

ORIGINAL ARTICLE

The Roles of Health Literacy in Developing Health Communication Competence among Low-wage Workers in Kelantan, Malaysia

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ABSTRACT

Introduction: The distressing rate of critical illnesses in Malaysia was contributed by the nation's low level of health literacy where many Malaysians failed to well-manage their illness as they are incompetent in communicating the health conditions to obtain the necessary medical services. This study was conducted cross-sectionally to determine the relationship and effects of health literacy, encompassed of health care, disease prevention and health promotion domains towards health communication competence among low-wage workers in Kelantan, Malaysia. **Materials and methods:** : Quota sampling was applied in selecting the targeted respondents from three districts of Machang, Kota Bharu and Bachok. 150 samples, encompassing gardeners and janitors were conveniently selected as the study's respondents. A set of questionnaires was used as the instrument and was physically distributed to the respondents. **Results:** The results from the descriptive analysis showed that more low-wage workers in urban areas possessed adequate level of health literacy and good level of health communication competence in comparison to those in sub-urban area. Meanwhile, the correlational analysis findings showed the overall and domains of health literacy were positively and strongly correlated to health communication competence. The results of multiple regression analysis have also revealed that every domain of health literacy had significant effects towards low-wage workers' health communication competence, with health promotion as the strongest predictor. **Conclusion:** Health literacy was found to be significantly, positively and strongly associated to health communication competence among low-wage workers in Kelantan, Malaysia. This study has highlighted the significance of health literacy in developing health communication competence in which those who work in sub-urban areas need to particularly be prioritized. Accordingly, this study suggests the health departments to organize various health promotion and education programs for the society to enhance their awareness on health literacy.

Malaysian Journal of Medicine and Health Sciences (2024) 20(4): 56-62. doi:10.47836/mjmhs20.4.8

Keywords: Health communication competence, Health literacy, Health care, Disease prevention, Health promotion

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INTRODUCTION

The nobility of the occupation as medical practitioners is beyond words as they need to perform more than what they are capable to do. In a sense of responsibility, their duties and work come with expectations and those expectations outweigh their burden in providing and aiding the nations. Certain circumstances do put the medical practitioners in a difficult position whereby if the health care services and consultations are not turning well or at par with the patients' expectations,

the blame would be put onto them. According to Tigar (1), it is consensually accepted that patients and families who are suffering from medical errors, deserve to receive apologies which however, will not move away from the blaming culture that pervades the health care organizations. Simply, it is high time for everyone to be responsible with their health and patients' self-empowerment is the key solver to the problem. Even it is not somewhat easy to identify medical errors in which there are certain information that may be concealed to avoid the issues of medico-legal (2), it is expected for the patients to at least understand about the significance of their autonomy and empowerment in deciding medical related consent, without subconsciously be influenced by other people. In fact, communication can be fostered through patients' empowerment (3) as

they are individually responsible to make health-related decisions by communicating them to their individual physicians.

Nevertheless, the communication between patients and medical practitioners will always rely and relates to both sides of the parties. According to Rajah, Hassali (4), 19% of medical practitioners agreed that they failed to use simple language and avoid medical jargon during consultation with the patients. This has demonstrated that there are gaps in health conversation or communication's practices between the medical practitioners and patients, which was also supported by Kee, Khoo (5) who have stated in their study that the communication abilities of medical practitioners are likely to be overestimated. Therefore, previous study has suggested that there is a need to conduct communication training for pharmacy education in order to efficiently improve the health care delivery and competency (6). Thus, medical practitioners need to ensure that their communication or conversation to the patients is simple and clear, in accordance to the patients' level of health literacy (4).

World Health Organization (WHO) defined health literacy as skills of cognitive and social which may determine the individuals' ability and motivation to have access, understand and use various information to maintain and promote the good health (7). In Malaysia, it was found that only 6.6% of adults with age 18 years old and above have adequate health literacy with no differences between the gender (8). This same survey also reported that individuals who live in urban areas (7.8%) have significant adequate health literacy as compared to those who live in rural areas (2.3%). In addition, only 2.4% of adults with primary education and 5.1% adults with secondary education were found to be in adequate level of health literacy as compared to those individuals with tertiary education (11.0%). In relation to individuals' income, trend for adequate health literacy was not found except for it was lowest among those with income of RM2000-RM2999 (3.6%) and highest among those who earned RM6000-RM6999 monthly (11.6%) (8). Nonetheless, a current National Health Morbidity Survey 2019 has revealed that the overall status of Malaysians' health literacy was considered as lower sufficiency level with an indication of limited health literacy is more prominent among respondents who are older, has lower household income and lower education level (9).

