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## PUBLIC HEALTH RESEARCH

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### Awareness, knowledge and acceptance of community on a non-communicable disease intervention – Findings from the “Healthy Community, Developed Nation” (KOSPEN) in the Southern Zone of Peninsular Malaysia

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#### ABSTRACT

<b>Received</b>	26 June 2019
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<b>Introduction</b>	Community-based health promotion programme has been recognised to reduce modifiable lifestyle risk behaviours for non-communicable diseases. The aim of this study was to evaluate the proportion of the awareness, knowledge and acceptance of a community-based intervention programme, “Komuniti Sihat, Pembina Negara“ (KOSPEN) (Healthy Community, Developed Nation).
<b>Methods</b>	This cross-sectional study employed a two-stage proportionate sampling method to select a representative sample of communities in the Southern states of Peninsular Malaysia, Negeri Sembilan, Malacca, and Johor. Face-to-face interviews by trained research assistants using pre-validated questionnaires was the study tool applied.
<b>Results</b>	The study revealed that approximately two thirds of respondents were aware of the KOSPEN programme (65.5%) and almost half (45.4%) of them were involved in the health promotion activities, namely health screenings (84.8%), health talks (66.4%), and providing plain water in formal occasion (52.9%). About two thirds and one-quarter of them have a very good (73.4%) and good (24.1%) general view on this programme. Four out of ten respondents faced difficulties joining the activities. Lack of time (83.0%) was reported as the main barrier.
<b>Conclusions</b>	The KOSPEN programme in overall was moderately accepted by the community. However, the need for future improvement has to be highlighted in order to enhance the involvement and participation of the communities.
<b>Keywords</b>	Awareness - acceptance - community Intervention Programme - non-communicable disease - KOSPEN.

## INTRODUCTION

The prevalence of major non-communicable diseases (NCDs) and their risk factors in Malaysia have been increasing since the last two decades.<sup>1</sup> The prevalence of smoking has been static in the last three decades<sup>2</sup>, while the prevalence of obesity and diabetes are demonstrating an increasing trend from 14.4% to 17.7%, and from 11.6 to 17.5% over a 9-year period (2006 to 2015), respectively.<sup>3-5</sup> These alarming trends have remarkably burdened the healthcare system in providing medical treatment for the chronic diseases besides implementing measures to overcome the associated risk factors.<sup>6</sup>

NCDs are predominantly secondary to the unhealthy lifestyle behaviours which are preventable such as unhealthy diets, inadequate physical activity, tobacco and alcohol abuse.<sup>7</sup> Therefore, effective NCD prevention and control strategies must focus on a combination of community-based approach and individualised intervention. The fundamental of community-based action will not only promote lifestyle changes towards the healthier behaviors, but also empower the community by encouraging them to be an agent of change that will utilise their own resources for proactive preventive actions. This comprehensive strategy involves raising the community's awareness by changing their risk perceptions, providing simple tools, technologies and lifestyle choices as well as facilitating the adoption process of appropriate options by the community members.<sup>8,9</sup>

In line with this principle, the Ministry of Health Malaysia has launched a nation-wide community-based program, "*Komuniti Sihat, Pembina Negara*" (KOSPEN) (Healthy Community, Developed Nation). The KOSPEN holds the objectives to reduce NCDs risk factors through promoting healthy eating, active lifestyle, obesity management, smoke-free habit and periodic health screenings. This program which is a collaboration between Ministry of Health and Ministry of Rural and Regional Development (MRRD), is congruent with the policy statement of the National Non-Communicable Disease – National Strategic Planning (NSP) initiatives and is consistent with strategies outlined under the NSP.<sup>7</sup> Eligible localities within the districts were identified and approached by Community Development Department and District Health Office, following their agreeable participation. Eligible local residents were recruited as volunteers and trained on various procedures such as delivering health education, advocating healthy lifestyles, conducting blood sugar tests, blood pressure measurements, reading and interpreting results from the screening tests, as well as referring high risk cases to the nearest health clinics for further medical management.

To achieve the stipulated objectives, program evaluation is therefore important in order to

identify the shortcomings and weaknesses throughout its implementation, so that these limitations can be rectified via appropriate actions. This study aimed to assess the awareness, knowledge and acceptance of KOSPEN programme among residents in the selected localities.

