

ORIGINAL ARTICLE

KNOWLEDGE, ATTITUDE AND PRACTICES RELATING TO DENGUE FEVER AMONG TEACHERS OF PESHAWAR GARRISON

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Background: The menace of dengue fever (DF), a mosquito-borne viral disease has widely spread throughout the globe leading to a 30-fold increase in its incidence in the last 50 years. The objective of this study was to assess the knowledge, attitude, and practices of teachers regarding dengue illness prevention in Peshawar Garrison, Pakistan. **Methods:** It was a descriptive cross-sectional study carried out in 9 schools and colleges of Peshawar Garrison over a period of 3 months. One hundred and eighty (180) teachers from schools and colleges were included in the study. Data were collected using a structured pretested questionnaire, and analysed using SPSS-22. **Results:** Scale average and item average for knowledge ranged from 19 to 57 and 1 to 3 respectively. The scale average 38.79 and item average 2.04 correspond to 'yes' category of responses. For attitude the scale average and item average ranged from 6 to 30 and 1 to 5 respectively. The scale average of 8.93 and item average of 1.79 corresponding to somewhere between strongly agree and agree. Regarding practice, the range of scale and item averages was 8 to 16 and 1 to 2 respectively. A scale average score of 15.16 and item average score of 1.69 correspond to 'yes' category of responses. **Conclusion:** There was a consistency in the level of knowledge, attitude and practices of participants related to DF. Teachers at all levels be inculcated in promoting awareness among general population regarding DF.

Keywords: Knowledge, attitude, practice, dengue, mosquito control

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INTRODUCTION

Globally dengue is the most rapidly spreading mosquito-borne viral disease. Its incidence has increased 30-fold in the last 50 years. It has geographic expansion to new countries and from urban to rural areas. Fifty million dengue infections occur worldwide annually and approximately 2.5 billion people live in dengue endemic countries.¹ Around 1.8 billion (more than 70%) of the population of these areas lives in the WHO South-East Asia Region and Western Pacific Region which bear nearly 75% of the current global disease burden due to dengue.² Before 1970, dengue fever was very rare and was found in only 9 countries. The case mortality is about 5%, which can be reduced with proper treatment in the hospital to about 1%. Dengue infection has become the leading public health problem. According to USA Centers for Disease Control and Prevention, dengue fever endangers more than 1/3rd of world population at risk. More than 100 million people get infected with this virus every year.³

Studies carried out worldwide to assess the knowledge, attitudes and prevention strategies among different study populations had varied results. In Westmoreland, Jamaica a KAP survey was conducted in childbirth health clinics; 54% of parents had good knowledge about dengue, about 47% considered dengue to be a serious but preventable disease, but 77% did not use effective dengue preventive methods.⁴ University of Malaya, Kuala Lumpur conducted a KAP study that showed that 82% cited radio and TV as their main source of information on dengue. A significant

association found between knowledge of dengue and Aedes control measures.⁵ A study conducted in Philippines demonstrated good knowledge about disease corresponds with increased protective measures against dengue.⁶ Another study conducted among female students of Jeddah high schools revealed low prevalence of knowledge about dengue. The higher knowledge scores were of those students with positive family history of dengue illness, those with higher maternal education and those with increasing student's age.⁷ KAP study in rural area of Japan demonstrated 70.9% knowledge about the vector. More than 94% respondents had a positive attitude that DF is treatable. More than 85% people practice few of the preventive measures.⁸

Nexus to above, various KAP studies have been done in Pakistan to assess the community's understanding of disease process and preventive practices. A pilot KAP study conducted in Karachi revealed that about 90% had heard of DF.⁹ Similarly, a KAP study conducted by Lahore Medical and Dental College involved 1st year medical students. Almost all respondents agreed that DF is an important public health problem. Elimination of mosquito habitat and advocacy, collaboration and capacity-building were among the options preferred for prevention of dengue spread.¹⁰ A survey conducted among communities belonging to different socio-economic backgrounds in Karachi revealed that only 35% had adequate knowledge about DF and its vector.¹¹

No such study has been conducted to assess knowledge, attitude, and practices among teachers in Peshawar regarding dengue illness and its prevention. This study investigated the KAP of the school teachers in Peshawar regarding prevention of DF in backdrop of rise in cases of dengue countrywide.

