

**UNIVERSITI SAINS MALAYSIA
GERAN PENYELIDIKAN UNIVERSITI PENYELIDIKAN
LAPORAN AKHIR**

**HEALTH AND SAFETY: ENHANCING COMMUNITY-BASED
EDUCATION MODULERS OF PREPAREDNESS FOR FLOOD-
RELATED COMMUNICABLE DISEASES IN KELANTAN**

PENYELIDIK

**PROFESOR MADYA DR. WAN MOHD ZAHIRUDDIN BIN
MOHAMMAD**

PENYELIDIK BERSAMA

**PROF. DR. HABSAH HASAN
PROF. DR. SEEHAIDA MOHAMED
ASSOC. PROF. DR. LEE YEONG YEH
DR. WAN NOR ARIFIN WAN MANSOR
DR. ALWI MUHD BESARI
DR. NANI DRAMAN
DR. ROSNANI ZAKARIA
DR. NOOR AMAN A. HAMID
DR. SURIANTI SUKERI**

2017

BORANG TRGS BANJIR - P1(PROJECT)

YEAR

2016



KEMENTERIAN
PENDIDIKAN
MALAYSIA

FINAL REPORT

GERAN PENYELIDIKAN PENGURUSAN BENCANA BANJIR
Laporan Akhir Skim Geran Penyelidikan Transdisiplinari (TRGS)

A. PROJECT INFORMATION

YEAR: 2015/2016

RESEARCH TITLE:

ENHANCING COMMUNITY-BASED EDUCATION MODULES OF PREPAREDNESS FOR FLOOD-RELATED
COMMUNICABLE DISEASES IN KELANTAN

THEME CODE:1.0

(Please refer attachment)

SUBTHEME CODE:

Please Tick (✓)

PHASE: 01: Pre-Disaster

/

02: During Disaster

/

03: Post-Disaster

/

AREA: 01: Preventive

/

02: Preparedness

/

03: Rescue and Recovery

04: Adaptation

05: Mitigation

START DATE: 01.04.2015

END DATE (EXPECTED): 31.03.2016

PROJECT STATUS: (ACTIVE / TERMINATED / COMPLETED): COMPLETED

PROJECT LEADER: ASSOC. PROF. DR WAN MOHD ZAHIRUDDIN BIN WAN MOHAMMAD

I/C / PASSPORT NUMBER: 690616035115

PROJECT MEMBERS :

1. PROF. DR HABSAH HASAN
2. PROF. DR ZEEHAIDA MOHAMED
3. ASSOC. PROF. DR LEE YEONG YEH
4. DR WAN NOR ARIFIN WAN MANSOR
5. DR ALWI MUHD BESARI
6. DR NANI BT DRAMAN
7. DR ROSNANI ZAKARIA
8. DR NOOR AMAN A. HAMID
9. DR SURIANTI SUKERI

(including GRA/RA/RO)

1. WAN HANI SOFEA BT WAN MANSOR
2. WAN ADABIAH BT WAN MAZLAN

1. B. PROJECT ACHIEVEMENT (*Prestasi Projek*)

ACHIEVEMENT PERCENTAGE				
Project progress according to milestones achieved up to this period	0 - 25%	26 - 50%	51 - 75%	76 - 100%
Percentage (please state #%)				100%

RESEARCH OUTPUT		
Number of articles/ manuscripts/ books (Please attach the First Page of Publication)	Indexed Journal	Non-Indexed Journal
	1 (submitted for publication in scopus-indexed "Jurnal Teknologi" of UTM)	
Conference Proceeding (Please attach the First Page of Publication)	International	National
	3	1
Intellectual Property (Please specify)		

Number and title of Policy Paper / SOP / Technology Solution <i>(Please specify)</i>	<ol style="list-style-type: none"> 1. Modul Pendidikan Kesihatan Komuniti bagi Penyakit-Penyakit Berjangkit Akibat Banjir, 2016. (no. ISBN 978-967-0486-81-9) (Nota: Modul asal sedang dalam proses 2nd editing dan dijangka dapat dicetak untuk diterbitkan pada Julai 2016). 2. Validated Questionnaires for Knowledge, Attitude and Preventive Practice on Flood-Related Communicable Diseases (Nota: Borang kajiselidik ini boleh digunakan bagi kajian situasi semasa atau alat penilaian selepas intervensi kesihatan pencegahan penyakit berjangkit akibat banjir di peringkat komuniti).
--	--

HUMAN CAPITAL DEVELOPMENT					
Human Capital	Number				Others (please specify)
	On-going		Graduated		
Citizen	Malaysian	Non Malaysian	Malaysian	Non Malaysian	
No. PHD STUDENT					
Student Fullname: IC / Passport No: Student ID: Date of appointment:					
No. MASTER STUDENT					
Student Fullname: IC / Passport No: Student ID: Date of appointment:					
No. RA/RO					
Student Fullname: IC / Passport No: Student ID: Date of appointment:			<ol style="list-style-type: none"> 1. WAN HANI SOFEA BT WAN MANSOR KP: 910601-03-5894 Date: 01.06.2015 2. WAN NOR ADABIAH BT WAN MAZLAN KP: 910907-03-6144 Date: 01.06.2016 		
Total					

C. EXPENDITURE *(Perbelanjaan) as Borang K1(RMC)*

Budget Approved (<i>Peruntukan diluluskan</i>)	: RM 133,496.00
Amount Spent (<i>Jumlah Perbelanjaan</i>)	: <u>RM 112,68.34</u>
Balance (<i>Baki</i>)	: RM 20,813.66
Percentage of Amount Spent (<i>Peratusan Belanja</i>)	: 84.41%

D. SUMMARY OF RESEARCH FINDINGS (*Ringkasan Penemuan Projek Penyelidikan*)

SUMMARY OF RESEARCH FINDINGS

Objectives:

Methods and materials:

This research project involved two phases.