## METHODS

### Study design

This cross-sectional study was conducted from October to December 2014 in three states in the southern zone of Peninsular Malaysia namely Negeri Sembilan, Malacca, and Johor. A two-stage proportionate sampling method was employed to select a representative sample from the respective states. The first stage included the selection of districts that is implementing the KOSPEN programme via systematic random sampling and second stage involved the random selection of two enumeration blocks (EBs; which is an artificial geographical boundary created by the Department of Statistics based on the 2010 census) from the selected districts via simple random sampling. In total, 29 districts with 58 EBs were selected. All household members in the selected EBs and were at least 18 year-olds and resided more than two weeks in the selected EBs were invited to participate in the study. Based on an expected prevalence of awareness of 0.05 (based on the expert opinion), margin of error of 1.5%, design effect of 3.0 and non-response rate of 30%, an optimum sample of 3,456 respondents are needed. Further details on the study design are available from the KOSPEN report.<sup>10</sup>

### Instrument

A customised questionnaire which was developed by a panel of experts consisted of programme managers, the Unit of Non-communicable disease of Ministry of Health Malaysia, public health specialists and senior health education officers, was pre-tested among 30 respondents in Kg Seri Bahagia, Kuala Selangor. A few minor corrections were made based on the feedback from the respondents. The final questionnaire consists of six sections, namely sociodemographic, awareness of KOSPEN Programme, knowledge on agencies and main activities of KOSPEN, acceptance of the programme, activities that respondents involved in and barrier which they encountered upon participation.

### Data collection

Data were obtained through face-to-face interviews by trained research assistants. Eligible respondents were briefed by research assistants on the objectives of the study and their voluntary right of participating in the study. Respondent were assured of data confidentiality and anonymity, and that only aggregated data will be published. The interview

session was commenced upon written consent from the respondents. The Medical Research Ethics Committee, Ministry of Health, Malaysia has granted the ethical clearance for the present study (14-1193-22626).

#### Measure

The analysis of the present study was confined to those who were aware of the KOSPEN programme, which was determined by an item "Have you ever heard of KOSPEN Programme" with the option of "Yes", or "No". The source of awareness of the KOSPEN programme was also identified in the study. The knowledge on the KOSPEN programme was measured based on knowledge on the agencies involved and core activities of KOSPEN programme. The overall acceptance and or perception on KOSPEN activities were measured using a 5-level likert scale that ranged from very poor, poor, moderate, good to very good.

#### Data management and analysis

Double data entry method was employed to ensure accuracy and exactness. The original questionnaire was referred whenever discrepancies were encountered. Data were cleaned and weighted based on complex sampling design and non-response rate. Descriptive statistics were used to describe the characteristics of respondents, awareness, knowledge and acceptance of KOSPEN programme. All analyses were carried out by SPSS statistical software version 20.

## RESULTS

#### Social demographic characteristic of respondents

A total of 4,149 adults responded to this study. The respondents were almost evenly distributed by gender, in which 54% (95% CI: 52.4-55.5, n=2242) were female and 46.0% (95% CI: 44.4-47.6, n = 1907) were male. Majority of the respondents were 50 year-olds and above (47.1%, 95% CI: 45.6-48.7, n=1913), followed by below 30 year-olds (20.3% 95% CI: 19.0-21.5, n=859) and 40 to 49 year-old (17.5 %, 95% CI: 16.3-18.7, n= 739). Most of the respondents were Malays (94.7%, 95% CI: 94.2-95.3, n=3896), followed by Indians (4.0%, 95% CI: 3.5-4.5, n=203) and Chinese (1.0%, 95% CI: 0.7-1.4, n=30). In terms of education level, 52.3% (95% CI: 50.7-53.8, n=2169) of them completed secondary school, while 27.4% (95% CI: 27.0-29.8, n=1155) completed primary education. Only a minority of them attained tertiary education (12.9%, 95% CI: 12.0-15.0, n=547) (Table 1).

