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KNOWLEDGE ON DENGUE FEVER AMONG UNDERGRADUATES

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INTRODUCTION

Dengue is a mosquito-borne infection that in recent decades has become a major international public health concern. Dengue is found in tropical and sub tropical regions around the world. It is predominantly found in urban and semi urban areas. Dengue fever is a viral disease transmitted to humans through the bites of infective female *Aedes* mosquitoes, usually by *Aedes aegypti*. (Centers for Disease Control and Prevention, 2007). Dengue spread fast in urban areas when the mosquito population increases during rainy season. (Epidemiological Unit, Ministry of Healthcare and Nutrition, 2009).

The incidence of dengue has increased dramatically around the world in recent decades. Around 2.5 billion people of the world's population are now at risk of dengue. World Health Organization (WHO) currently estimates that there may be 50 million dengue infections worldwide every year. (World Health Organization, 2009). The year 2009, reported the largest number of dengue fever cases and deaths in the recent past to the Epidemiological Unit, Sri Lanka. During the year 2011, 21540 cases and 151 deaths were reported up to the date 4th of November 2011 to the Epidemiology Unit, Sri Lanka.

University undergraduates are important section of the society. In future, they are going to be the policy makers in the country. Therefore, it is important to estimate the knowledge on dengue fever among university undergraduates, since if there is a deficiency in that knowledge we can make necessary recommendations. Hence, this study was carried out with the objectives to assess the knowledge on Dengue fever among undergraduates, to identify the factors associated with knowledge on Dengue fever among undergraduates and to identify the sources of knowledge on Dengue fever among undergraduates.

METHODOLOGY

A descriptive cross sectional study was undertaken to assess the knowledge on Dengue fever among undergraduates of University of Sri Jayewardenepura. Purposive sampling method was used to select 200 undergraduates. Twenty five (25) undergraduates from each batch from each faculty (Faculty of Medical Sciences, Faculty of Applied Sciences, Faculty of Management Studies & Commerce and Faculty of Arts) were recruited. Equal number of males and females were selected from each faculty. Self administered questionnaire was used to collect data from respondents. The questions were directed toward gaining information regarding undergraduates' knowledge on Dengue fever, sources of information on dengue fever and socio-demographic characteristics of the subjects. Knowledge was assessed by using a scoring system. Data were analyzed by using descriptive statistics and SPSS software package.

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RESULTS AND DISCUSSION

Description of the sample

Table: 1 Distribution of the respondents according to socio-demographic characteristics (N=200)

Characteristics	Number (N)	Percentage
Faculty		
Medical Sciences	50	25.0
Arts	50	25.0
Management Studies & Commerce	50	25.0
Applied Sciences	50	25.0
Age (years)		
21 – 23	131	65.5
24 – 26	69	34.5
Year of Study		
Second	100	50.0
Third	100	50.0
Sex		
Male	100	50.0
Female	100	50.0
Home Area		
Urban	34	17.0
Semi Urban	61	30.5
Rural	105	52.5

Overall knowledge on Dengue fever

Table: 2 Level of knowledge on dengue fever (N=200)

Level of Knowledge	Number (N)	Percentage
Poor (0 – 12)	0	0.0
Satisfactory (13 – 24)	39	19.5
Good (25 – 36)	161	80.5
Total	200	100.0

Minimum:17 Maximum:35 Mean: 27.7 Standard Deviation: 3.68

Majority of respondents had good knowledge. Knowledge scores ranged from zero to 36. Minimum score obtained by respondents was 17.

Overall knowledge on dengue according to background characteristics

Table: 3 Overall knowledge on dengue according to background variables (N=200)

Variable	Knowledge		Significance
	Satisfactory(%)*	Good(%)*	
Faculty			
Medical Sciences	2(4.0)	48(96.0)	$\chi^2 = 10.203$
Others	37(24.7)	113(75.3)	$df = 1$
			$p = 0.001$
Year of Study			
Second	14(14.0)	86(86.0)	$\chi^2 = 3.854$
Third	25(25.0)	75(75.0)	$df = 1$
			$p = 0.050$
Sex			
Male	23(23.0)	77(77.0)	$\chi^2 = 1.561$
Female	16(16.0)	84(84.0)	$df = 1$
			$p = 0.212$
Home Area			
Urban & Semi Urban	14(14.7)	81(85.3)	$\chi^2 = 2.615$
Rural	25(23.8)	80(76.2)	$df = 1$
			$p = 0.106$

* Row Percentage

When comparing the faculties with regard to the overall knowledge on Dengue fever all other faculties were combined against Faculty of Medical Sciences.

