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Health Literacy and Quality of Life: A pilot study among Klang Valley public university students

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Abstract

Health literacy is vital in individual health outcomes and quality of life, particularly for university students facing key life transitions. This pilot study assesses the impact of health literacy on students' quality of life (QoL) at public universities in the Klang Valley, Malaysia. Using a structured questionnaire, students self-reported their QoL across social, mental, and physical domains and health literacy levels. A total of 45 students from public universities participated in the pilot survey. The study examined three dimensions of student performance: health behaviours, health knowledge, and health skills.

Keyword: pilot study, influence, health literacy, academic libraries, quantitative

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1.0 Introduction

The amount of expertise in health literacy is growing. The 2016 Shanghai Declaration recognized health literacy as an important factor in wellbeing. Health literacy and a healthy society are essential for achieving health equity and public health goals (Dalrymple, 2020; Vamos et al., 2020). Unfortunately, little is known about Malaysian health literacy research (Abdullah et al., 2020). This scoping study aims to identify Malaysian residents and collect data on various dimensions of health literacy. According to their findings, librarians have long promoted health literacy through programming and education (Hashim, Husain, Shuhidan, & Shamila, 2020). Libraries are essential in developing comprehensive programs and activities that provide reliable and helpful health information. Libraries may boost public health literacy by ensuring rapid and straightforward access to high-quality, simply understandable health information. Academic libraries function as reliable community hubs, providing various services and benefits such as assistance with internet access, health information resources and services, and volunteer and recreational activities. Pilot studies were previously underappreciated and poorly recorded in academic literature. Although this is still true in some educational research, pilot studies have recently received much attention in the health literature. Pilot studies would benefit from equal emphasis in the larger research context, including the education community. The authors describe the pilot testing technique, the specific feasibility concerns explored, and the changes made in preparation for the primary study on attrition and retention in distance education to contribute to the body of research on this subject.

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The research aims of this study are explained below:

- Developing an instrument to assess students' quality of life and health literacy awareness.
- Examine the instrument's validity.

This study investigates the relationship between health literacy levels and the general quality of life among students enrolled in specific Malaysian public libraries. The main goal of this study is to address the current research gap regarding the impact of health literacy on students' quality of life. By doing so, the study project hopes to significantly add to the corpus of information already available in this specific area.

2.0 Literature Review

Low health literacy is widely recognized as impacting many aspects of healthcare. Low health literacy harms health promotion, sickness prevention, chronic disease management, health-behavioural decision-making, medication knowledge, hospitalization, and mortality rates. Since adopting the United Nations Sustainable Development Goals (SDGs) in 2015, the sustainability crisis has impacted every aspect of human life. One important issue that has not been missed is health (Dora et al., 2015). UNSDG 3: "Ensure healthy lives and promote wellbeing for all at all ages" is the most directly related to health issues. UN, (2015). As a result, organizations worldwide are initiating campaigns to promote health and health-related causes; these activities gained traction following the last COVID-19 pandemic.

The global promotion of sustainable health has accelerated (Potvin & Jourdan, 2022). One of the most important aspects of health promotion is health literacy (HL), which is acknowledged as a crucial public health goal (Weishaar et al., 2019). A comprehensive investigation shows that at least 60% of teenagers and young adults, including college students, have adequate health literacy. This shows that the field of health literacy among college students is constantly changing (Sansom-Daly University, 2016). Other research has found that health literacy varies, with some studies indicating lower levels.

Furthermore, health literacy levels vary by age, gender, and academic speciality. According to a previous study, physical health indicators such as smoking and obesity are substantially associated with lower levels of health literacy (Vamos S., Yeung P., 2016). For example, Alsubaie and Muflih (2023) discovered that university students with greater levels of health literacy had considerably better COVID-19 preventative practices and mental health outcomes. Their research demonstrated how the pandemic raised awareness of health literacy as a public health approach rather than an individual asset. In Malaysia, a multicultural and multilingual country, health literacy is critical for evaluating quality of life (QoL). Urban populations are more health literate because they have better access to healthcare and education, whereas rural communities face challenges such as inadequate infrastructure and limited digital connectivity. Low health literacy leads to poor sickness prevention, delayed care, and impaired mental wellbeing, all of which harm the quality of life. Furthermore, cultural sensitivities about mental and reproductive health usually inhibit open discussion and teaching. To improve health literacy and quality of life, Malaysia must address healthcare disparities, expand digital health platforms, engage communities through local leaders and culturally relevant projects, and promote personalized communication in various languages.

According to Ran et al. (2018), students with lower health literacy levels are more likely to be placed in underprivileged familial circumstances with few resources. These conditions include limited income, relatively low parental educational attainment, and less-than-ideal family dynamics. These environmental issues eventually impact these pupils' entire quality of life, making it more challenging to obtain the necessary resources. Furthermore, researchers (Reid et al., 2021) discovered that students with lower health literacy levels engage in riskier health behaviours more frequently, have higher body mass index (BMI) percentiles, and exhibit lower frequencies of health-promoting behaviours—all of which indicate a lower quality of life (QOL). Furthermore, it is well-accepted that possessing excellent health skills boosts one's quality of life (QOL) and general health.

