

UNIVERSITI TEKNOLOGI MARA

PAEDIATRIC DENGUE LIFE-THREATENING
SYMPTOMS RECOGNITION AMONGST CARERS IN
COMMUNITY.

NUR ATIFAH BINTI MOHD NAIM

AUGUST 2012

ACKNOWLEDGEMENT

Alhamdulillah, after a year of hardworking, this report is finally completed. Firstly, I would like to extend my sincere appreciation to my lead project supervisor, Dr Syed Jefrizal Syed Jamal for his tremendous knowledge, guidance, constructive criticism and kindness throughout my research period. Not to forget my co-supervisors, Associate Professor Dr. Anis Safura Ramli and Dr Farnaza Ariffin for their contribution and support.

Special thanks go to the dean of medical faculty of UiTM, Dato' Prof Dr. Khalid Yusoff, the coordinator of Advanced Medical Science (AMS), Professor Dr. Nasimul Islam and my co-writer, Dr Mohammad Ikhsan Selamat for their invaluable time, support and advices.

I would like to express my sincere thanks to all the principals, teachers, students and the respondents for their help in the data collection process and support to do this research successfully. Thanks to all my AMS friends who gave me valuable guidance, consultation and support to do this research and thesis successfully.

And finally, I would like to extend my thanks to my family for their understanding, support and love.

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ABSTRACT

Intro: Malaysia carries a high burden of dengue and dengue hemorrhagic fever (DHF). This disease carries significant morbidity and mortality risks especially amongst the paediatric population.

Methods & materials: A cross sectional study was designed to determine the current status of knowledge and awareness on danger paediatric dengue symptoms in parents and carers in Malaysia. We also aim to ascertain whether there are any factors which may contribute to their degree of knowledge and awareness. This study was conducted in Gombak district in Selangor from November 2011 to April 2012. The target respondents were carers of children up to a maximum age of 12 years old. The mean age of the participants was 40 years with a standard deviation of 5.69. Six primary schools and four kindergartens were selected by two stage sampling method and the questionnaires were distributed by the school's principal to the carers. The questionnaire included demographic details and questions on common life-threatening signs and symptoms of dengue. The answers were assessed using a scoring system and the cumulative dengue score was taken as a reflection of the level of knowledge. The knowledge was categorized as 'good', 'moderate' or 'poor'. Chi-square analysis was used to determine the relationship between socio-demographic characteristics and the dengue score.

Results: Out of 866 respondents (388 males and 478 females), only 30 percent had good level of knowledge and awareness. The dengue score had significant association with the highest education level of the carers ($p=0.001$), household monthly income ($p=0.001$), family history of dengue ($p=0.016$), dengue campaigns awareness ($p=0.010$) and level of dengue knowledge assessed by the respondents ($p=0.001$).

Conclusion: Overall, the level of knowledge and awareness of dengue life-threatening symptoms amongst parents and carers in Malaysia need to be improved. We recommend improvement on parental education and public health campaigns to stress more on paediatric dengue danger symptoms and complications of the disease.

Key words: Dengue, paediatric, life-threatening symptoms, Malaysia

1.1 Overview of Dengue

1.1.1 Epidemiology

Dengue is one of the world's significant arthropod-borne diseases with high prevalence in tropical and subtropical regions. The number of dengue cases have increased by about 30-fold in the last 40 years. Worldwide, there are about 50 million cases of dengue infection annually (Brooks, Carroll, Butel & Morse, 2004) with an estimated 500,000 cases of dengue hemorrhagic fever and 22,000 deaths occurring mainly amongst the pediatric population (<http://www.who.int/csr/disease/dengue/impact/en/>). Today, over 2.5 billion people, almost one third of the global population, live in high risk areas for this potentially deadly virus (Mazrura *et al.*, 2010). In addition, an estimated 100 countries worldwide have dengue fever classified as endemic disease (Syed *et al.*, 2010). The number of countries being affected has continued to rise as compared to in 1970 when only nine countries experienced epidemic DHF (<http://www.who.int/csr/disease/dengue/en/>). The first few dengue epidemics being reported occurred in Asia, Africa and North America in 1779 to 1780 (Nalongsack *et al.*, 2009). Originally, dengue predominantly occurs in urban and semi urban settings. However, The World Health Organization (WHO) recently had reports of cases in rural areas as well (2009).

WHO has declared dengue and dengue hemorrhagic fever as endemic disease in Asian countries (Itrat *et al.*, 2008). The number of dengue cases annually in South East Asia has increased from less than 10 000 in 1950s and 1960s to more than 200 000 cases in the 1990s (Gibbons & Vaughn, 2002). In 1996, New Delhi had an outbreak of dengue fever with 10, 252 people being hospitalized and 423 deaths were reported (Alag, Tiwari & Talwar, 1997). In Thailand, a large outbreak occurred in 1987 with more than 1000 deaths and in 1998, 424 deaths were documented (Bentham *et al.*, 2002).