Sources of knowledge on Dengue fever of undergraduates

Table: 4 Number & percentage of sources of knowledge in which the respondents received information regarding dengue fever (N=200)

Source of information*	Number (N)	Percentage
Television	195	97.5
Newspaper	171	85.5
Radio	120	60.0
Posters	108	54.0
Leaflets	106	53.0
Friends and Neighbors	92	46.0
Health Personnel	90	45.0
Magazine	70	35.0
University	61	30.5
Internet	46	23.0
Others	5	2.5

* Multiple responses. Others include awareness programs, patients, lectures, hospital.

Overall knowledge on Dengue fever among undergraduates was good. Nobody with poor knowledge was identified. This may be because Dengue in Sri Lanka is an endemic disease and media, community, government organizations conduct awareness programmes on Dengue frequently. Therefore people may expose to those programmes and absorb knowledge on dengue.

When comparing the faculties with regard to the overall knowledge on Dengue fever all other faculties were combined against Faculty of Medical Sciences. Both faculty groups had very high proportions of respondents with good overall knowledge but Faculty of Medical Sciences had statistically significant higher proportion of respondents with good overall knowledge. *(p=0.001)*. This may be due to Faculty of Medical Sciences students gain more knowledge from lecture modules on Dengue. And also they have the opportunity to learn from hospitalized patients when they attend to clinical practice. Therefore faculty of study is associated with knowledge on dengue.

No significant difference revealed between male and female students with regard to knowledge on Dengue. Because literacy level in Sri Lanka is very high and which is almost equal to developed countries. So males and females almost equally had knowledge on Dengue. A study conducted by Koenraadt *et al* (2006) found that females were more knowledgeable than males. Another study conducted by Benthem *et al* (2002) also found that knowledge on dengue significantly differed according to sex. But those results are not in agreement with the results of this study. Year of study also did not have any association with knowledge on Dengue fever. This may be that most of the times undergraduates gain knowledge on Dengue before entering to the university. So undergraduate's knowledge almost equal when they study in the university. Home area of the undergraduates does not show any significant difference with knowledge on Dengue. Earlier lot of Dengue cases and deaths reported from urban and semi urban areas. But now most of rural areas have become urbanized and they are faced with lack the proper waste disposal management. Therefore significant Dengue cases and deaths reported in rural areas too. Therefore undergraduates from urban and rural areas almost evenly aware about Dengue fever. A study conducted by

Benthem *et al* (2002) revealed that knowledge on dengue significantly differed by site. However, that result is not supported by the findings of this study. Therefore Sex, year of study, home area all turned out to be not associated with the knowledge.

When considering the individuals source of information on dengue fever, all sources disseminating knowledge about the disease. But majority of undergraduates obtained knowledge on dengue fever from television and newspapers. Since the number of local television channels and local newspapers had increased relaying information about magnitude and disease facts and preventive measures on dengue in the island, television and newspapers viewership has increased among the masses, and this may be the reason why it was considered the source of information by the majority. This result is consistent with the studies conducted by Itrat *et al.* (2008) and Matta *et al.* (2006).

CONCLUSIONS/RECOMMENDATIONS

Overall knowledge on Dengue fever among undergraduates was good. But statistically significant association found between Faculty of Medical Sciences and other faculty group ($p = 0.001$). Consequently, this increased knowledge will in turn might bring further benefits to the society and this highly beneficial knowledge will continue over time. Due to time and resource limitation, the study has been conducted only in University of Sri Jayewardenepura, and hence it might not be a representation of the countries' universities as a whole. In future, more studies should be conducted in other universities as well to find out the pattern of knowledge on Dengue fever among undergraduates.

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