Furthermore, the Shanghai declaration of recognizing health literacy as a vital component of health has been endorsed by countries in the Ninth Global Conference on Health Promotion (10). This has reflected the significance of health literacy in preventing, combating the health-related concerns as the nation is now upholding to individual's empowerment. The significance of health literacy towards health care outcomes is widely

recognized. According to Jaafar, Perialathan (9), it was revealed that limited health literate individuals were more present in disease prevention domain, while health care domain were most presented by adequate health literate individuals, whereas individuals who have outstanding health literacy were most present in health promotion domain. Hence, three objectives were formulated for this research which were (1) To compare the level of health literacy and health communication competence among low-wage workers based on their workplace location; (2) To examine the relationship between health literacy and health communication competence among low-wage workers; and (3) To identify the strongest predictor among health literacy's dimensions towards low-wage workers' health communication competence.

MATERIALS AND METHODS

This cross-sectional study was generally intended to determine the relationship between the domains of health literacy encompassed of disease prevention, health care and health promotion towards health communication competence among low-wage workers in Kelantan. This research design would enable the researchers to examine the relationship between variables in a defined population (11). Kelantan is one of the Malaysia Peninsular states which located at the east coast region and bordered by the Thailand's Narathiwat Province. The geographical advantages have mixed the local communities with cultural heritage, traditions and unique values that were commonly practiced. Being one of the Malaysia's states with the lowest mean income with RM4,874 has resulted the researchers to select Kelantan as the sampling frame for this study (12). In another perspective, Kelantan was also discovered to have the highest poverty rate among states in Peninsular Malaysia, second in Malaysia, following Sabah (12).

Furthermore, quota sampling was applied in this study to make sure that the study's findings are generalizable to the population. For quota sampling, respondents or study participants' were non-randomly selected by the researchers, either on a fixed number or population's percentage based on one or more predetermined characteristics (13). Specifically, a proportionate quota sampling was used in this study whereby 50 low-wage workers encompassed of gardeners and janitors from three districts in Kelantan (Kota Bharu, Machang dan Bachok) were approached to be the respondents. Kota Bharu and Machang were distinguished as urban areas while Bachok was identified as a sub-urban area. In brief, this study has involved 150 low-wage workers from three districts in Kelantan, Malaysia in which it can be considered as a good number of samples. According to Hair, Black (14), when a study has 50 to 100 samples, a simple regression analysis is able to be proceeded by the study as 100 samples are considered as sufficiently good. The instrument used for data collection was a set of self-administered questionnaire

which was adapted from New Short-Form Health Literacy Instrument (HLS-SF12) (15) as well as CoCo questionnaire (16). This questionnaire was designed to be in three sections of where; Section A encompassed four items for demographic profile of respondents, Section B with 12 items of health literacy and Section C with 17 items of health communication competence. Furthermore, this questionnaire was also back-to-back translated from English to Malay language which was then content validated by an expert. This translation process is critically important to ensure that all respondents understand the questionnaire thoroughly. Before the dissemination of questionnaire begins, the researcher has verified with one of the supervisors who work with these low wage workers to further confirm their understanding on the questionnaire. Nonetheless, a pilot study was also conducted which has found the questionnaire to be reliable with the acceptable Cronbach's Alpha values range of 0.636 to 0.686 (17). By utilizing SPSS version 28.0, the analyses of descriptive, correlational and multiple regression were conducted to ensure the achievement of the study's objectives. 150 sets of questionnaires were distributed and this study has achieved a 100% response rate.

Ethical Approval

In addition, this study has obtained its ethical approval from the UiTM Research Ethic Committee [REC/02/2023 (ST/MR/45)]. The participation of the respondents was on voluntary basis which the privacy and confidentiality of the data was strictly uphold.

RESULTS

Demographic Profile of Respondents

These demographic details are important to distinguish the respondents from each district in which descriptive statistics were used to demonstrate the distinctions. The analysed data were tabulated in Table I.

Table I: Demographic Profile of Respondents

| Respondents' Profile | Frequency (n) | Percentage (%) |
|------------------------|---------------|----------------|
| Gender | | |
| Male | 38 | 25.3 |
| Female | 112 | 74.7 |
| Total | 150 | 100.00 |
| Age | | |
| 26-30 years old | 21 | 14 |
| 31-35 years old | 15 | 10 |
| 36-40 years old | 28 | 18.7 |
| 41 years old and above | 86 | 57.3 |
| Total | 150 | 100.0 |

CONTINUE

Table I: Demographic Profile of Respondents (CONT.)

| Respondents' Profile | Frequency (n) | Percentage (%) |
|----------------------|---------------|----------------|
| District | | |
| Kota Bharu | 50 | 33.3 |
| Machang | 50 | 33.3 |
| Bachok | 50 | 33.3 |
| Total | 150 | 100.0 |
| Household Income | | |
| RM500 -RM999 | 60 | 40 |
| RM1000 -RM1499 | 69 | 46 |
| RM1500 -RM1999 | 17 | 11.3 |
| RM2000 -RM2499 | 4 | 2.7 |
| Total | 150 | 100.0 |

