	50	1.00	86.00	1.7200	.45356	.206
Valid N (list wise)	50					

Medical * Dengue * knowledge Cross tabulation

Count

Knowledge			Dengue		Total
			positive	negative	
Knowledge	Medical	medical person	5	9	14
		non-medical person	8	21	29
	Total		13	30	43
No Knowledge	Medical	medical person	0	2	2
		non-medical person	1	4	5
	Total		1	6	7
Total	Medical	medical person	5	11	16
		non-medical person	9	25	34
	Total		14	36	50

Table 3: knowledge of dengue fever in male and female.

Statistics				
			Gender	knowledge
N	Valid		50	50
	Missing		3	3
Mean			1.3600	1.1400
Median			1.0000	1.0000
Mode			1.00	1.00

Report

Gender

knowledge	Mean	N	Std. Deviation
knowledge	1.3256	43	.47414
no knowledge	1.5714	7	.53452
Total	1.3600	50	.48487

Gender * Dengue * knowledge Cross tabulation					
Count					
knowledge			Dengue		Total
			positive	negative	
knowledge	Gender	male	10	19	29
		female	3	11	14
	Total		13	30	43
no knowledge	Gender	male	0	3	3
		female	1	3	4
	Total		1	6	7
Total	Gender	male	10	22	32
		female	4	14	18
	Total		14	36	50

Table 4: Knowledge of dengue fever in medical and non-medical stakeholders.

Medical * Exposure * knowledge Cross tabulation					
Count					
knowledge			Exposure		Total
			exposure	no exposure	
knowledge	Medical	medical person	7	7	14
		non-medical person	9	20	29

			16	27	43
no knowledge	Medical	medical person	1	1	2
		non-medical person	4	1	5
		Total	5	2	7
Total	Medical	medical person	8	8	16
		non-medical person	13	21	34
		Total	21	29	50

Table 5: Exposure of dengue fever in stakeholders

Dengue * Exposure * Medical Cross tabulation					
Count					
Medical			Exposure		Total
			exposure	no exposure	
medical person	Dengue	positive	0	5	5
		negative	8	3	11
	Total		8	8	16
non-medical person	Dengue	positive	5	4	9
		negative	8	17	25
	Total		13	21	34
Total	Dengue	positive	5	9	14
		negative	16	20	36
	Total		21	29	50

Table 6: Number of Positive and Negative dengue cases:

Dengue

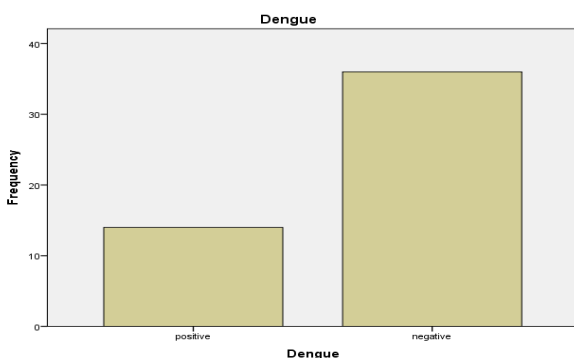|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	positive	14	26.4	28.0	28.0
	negative	36	67.9	72.0	100.0
	Total	50	94.3	100.0	
Missing	System	3	5.7		
Total		53	100.0		

Table 7: Number of Positive and Negative dengue cases in different age groups:

age group * Dengue Cross tabulation				
Count				
		Dengue		Total
		positive	negative	
age group	18 to 20years	4	7	11
	21 to 32years	6	15	21
	33 to 42 years	4	14	18
Total		14	36	50

Discussion

Dengue fever is associated with high grade fever with chills on and off in a day, vomiting, anorexia, abdominal pain, headache, vertigo, malaise, fatigue and lethargy in resulting from dengue mosquito bite (aedes Egyptia). Dengue fever spread in community through lack of sanitation, stilled water of rain, impaired sewage and sewerage system and lack of awareness of community stakeholders. Dengue fever is coagulopathy disorder may lead to death due to bleeding. Dengue fever cause lack of platelets in the human body and the function of platelets cells in blood to control the bleeding as per traumatic situation. Platelets also prevent the body from bleeding in traumatic conditions. Awareness about nutrition in dengue is very important in community to prevent from complications of dengue fever. Incubation of dengue fever is 3 to 15 days. Cross sectional study was conducted and published by 2022 in Pakistan to observe the knowledge and attitude of peoples regarding dengue fever death 1108 and 286262 due to outbreak of dengue, lack of knowledge in community stakeholders in this research. (1) Cross sectional study was conducted and published by 2022 in Pakistan. Original research article published in Brazilian journal of biology in 2022. Research was conducted in malakand region of Pakistan. In this research vectors of dengue fever in medical practitioner. Questionnaire form was distributed for data collection, 81.2% participants was having knowledge regarding dengue fever and 18.8% participants was not having knowledge of dengue fever therefore they could not prevent from complication of dengue fever.(2) Cross sectional study was conducted and published by 2024 in Pakistan to observe the knowledge and attitude of peoples, empirical evidences and epidemic hit areas. (KAPs) Knowledge, Attitude and Practices. It was household cross sectional study. Signs and symptoms of participants Headache: 73.8%, pain in joints: 64.4%, pain in muscles: 51.9%, pain in eyes: 41.8%, bleeding from nose and in stool: 34.3% and Rashes on skin due to thrombocytopenia like petechial, purpura and ecchymosis: 36.1% were identified. (3) Cross sectional study was conducted and published by 2021 in (RMJ) Rawal Medical Journal in Pakistan. (KAPs)

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town. 14(26.9%) positive dengue cases and 50(94.3%) negative dengue reports.

Conclusion

There is need of awareness sessions for preventive practices of dengue in Baldia town Karachi. Cases of dengue in non-medical stakeholders are higher than medical stakeholders its mean medical stakeholders are having knowledge and awareness regarding preventive practices in dengue fever. 14(26.9%) positive dengue cases and 36(67.9%) negative dengue reports. 43 participants are having good knowledge and 7 participants are not having knowledge regarding dengue fever prevention and complications. According to age group dengue fever was higher in age group of 21-32 years old peoples as compared to other age groups.

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