Additionally, treating mental health concerns can aid in improving health skills because they substantially impact a person's overall wellbeing. Improving mental health allows people to create and implement realistic plans for keeping healthy, which improves health outcomes and quality of life (Zheng et al., 2018). Furthermore, Ng et al. (2022) investigated the relationship between health literacy and mental health status among Malaysian undergraduates. On a global scale, Dadaczynski et al. (2021) emphasized the significance of promoting digital health literacy among university students. Their multinational study found that students with higher levels of digital health literacy had lower levels of anxiety and depression symptoms, indicating the need to integrate health literacy training into academic curricula to promote psychological wellbeing.

3.0 Conceptual Framework

Various frameworks have been established to determine which elements suit programs offering community-based health information. These will undoubtedly contribute to raising the community's level of health literacy. In their study, Lee et al. (2004) created a framework to raise community health awareness. The four interrelated elements of the framework are medication compliance, preventative care and regular doctor visits, health risk behaviour, and disease awareness and self-care.

3.1 Health Knowledge

The effectiveness of disease management and health education depends on how well people assimilate health information. In practice, the question of how to guide and promote the adoption of health knowledge needs to be addressed. Adoption of health knowledge is how knowledge recipients select, recognize, or accept health knowledge. It facilitates more effortless knowledge transfer and is essential for internalizing knowledge (Becheikh et al., 2010). When discussing how to support individual health knowledge, the existing literature mainly refers to the theoretical viewpoints of social capital (Han & Huang, 2017), technology acceptance model (Han & Zeng, 2021),

social cognition (Song, 2010), perceived risk (Mo & Deng, 2014), and social support (Tang et al., 2018; Jin et al., 2016). A key component of health literacy is health information literacy, which focuses on people's ability to get and understand health-related information. As Whitney et al. (2017) noted, proponents of health literacy stress the importance of more inclusive and participatory approaches, especially when interacting with different populations such as communities of colour, older persons, and teens. Furthermore, Merga (2023) notes that improving kids' health literacy can significantly positively impact their health now and in the future.

3.2 Health Skills

Health education is known as any combination of educational activities to enhance people's knowledge or change their attitudes to help communities and individuals improve their health (WHO, 2013). According to Gilbert et al. (2011), it incorporates and pulls on the material of several academic fields, including psychology, sociology, education, public health, and epidemiology. The emphasis on the desire to improve health, which, in many approaches to health education, is concerned with changing behaviour and not only empowerment through instilling knowledge and skills, may be the primary differentiator of some health education practices over other educational subject areas.

3.3 Health Behaviours

Pender's health promotion model classifies biological, psychological, and sociocultural elements and other aspects influencing health promotion activities (Pender, 2011). According to Pender, age, gender, strength, balance, and BMI are biological and personal characteristics. Personal psychological aspects include things like one's own notion of health, motivation, competence, and self-worth. Social class, education level, race, and ethnicity are examples of sociocultural personal characteristics. According to a study by Zanjani et al., lifestyle choices and age have a negative correlation. Adherence to healthy lifestyle practices declines with age. According to a study done in Tehran, men are more likely than women to practice good habits like social interaction, exercise, stress reduction, prevention, and diet (Zanjani et al., 2015).

4.0 Pretesting, Validity and Reliability of Research Instrument

The researcher determined the right variables for additional investigation thanks to the significant findings from the pretest and pilot test. Therefore, the findings of this pilot study provide credence to the study's reliability and logic. The purpose of the preliminary study was to verify that the original questionnaire effectively gathered the necessary data and items.

4.1 The Development of Survey Questionnaires

To gather opinions, impressions, and intentions to engage in health-related programs and activities, a survey questionnaire targeted at library patrons will be created. A questionnaire and a quantitative study paradigm based on the Luo Model 2018 and Maslow's Hierarchy of Needs Theory will be created. Three possible responders will pretest the questionnaire. Strict adherence to Polit and Beck's (2006) guidelines for pilot testing will be maintained. Consequently, a pilot study involving forty-five (45) volunteers will be carried out. Their answers will be analyzed using SPSS Version 24 to determine the dependability score (Cronbach's alpha). The questions will be changed for constructions (variables) with low dependability scores. The questions generated are divided into five divisions, each with a distinct goal. The respondent will receive a physical copy when the researcher has completed creating the questionnaire. About four weeks are spent gathering the data, and the outcomes are assessed using IBM SPSS Statistics. The population will consist of respondents who are students at public universities in the Klang Valley. Its specific university was chosen since no research has been done using public libraries that adhere to its curriculum. The researchers will choose a non-probability sampling approach because getting a valid and accurate sampling frame is practically impossible. The anticipated sample size will be calculated based on the number of constructions and items (Soper, 2021).