Descriptive Analysis of Health Literacy and Health Communication Competence

The first objective of the study was to compare the level of health literacy and health communication competence among low-wage workers in Kelantan who work in Kota Bharu, Machang and Bachok, in which it can be achieved via the descriptive analyses. All items score for both independent and dependent variables were computed and categorized into the unified score metrics of 0 to 50, in which the lowest level of independent variable was represented by 0 while 50 was representing the highest level of health literacy (15). These scores were later interpreted by two categories of health literacy which were limited and adequate health literacy. Limited health literacy was represented by scores of 0 till 33 while adequate health literacy was represented by the scores of >33 till 50. Previously, this adequate health literacy category was divided into two categories which were sufficient and excellent health literacy (9) which however, the researchers decided to combine them as in categorizing the health literacy to only limited and adequate levels. Meanwhile, the level of health communication competence were categorized into two levels which were poor and good health communication competence (HCC), which the mean score of HCC were interpreted by using Best's Principle (18).

Based on the results of the descriptive analysis in Table II, the finding indicated a higher number of low-wage workers in urban locations; with adequate health literacy as compared to those who work in sub-urban location (80%:46%; 78%:46%). Table III has also demonstrated a similar finding for the dependent variable, whereby more low-wage workers in urban locations have good health communication competence, in comparison to those in sub-urban (54%:36%; 42%:36%).

Table II: Comparisons on Level of Health Literacy (HL) Between Low-wage workers

| District(s) | Limited HL (Score 0 – 33)* | Adequate HL (Score >33–50)* | Interpretation |
|--------------------|----------------------------|-----------------------------|--|
| Kota Bharu (Urban) | 10 (20%) | 40 (80%) | Adequate HL is higher than the sub-urban (80%:46%) |
| Machang (Urban) | 11 (22%) | 39 (78%) | Adequate HL is higher than the sub-urban (78%:46%) |
| Bachok (Sub-Urban) | 27 (54%) | 23 (46%) | Limited HL is higher than the urban (54%:22%:20%) |

*Interpreted by using unified metrics by Duong et al. (2017)

Table III: Comparisons on Level of Health Communication Competence Between Low-wage workers

| District(s) | Poor HCC (Mean: 1 - 3)* | Good HCC (Mean: >3 - 5)* | Interpretation |
|--------------------|-------------------------|--------------------------|---|
| Kota Bharu (Urban) | 23 (46%) | 27 (54%) | Good HCC is higher than the sub-urban (54%:36%) |
| Machang (Urban) | 29 (58%) | 21 (42%) | Good HCC is higher than the sub-urban (42%:36%) |
| Bachok (Sub-Urban) | 32 (64%) | 18 (36%) | Poor HCC is higher than the urban (64%:58%:46%) |

*Interpreted by using Best's Principle by Thaoprom (2004)

Correlational Analysis of Health Literacy and Health Communication Competence

A correlational analysis was conducted in examining the relationships between each domain of health literacy and health communication competence among low-wage workers in Kelantan. The results were tabulated in Table IV in which the strength and direction of the coefficient values (r) were interpreted by using guidelines from Cohen (21). The analysis has indicated health literacy domains of disease prevention (r=.634, p<.01), health care (r=.584, p<.01) and health promotion (r=.638, p<.01) were significantly positively related to health communication competence. In addition, the dependent variable was also reported to be significantly and positively related to the general health literacy (r=.702, p<.01). As a matter of fact, the findings have shown that health literacy, health promotion, disease prevention and health care were strongly associated to health communication competence (see Table IV).

Table IV: Correlations between Health Literacy and Health Communication Competence

| Variables | Health Communication Competence | |
|-------------|---------------------------------|--------|
| Health Care | Correlation coefficient | .584** |
| | Sig. (2-tailed) | .000 |

CONTINUE

Table IV: Correlations between Health Literacy and Health Communication Competence

| Variables | Health Communication Competence | |
|--------------------|---------------------------------|--------|
| Disease Prevention | Correlation coefficient | .634** |
| | Sig. (2-tailed) | .000 |
| Health Promotion | Correlation coefficient | .638** |
| | Sig. (2-tailed) | .000 |
| Health Literacy | Correlation coefficient | .702** |
| | Sig. (2-tailed) | .000 |

**Significant at 0.01 level (2-tailed)

Multiple Regression Analysis of Health Literacy and Health Communication Competence

Moreover, a multiple regression analysis was conducted to identify which domain of health literacy that is strongly predicting the dependent variable in which the findings were tabulated in Table V. As the values for tolerance were smaller than one and the values of variance inflation factors (VIF) were smaller than 10, has indicated that this study has no collinearity problem. The findings have revealed that 49.6% of the variance (R-square) of health communication competence was explained by the disease prevention, health care and health promotion domains of health literacy, with the R² value of .496 and significant F value of .000. The value of Durbin Watson was also in a good range of 1.5 to 2. Over and above, the results had showed that health promotion domain was the strongest predictor of health communication competence (β=.353, p<.05), followed by disease prevention and health care domains (β=.242, p<.05; β=.201, p<.05 respectively).