#### Awareness of KOSPEN

Approximately two thirds of the respondents were aware of the KOSPEN program (65.5%, 95% CI: 64.0-66.9, n=2791). The most common source of information was from the Village Safety and Development Committee (*Jawatankuasa Kemajuan dan Keselamatan Kampung, JKKK*) (56.7%, 95% CI: 54.9-58.5, n=1654), followed by friends (45.2%, 95% CI: 43.4-47.0, n=1287), volunteers (29.0%, 95% CI: 27.8-29.2, n= 891), Community Development Department (*Jabatan Kemajuan Masyarakat, KEMAS*) (24.2%, 95% CI: 22.7-25.7, n=744) and health agencies (23.1%, 95% CI: 21.7-24.6, n=733). On the other hand, other sources included signboards (10.6%, (95% CI:9.4-11.6), mass media (8.8%, 95% CI: 7.8-9.9) and social media (3.9%, 95% CI: 3.2-4.7) were also reported (Table 2).

#### Knowledge of KOSPEN

Among the respondents who were aware of the KOSPEN programme, majority of them reported that the main agencies involved in the KOSPEN programme were health clinics (70.2%, 95% CI: 68.6-71.8, n=2085), District Health Office (57.3%, 95% CI: 55.7-58.9, n=1756) and KEMAS (38.9%, 95% CI: 37.2-40.6, n=1167). The main activities of KOSPEN reported by respondents were health screening (82.3%, 95% CI: 80.8-83.7, n=2380) and active lifestyle (63.4%, 95% CI: 61.6-65.1, n=1732). However, most of them considered sports carnivals (49.4%, 95% CI: 47.6-51.1, n=1433) and cooking demonstrations (39.4%, 95% CI: 37.7-41.1, n=1171) as KOSPEN activities (Table 3).

#### Acceptance on KOSPEN

The present study revealed that a majority of the respondents had a-very good (73.4%, 95% CI: 70.4-76.2) and good (24.1%, 95% CI: 21.4-27.0) general view on KOSPEN. Approximately 91% of the respondents agreed that KOSPEN was effective in overcoming chronic medical diseases. Almost all of the respondents admitted that the practice of separating sugar from hot drinks (96.7%), preparing plain water during events (98.7%), providing menu with fruit and vegetable (98.8%), recognition as non-smoking zone for all formal events (97.3%), setting up weight monitoring corner (97.3%), and conducting physical exercise, leisure activities and sports sessions (98.2%) were good approaches in KOSPEN (Table 4).

## DISCUSSION

The KOSPEN program has been implemented for a period of 4 to 12 months, and the present study demonstrated that the community was generally aware of the existence of the programme, mainly from the JKKK and friends, but less from social or printed media. This indicated that the JKKK have fulfilled their roles and responsibilities as stipulated

in the KOSPEN programme guidelines, and that the correct mechanism was utilised to implement KOSPEN in rural settlements. In addition, these findings may also suggest that informal communication and interaction would seem more effective than electronic sources such as social media among the rural communities. Therefore, future health promotion programmes in rural localities may adopt similar modus operandi.

The study revealed that members in the community had moderate knowledge about the agencies involved and activities conducted in the KOSPEN programme. Health institution and health screening was correctly identified by the respondents as the agency involved and activity being carried out, respectively. They were aware of these as they had witnessed these health promotion activities carried out by health department and volunteers in the field. However, a comparatively small proportion of respondents recognised anti-smoking and physical activities promotion programme as KOSPEN activities. In addition, the study also revealed that a high proportion of respondents had considered cooking demonstrations and sport carnival as the health promotion activities under KOSPEN. This confusion may be due to the fact that these activities were often carried out during the official launch of the KOSPEN programmes in certain localities. The present findings may suggest that more effort is needed to impart the knowledge about health promotion activities of KOSPEN.

In terms of acceptance of the KOSPEN programme, majority of the respondents showed positive perception, such as its effectiveness in curbing the rising prevalence of NCDs. As posited by the human behavioral theory that a positive perception on a particular activity will arouse an individual's interest and participation with less barriers<sup>11,12</sup>. Therefore, such overwhelming perceptions on KOSPEN may enkindle their eager participations in the KOSPEN programme which can ultimately lead to healthy lifestyle.

## CONCLUSION

In conclusion, the present study revealed that there was a moderate level of awareness and knowledge on the KOSPEN programme. Nonetheless, the positive perception among a majority of the communities is a motivating indicator for the successful implementation of KOSPEN. More effort should be undertaken in order to promote KOSPEN and increase the awareness and knowledge on KOSPEN, particularly through the involvement of local village committees such as the Village Safety and Development Committee

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