

# Knowledge and Awareness of Men's Health Issues among Undergraduate Medical Students

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**Abstract** The morbidity and mortality of men have risen up significantly. But there is a considerable lack of awareness among the community as well as healthcare professionals. This survey was conducted to explore the level of knowledge and awareness towards men's health issues among undergraduate medical students. A descriptive cross-sectional survey was conducted in 2016 in a private medical school, Malaysia. A cohort of 85 final year medical students who attended the lecture session on non-communicable diseases participated in the survey. A self-administered questionnaire regarding the definition of men's health and men's health issues was completed by the participants. The data were collected and analysed by using Microsoft Excel (2013). Frequency and percentage were calculated for quantitative analysis. Categorisation of codes according to the concepts and emerging themes were used for qualitative analysis. All of the 85 students agreed to take part and returned the completed surveys. The majority of the students (92.95%) had poor knowledge while only 7.05% of the students had good knowledge. None of the participants who responded to the first question correctly answered the definition of men's health. Regarding three common men's health issue globally, 183 (88.83%) correct answers were collected while 103 (50.49%) answers were correct for three common men's health issues in Malaysia. Majority of the participants in this survey were found to have poor knowledge on male health issues. Measures to raise the awareness of men's health issues among the medical students are crucial to improve the men's health problems.

**Keywords** Knowledge, Awareness, Men's health, Undergraduate, Medical students

## 1. Introduction

Men's health has been recognised as an important issue in many countries. Men have specific health needs, experiences, and concerns that are related to their gender as well as their biological sex. This concept is relatively new [1]. The different men's health societies in the world have different versions of men's health definition. Men's health, as suggested by the Men's Health Forum (England), refers to "An issue arising from physiological, psychological, social, cultural or environmental factors that have a specific impact on boys or men and/or where particular interventions are required for boys or men in order to achieve improvements in health and well-being at either the individual or the population level" [2]. According to the Royal Australian College of General Practitioners (RACGP), men's health is defined as the holistic management of health conditions and risks that are most common or specific to men in order to promote optimal physical, emotional and social health in the general practice setting [3].

The male average life expectancy at birth was 76 years compared to 81 years for the female in the United States in 2013; 76.1 years as compared to 82.2 years for the female in the European Union (EU), and 80.1 years compared to 84.3 years in the female in Australia in 2011-2013 [2, 4, 5]. In Malaysia, the life expectancy for men at birth is 71.7 years compared to 76.5 years for women [6]. The premature mortality rate is more common in men than women. It is caused by chronic diseases (e.g. coronary heart disease, stroke, diabetes and some cancers). Poor lifestyles and preventable risk factors such as tobacco smoking, alcohol consumption, illicit drug use, drug-related harm, physical activity, inadequate diet, obesity, and sexual behaviour are some of the principal causes of premature death and morbidity in men. Men from lower socioeconomic groups have poorer health outcomes and experience significantly higher mortality rates. Men usually present to health services late that results in higher levels of potentially preventable health problems. They are less frequently engaged than women in regular health checks. Men's poorer knowledge and awareness of health point towards the need for targeted health information to be delivered to men. Men's usage of health services has been long recognised as a possible contributing factor in their high rate of premature morbidity

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and mortality [2]. Men also have greater levels of occupational exposure to physical and chemical hazards, behaviours associated with male norms of risk taking and adventure, health behaviour paradigms related to masculinity and the fact that men. All these factors are associated with men's poorer survival rates [7].

According to the Centers for Disease Control and Prevention (CDC) 2013, the 10 leading causes of death for men in the United States are: heart disease, cancer, unintentional injuries, chronic lower respiratory disease, stroke, diabetes, suicide, influenza and pneumonia, Alzheimer's disease, and chronic liver disease [8]. In Australia the 10 leading causes of death for men in 2008 were ischaemic heart disease, trachea and lung cancer, stroke, chronic lower respiratory disease, prostate cancer, skin cancer, transport accident, diseases of liver, Parkinson's disease [9]. Men experience higher mortality rates than women in suicide, accidents and injury, cancers, diabetes mellitus, and diseases of the circulatory system. For men the highest proportion of total disease burden attributed to determinants of health in 2003 were tobacco smoking (9.6%), high blood pressure (7.8%), overweight/obesity (7.7%), high blood cholesterol (6.6%), physical inactivity (6.4%) and alcohol (3.8%) [10].