Table V: Multiple Regression Analysis

| Independent variables | Standardized Coefficients Beta | t | Sig. | Collinearity Statistics | |
|-----------------------|--------------------------------|-------|------|-------------------------|--------|
| | | | | Tolerance | VIF |
| Health care | .201* | 2.308 | .022 | .455 | 2.200 |
| Disease prevention | .242* | 2.468 | .015 | .358 | 2.794 |
| Health promotion | .353* | 4.287 | .000 | .509 | 1.966 |
| R Square | | | | | .496 |
| F | | | | | 47.941 |
| Sig. F Value | | | | | .000 |
| Durbin Watson | | | | | 1.837 |

*Significant at 0.05 level

DISCUSSION

Level of Health Literacy and Health Communication Competence

Previous studies have supported the study's findings whereby they have specified how the rural community has lower level of health literacy as compared to those

who lives in urban or city areas (9, 19). According to Golboni, Nadrian (20), health literacy inadequacy was lower in urban areas, as compared to rural areas. The same goes with the health communication competence level in which Huang, Wang (21) have specified how the ability to communicate are significantly different between urban and rural community members. Subsequently, these can imply the that first research objective was achieved.

The Relationship between Health Literacy and Health Communication Competence

The study's results were in line with the previous researches where the independent variables were strongly predicting the health communication competence as confirmed by Office of Disease Prevention and Health Promotion (ODPHP) (22) which has stated low health literacy has created the potential communication barriers between the health care providers and patients which consequently lead the patients to various negative health outcomes. Undoubtedly, it was widely known that health literacy can help in protecting the health, preventing health problems and better management of health problems when they occurred (23) by empowering them to be in charge with their medical related services. Over the past years, health communication has been assumed to be significantly link to individual's health literacy (24). Through health literacy, it will enable the medical practitioners to have a better conversation with patients and relevant health information can be shared as they are able to understand those (25). Additionally, as cited by Belim and De Almeida (26), medical practitioner-patient communication in the clinical encounter can be negatively impacted by limited health literacy. This is due to the fact that the instructions on changes of medication or verbal explanations on medical conditions would put the individuals with limited health literacy in tough spot in comprehending and understanding it, hence poor satisfaction on the medical practitioner-patient communication will be reported (26). Implicitly, health literacy may boost patients' self-efficacy in using health information which therefore, it is suggested for all health care professionals to clearly communicate to their patients as the negative effects of low health literacy can be mitigated through good communication clarity (27). Therefore, it can be concluded that the second research objective was achieved.

Strongest Predictor of Health Communication Competence

According to Malikhao (28), health communication has been known as a form of health promotion and health education which focused on organizational and interpersonal communication in health care settings. Plus, experts on public health has recognized the vitality of health communication to public health programs in addressing health promotion, disease prevention as well as quality of life (29). According to Allen, Auld (30), three disciplines of health communication, health

education and health literacy have demonstrated appreciation towards the importance of meaning-centred communication whenever the health practitioners ask the patients to communicate and explain their conditions in their own words during consultation. Individuals who possess low level of health literacy are expected to have less communication effectiveness especially when they are with social care and health practitioners (31). Engaging in discussions will be an unlikely option for these individuals even it is meant for their health, which subsequently lead to the hidden of their health needs (31). Wherefore, it can be concluded that the significant effects of health promotion as the strongest predictor in the interest of health literacy towards health communication competence have been continuously emphasized by various sources. Thus, this has reflected the achievement of the study's third research objective.

CONCLUSION

In conclusion, urban areas as in Kota Bharu and Machang has higher percentage in adequate health literacy and good health communication competence in comparison to sub-urban area such as Bachok, signifying more low-wage workers in these areas are health literate individuals and competent communicators. The findings showed that health literacy was significantly, positively and strongly associated to health communication competence among low-wage workers in Kelantan, Malaysia. Moreover, all domains of health literacy may explain almost 50% of the health communication competence whereby health promotion domain was the strongest predictor of the dependent variable, followed by the domains of disease prevention and health care. Wherefore, this study has highlighted the significance of health literacy in developing health communication competence in which those who work in sub-urban areas need to particularly be prioritized.

ACKNOWLEDGEMENT

We would like to thank Faculty of Business and Management, Universiti Teknologi MARA Selangor Branch for assisting us in completing this study.

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