SUBJECTS AND METHODS

It was a cross-sectional study performed on teachers of Peshawar Garrison to assess the level of knowledge, to find out the current state of attitudes regarding dengue illness prevention, and to determine the practices being used regarding dengue illness prevention. Official approval was obtained before starting the study. The educational institutes included were Army Public School and College Systems (APS & CS) Warsak Road, Fazaia Inter College PAF Base, Garrison APS Babar Road, FG Boys College Tariq Road, FG Technical School Tariq Road, FG Boys Public High School Khyber Road, FG Middle Public School Khyber Road, FG Girls Public High School Mall Road, and APS Junior School Mall Road Peshawar.

Total sample size came out to be 179 taking proportion of 35%¹¹ knowledge about dengue fever taking 95% confidence level and 5% error of margin by WHO calculator. Both genders were included in a ratio of 1:1. Teachers of Peshawar Garrison, aged 18 years or above, during a period from November 2014 to January 2015 were recruited through convenience sampling after taking written informed consent. Students and administrative staff were excluded.

Data were collected through a close ended, self-administered questionnaire. The questionnaire was divided into 3 parts pertaining to knowledge, attitude and practices. Responses for knowledge were on 3-point rating scale, for attitude on 5-point Likert Scale and those for practices were dichotomous.

Data were analysed using SPSS-22. Mean and standard deviation were calculated for numerical variables whereas frequency and percentages for categorical variables. Reliability of the questionnaire was calculated using Cronbach's Alpha. And $p \leq 0.05$ was considered significant.

RESULTS

One hundred and eighty participants completed the survey questionnaire. Fifty percent of the study population was males and an equal number was female. The mean age of the respondents was 37 ± 10.05 years (Range: 22–59 years). Majority of the study respondents were in age group 21–30 years and 31–40 years (33% in each group). Reliability of the questionnaire as determined by Cronbach's Alpha was 0.8.

Responses along with coding, number of items in each category of KAP, scale average based upon total score and item average based upon average scores are

shown in Table-1. Scale average and item average for knowledge ranged from 19 to 57 and 1 to 3 respectively. The scale average 38.79 and item average 2.04 correspond to 'yes' category of responses. For attitude the scale average and item average ranged from 6 to 30 and 1 to 5 respectively. The scale average of 8.93 and item average of 1.79 corresponding to somewhere between strongly agree and agree. Regarding practice, the range of scale and item averages was 8 to 16 and 1 to 2 respectively. A scale average score of 15.16 and item average score of 1.69 correspond to 'yes' category of responses.

Table-1: Analysis of questionnaire in terms of knowledge, attitude and practice

Study variable	Responses with coding	Items	Scale average	Item average
Knowledge	No=1 Yes=2 Don't know=3	19	38.79±6.86	2.04±0.27
Attitude	Strongly Agree=1 Agree=2 Not sure=3 Disagree=4 Strongly disagree=5	6	8.93±2.37	1.79±0.54
Practice	No=1 Yes=2	8	15.16±1.63	1.69±0.2

DISCUSSION

The main finding of this study was that the level of knowledge related to DF in the study population was quite high which may be due to the education level of the participants as all were teachers in educational institutions. The area of high knowledge of the participants was responses related to signs and symptoms of DF. However, most of the respondents were not aware of the time of bite of mosquito responsible for DF. The finding of our study regarding the high knowledge of study participants was in consistence with studies carried out in Pakistan which showed higher prevalence of knowledge in better socioeconomic class and medical students.^{11–13} A study from Jeddah¹⁴ demonstrated deficient knowledge among students regarding DF. This may be due to the reason that the study was carried out among students.

The respondents of the study showed a positive attitude towards prevention of DF. This is likely due to the high educational level of the study participants. Most of the study participants demonstrated strongly positive attitudes towards DF prevention. Majority of participants agreed that controlling the breeding places of mosquito can control spread of DF. The findings related to good attitudes towards DF prevention are in consistence with another study carried out in Thailand.¹⁵

The practice score of the respondents was also higher and the participants demonstrated positive practices regarding DF prevention. This may be likely due to strong knowledge level and the positive attitudes

towards DF prevention. Personal preventive practices were used by majority of the respondents. The finding of our study related to DF prevention were in consistence with the findings of a study in Thailand¹⁶ in which participants showed better preventive practices against DF. This may be due to the higher knowledge levels and better attitudes towards DF prevention. In our study no correlation was worked out between the knowledge, attitudes and practices of the participants.

CONCLUSION

There was a consistency in the level of knowledge, attitude and practices of participants related to DF. Teachers at all levels should be inculcated in promoting awareness among general population regarding DF.

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