In Malaysia, the principal causes of death in men were ischaemic heart disease, pneumonia, transport accidents, cerebrovascular disease and septicaemia [11]. The overall prevalence of cardiovascular risk factors in men were hypertension (30.8%), diabetes mellitus (16.7%), hypercholesterolaemia (43.5%), obesity (27.8%), and smoking (43.0%) [12]. A randomised community-based study on men's health in the urban area was conducted by The Malaysian Society of Andrology and The Study of The Ageing Male (MSASAM) in middle-aged men (mean age of 56 years) in 2006. The study revealed that 66% of men were overweight and 70%, smokers. The prevalence of erectile dysfunction was 66%, and LUTS, 17%. hypertension, dyslipidaemia and diabetes range between 17-54% [13]. Another study on men's health has shown more or less similar prevalence of disease burden and poor health status. There were 79% overweight or obese men, 69% erectile dysfunction, 30.2% hypertension, 21.4% diabetes, 29% lower urinary tract symptoms (LUTS), 11.1% severe depression and 10.8% coronary artery disease, 34% alcohol consumption, and 19% smokers [14].

Nowadays, the excess burden of morbidity and mortality in men become more obvious than ever before in international level as well as in Malaysia. Regarding this issue, medical students need to be competent to deliver better quality health care services especially for men in the future. To our knowledge there were very studies attempting to explore the awareness if medical students on male health. Therefore, we conducted this descriptive survey to explore the knowledge and awareness of men's health among undergraduate medical students in private medical college in Malaysia.

## 2. Methods

A cross-sectional survey was conducted in 2016 before the start of a routine community medicine lecture on non-communicable diseases for final year medical students. A cohort of 85 students (male and female) who attended the lecture class was selected to participate in this study. Verbal consent was obtained from each student. Participants were asked to respond an anonymous self-administered questionnaire on men's health issues. We developed the questionnaire in this study. As the questions were not only clearly understandable and relevant to the participants but also designed to assess only the baseline level of knowledge and awareness of men's health issues, we started this survey without conducting pilot study. The questionnaire included three items of questions on the definition of men's health, common men's health issues globally, and common men's health issues in Malaysia. Regarding common men's health issues globally and common men's health issues in Malaysia, students were asked to list three issues. All the questions were open-ended and unstructured (Table 1). The rationale for using open-ended questions is to encourage individual participants to give spontaneous responses based on their own knowledge. An open-ended question tend to be more objective than other question types such as multiple choices questions. Moreover, we want to avoid the bias that may result from suggesting responses to individuals as in other question types. The students were asked to write their answers on a blank paper. For all questions, score one was given to the correct answers and score zero was given to wrong answers as well as to the answer which was not written. We calculated the total score where the maximum possible score was 7 and the minimum possible score was zero. We categorised the knowledge into the good level (>75% of total score) and poor level ( $\leq$ 75% of total score) [17].

Quantitative and qualitative analysis approaches were used for the data related to the question on the definition of men's health. Two authors (Thein AW, Than NN) independently did coding and decoding after carefully reading the data on the definition of men's health. The discrepancy in coding and disagreements were solved by the discussion with each other for consensus. Later categorization of codes according to the concepts and emerging themes were analysed. Data about the answers on common men's health issues globally and in Malaysia were analysed using the quantitative method. We used Microsoft Excel (2013) for statistical data entry and analysis. Descriptive statistics such as frequency and percentage were calculated for quantitative analysis.

## 3. Results

A total of 85 students including male and female participated in this survey. The response rate of the students who provided answers to the questions on the definition of

men's health issues, three common men's health issues (global) and three common men's health issues in Malaysia, were 61.18% (n=52), 96.47% (n=82), and 94.12% (n=80) respectively. None of the participants who responded the first question (n=52, N=52) provided the correct answer of men's health. Regarding the second question i.e. three common men's health issue globally, 183 (88.83%) correct answers and 23 (11.17%) wrong answers out of 206 responses were collected. Regarding the third question on three common men's health issues in Malaysia, only 103 (50.49%) answers were correct, while 101 (49.51%) answers were wrong. (Table 2).

Regarding the overall scores of participants on the knowledge and perception on men's health issues, the majority of the students (92.95%) had poor knowledge while only 7.05% of the students had good knowledge (Table 3).

Their perceived definitions were categorised qualitatively into five groups.

#### A. Vague definition of the men's health

*"Health and/or general well-being of men"*  
*"Health concerning men"*  
*"Men's physical well-being"*  
*"Health issues regarding men"*  
*"Disease prevalence in male"*

#### B. Men's health is specific issues related only to the men

*"Common diseases/health conditions affecting only men"*  
*"Health conditions related to men/male gender only"*  
*"Health issue occurring only in men but not women"*  
*"Health issues concerning the male population that need serious attention"*  
*"Men's health composed of cardiovascular disease and malignancy etc."*  
*"Health issues concerning the diseases more commonly affecting or predisposing the male"*  
*"Health status comprises several diseases commonly occur among men population or non-disease state"*

#### C. Men's health issue is that concerning only to male gender and related to male genital and reproductive systems

*"Health concerning men's reproductive system"*  
*"Health conditions that only affect men such as prostate cancer and low testosterone"*  
*"Health of men – fitness, testicular, male prone disease, male genital organ diseases"*