In Phase 1 (between August and October 2015, situational analysis were done in assessing and exploring baseline knowledge, attitude and preventive practices (KAP) of the affected communities with regards to communicable diseases related to flood. Baseline community surveys were conducted using a pre-validated KAP questionnaire through guided interviewed-based technique among 300 villagers. Raw total scores from each section of KAP were converted to percentage scales for analysis while four focus group discussions (FGD) were performed to explore their coping and experiences in the flood disaster.

In Phase 2 (between November 2015 and February 2016), health education materials were developed through series of workshop and then were evaluated through a community intervention. These involved revising existing health education materials, creating new materials tailored to the community and getting feedback from stakeholders. Customized modules that focusing on major flood-related communicable diseases and comprising of printed materials and audio-visual information kits were eventually developed which included 2 series of health education flip charts, 2 series of PowerPoint slides for health talk, 3 series of health education flyers, 10-minute video with captions on flood-health hazards, diseases and prevention messages and other complementary public health information.

A non-randomized community-controlled trial was then conducted to determine effectiveness of the community-based health education modules. The delivery channels of the health modules were conducted at least two weeks before the forecasted flood seasons in that year. Two strategies were applied: targeted small group health education sessions which comprised 20-25 persons each, and mass dissemination of public information health education materials.

Results

Three hundreds repondents were interviewed with a mean age of 45.1 years old (SD=17.34) and mainly those with secondary school education (n=166, 55.3%). Taking mean scores below 80% as unsatisfactory, all knowledge domains, attitude and selected practices (drinking water and protective habit) need further concern. Between 90.7 to 96.3% agreed that they were more likely to practice preventive measures if given proper information and personal protective tools (e.g soap, hand sanitizer, face mask etc). Between 72.2 - 95.3% agreed that current materials of health education on flood related diseases were useful but interactive small group discussions and demonstrations were also suggested by them.

There were 129 and 101 respondents within the intervention community who were participated in the repeated surveys at 1-week and 1-month post intervention KAP assessments respectively while another 125 in the controlled group. Table 1 shows there were statistically significant improvements in all knowledge components (type of diseases, common symptoms, methods of transmission, susceptible and risk factors, and danger signs) from 9.4% to 52.6% ($P<0.001$) while there was a 10% increment ($P<0.001$) in attitude scores toward preventing behaviours on flood-related communicable diseases among the intervention community. There was a slight reduction in most domains at 1-month post intervention; however all mean scores were still higher than at the baseline pre intervention stage.

When compared to control community at post-1 month, statistically significant difference in knowledge scores were shown between 15.4% and 35.4% ($P<0.001$) on types of diseases, common symptoms and susceptible/ risk factors domains. There were significant improvements on the practice domains at post 1-month in the practice of drinking safe water and

protective habits ($P < 0.001$ and $P < 0.006$ respectively) but no changes in the hand-washing and sanitation practice.

Conclusion

The study findings show that:


1. the community-based health education has been evaluated to be effective in enhancing existing level of relevant knowledge and attitude as part of their preparedness toward communicable diseases related to flood
2. this research further contributes by providing customized and comprehensive community-based health education modules in preventing potential communicable disease outbreaks in affected flood-prone communities
3. this will reduce the costs associated with the diseases and reduce the vulnerabilities of communities exposed to floods

E. PROBLEMS / CONSTRAINTS IF ANY (Masalah/ Kekangan sekiranya ada)

1. Initial constraint was mainly due to the proposed short duration of the project (April until December 2015). Even though on paper the project began in April 2015, the project proper including ethical approval and grant reception started from June 2015 onwards. After the project was approved for 3-month extension, the project milestones were revised and most of the planned activities were able to be completed.
2. Since the "forecasted" flood in the project areas didn't occur, the implementation of the community-based health education module was conducted as a 'field-test' in the targeted and control community to show its effectiveness. A proportion of the budget was not fully utilized due to these unforeseen circumstances.

Date : 8 JUN 2016
Tarikh


Project Leader's Signature:
Tandatangan Ketua Projek


PROF. DR. HANISAH ZAHARUDIN WAN MOHAMMAD
Pengarah
"Enhancing Community - Based Education Module"
@Prevention For Flood - Related Communicable Diseases In Flooded
Areas 2015-2016/2017

F. COMMENTS, IF ANY/ ENDORSEMENT BY RESEARCH MANAGEMENT CENTER (RMC) (Komen dan Pengesahan oleh Pusat Pengurusan Penyelidikan)

Name:
Nama:

Tandatangan:


30/6/16

Date:
Tarikh:

PROF. DR. LEE KEAT TEONG
Pengarah
Pejabat Pengurusan & Penyelidikan
Universiti Sains Malaysia