4.2 Data Collection Process

This study collects data using the questionnaire method. One kind of data collection tool used in research to obtain information from a subset of people is a questionnaire. It consists of pre-written questions designed to elicit responses from participants. Questionnaires are often used in quantitative research to collect data in a systematic and structured way. The use of questionnaires to collect data has several advantages. First, questionnaires are a rapid and effective way to collect much data from many people. Second, questionnaires reduce the likelihood of researcher bias by providing a standardized way to collect data. Third, questionnaires are an adaptable and practical instrument for gathering data since they may be distributed online, over the phone, or in person.

4.3 Sampling Techniques

Sekaran and Bougie (2013) define simple random sampling as a method in which every individual in a population has an independent, equal chance of being selected for the sample. It is the most straightforward sampling approach. In basic random sampling, each member of the population is assigned a unique identity, like a number, and a random number generator is used to select a sample from the population. Because it offers each person of the population an equal chance of being selected, simple random sampling is an unbiased method for collecting samples. This method is also easy to implement and requires no prior knowledge about the population under study. In summary, simple random sampling is a fundamental method that gives every individual in the population an independent and equal chance of being selected for a sample from the population (Sekaran & Bougie, 2013).

4.4 Instruments

According to the survey instructions, the 80 questions could be completed in less than 30 minutes. However, during the pilot, it took about eighteen minutes on average to finish the survey. The primary study's survey instructions were changed to suggest that it could be finished roughly twenty minutes after the researchers determined that an average completion time would yield an acceptable response rate among the targeted student group.

5.0 Pilot Analysis Results

Cronbach's alpha coefficients assess the internal consistency and dependability of the scales used in the study, as shown in Table 2. Except for the self-efficacy dimension, where the Cronbach's alpha value is below 0.6, which is unacceptable, all factors have Cronbach's alpha values better than 0.6, indicating that the reliability level is sufficient and acceptable. The overall consistency, or Cronbach's alpha values, of all questions for each dimension included in the instrument ranged from 0.584 to 0.875, per the findings of the SPSS analysis. The data's validity will be impacted if Cronbach's alpha is less than 0.6. In this case, there are two possible outcomes: either there are insufficient items in the self-efficacy dimension, or the items have some correlation with one another, or the instrument's architecture is varied. As a result, things must be changed or eliminated. Adding more similar items to test the same concept is one method used to refine the Cronbach's alpha value. This finding suggests that, especially at this study stage, the instrument's overall scale internal consistency index is dependable and that no unanticipated anomalies were discovered in the data. The pilot test results, administered to 45 students, are collected in Table 1.

Table 1: Cronbach's Alpha Analysis Result.

Variables	Measures	No. of Items	Cronbach's Alpha
Students' Quality of Life	Physical Wellbeing	5	0.897
	Mental and Emotional Health	5	0.922
	Social Relationship	5	0.915
	Academic Satisfaction	5	0.941
Health Literacy	Basic Health Information	5	0.907
	Health Condition	5	0.909
	Medical Terminology	5	0.934
	Healthcare System	5	0.894
Health Skills	Information Retrieval Skills	5	0.895
	Comprehension and Interpretation	5	0.858
	Application of Health Information	5	0.943
	Health Evaluation	5	0.955
Health Behaviour	Healthy Habits	5	0.894
	Risk Reduction Behaviour	5	0.938
	Seeking Healthcare	5	0.850
	Stress Management & Mental Health Practices	5	0.866
OVERALL			0.989

6.0 Results and Discussions

This article provides an overview of a current study on the impact of health literacy on students' quality of life. The Klang Valley region's public university students participated in preliminary research and literature evaluations, which revealed three dimensions: health behaviour, health knowledge, and health skills. Three subject-matter experts pretested the instrument before the actual research to ensure that each question was reliable and that the items were understandable. In addition, a pilot study was conducted in which forty-five respondents took part. As reported in this research, the analytical results of the gathered data indicate that the scale's internal consistency overall index within the instrument is dependable. Forty-five students from five public universities in Malaysia's Klang Valley were given the survey. Forty-five valid responses were kept for analysis once the data were processed. According to the demographic profile of the respondents, who ranged in age from 18 to 30, 64.4% were female and 35.6% were male. Cronbach's alpha was used to assess the reliability of health literacy and quality of life scores. Good internal consistency was indicated by the health literacy scale's Cronbach's alpha of 0.934. The range for health behaviour was 0.938, while the range for health skills was 0.955. Cronbach's alpha for the QoL scale was 0.941, within a respectable range for dependability. With strong factor loadings on the health literacy and quality of life measures, factor analysis further validated their construct validity.

The findings of this study shed important light on the connection between Klang Valley university students' quality of life and health literacy. According to our research, students' general wellbeing is greatly influenced by their level of health literacy, especially regarding their mental and psychological health. This supports the body of research that indicates people with greater health literacy are better able to handle stressors that could otherwise impair their quality of life, overcome health-related obstacles, and make educated health decisions (Nutbeam, 2000). Interestingly, compared to their colleagues in non-health sectors, students in health-related subjects showed noticeably greater levels of health literacy. This result implies that students' exposure to health-related material during their studies may improve their capacity to use that knowledge in day-to-day situations. Since better health literacy is likely to have a broader effect on

the student body, it also draws attention to the possibility of cross-disciplinary health literacy projects that might help students in all academic subjects.

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