*"Health of men in regards to lifestyle, and diseases particular to males (e.g. BPH, Prostate Cancer)."*

#### D. Men's health is related to physical and/or mental, social, psychological, and lifestyle

*"Physically fit and mentally well"*  
*"Well-being of men in term of physical well-being"*  
*"Providing health through social, mental and wellness"*  
*"The social, psychological, disease-free well-being of men"*  
*"General well-being and physical quality of male/men population"*  
*"Men's health is concerning about men's health and lifestyle"*  
*"Well-being of male population physically as well as psychosocially"*  
*"Health is the well-being of men physically, mentally and not merely absence of illness"*  
*"Physical, mental, emotional and social"*  
*"Health status of men physically, mentally & emotionally"*  
*"Physical, mental and social health issues regarding men"*  
*"Maintenance of the mental, physical and social well-being of man in their daily life"*  
*"State of well-being/general well-being socially, physically, mentally among the male population"*

#### E. Definition similar to WHO definition of health

*"It is nothing, just everything & anything that makes them happy – good health will be achieved, that what they think"*  
*"Concerned with identifying, preventing and treating conditions that are most common/ specific to men"*  
*"Complete physical, mental and social well-being in men and not merely free from disease or infirmity"*  
*"State of complete physical, mental and social well-being of man and not merely the absence of disease or conformity" (WHO definition)*

Table 1. Questionnaire used for survey

No.	Question Items
1.	What is the definition of men's health?
2.	List three common men's health issues (Global).
3.	List three common men's health issues in Malaysia.

Table 2. The response rate, frequency and percentage of correct and wrong answers on knowledge and awareness of men's health issues

Question	Provide Answer, n (%)	Correct answers, n (%)	Incomplete/Wrong answers, n (%)	Total responses, n (%)
Definition of men's health	52/85 (61.18)	0 (0)	52/52 (100)	85 (100)
Common men's health issues (Global)	82/85 (96.47)	183/206 (88.83)	23/206 (11.17)	255 (100)
Common men's health issues (Malaysia)	80/85 (94.12)	103/204 (50.49)	101/204 (49.51)	255 (100)

**Table 3.** Overall knowledge score on men's health issues (n = 85)

Knowledge level	n (%)
Good	6 (7.05)
Poor	79 (92.95)

## 4. Discussion

In our study, about two-thirds of participants responded the question on the definition of men's health. Similar respond rates, about 44% from University Sains Malaysia (USM), Kelantan, Malaysia, and 68.9% from Monash University (MU), Melbourne, Australia were reported in a study on evaluation of the level of knowledge on male sexual and reproductive health among final year medical students [15]. The participants answered the definition in various ways. They were familiar with the World Health Organization (WHO) definition of health in general as it was mentioned in the introduction to community Medicine lecture and their prescribed textbook. That's why few participants created their own definition of men's health adopted from the WHO definition of health. Their answers did not cover the aspects and interventions required for improvement of men's well-being. Many of them simply mentioned the definition of men's health as men's general and/or physical well-being. Some students answered men's health as issues or diseases related only to the men. The others participants thought that men's health is a health issue concerning with only a male genital and reproductive organs. In the next group, the definitions they answered were relatively more comprehensive and included physical, mental, emotional, psychological and social issues. Very few participants perceived men's health definition is the same as that of health which is defined and accepted by World Health Organization (WHO). Overall, participants were familiar with the WHO definition of health that covers both genders generally. However, they seemed to be unaware of special issues and risk factors affecting morbidity and mortality of men. In fact, the definitions by many international men's health organisations not only include the bio-medical aspects or sexual and reproductive health but also encompass the psychosocial, cultural or environmental aspects of men [2, 3]. Regarding global men health issues, the majority of participants had knowledge about common men health problems specific to men and risk factors of men's health problems. Many of them did not know men's health issues prevailing among men in Malaysia.

In our survey, the overall perceived knowledge of men's health definition and common men's health issues in the globe and in Malaysia was found to be quite poor. This may be possibly due to inadequate coverage of men's health topics in the existing local curriculum and lack of male-specific health care services in the health clinics where students were posted in the rotation. A few versions of men's health definition have been mentioned in the international literature which includes the keywords of holistic or

comprehensive approach to address or promote physical, mental, emotional, psychosocial, cultural and environmental health of men throughout his lifespan. The definitions have also covered the issues to address non-gender related diseases that are more prevalent in men with specific risk factors and lifestyle behaviors. In fact, men's health topics were understated and not covered in the undergraduate medical curriculum [15, 16].

Recent studies on men's health have pointed out that there is a need to enhance men's health education by incorporating men's health topics in the undergraduate medical curriculum [15-17]. For effective health care delivery to men, awareness of men's health care both general as well as specific to male gender is necessary among health care providers including medical students. A study has suggested that creating awareness and having systematic approach would facilitate primary care doctors in delivering health service to men [17]. The final year medical students are future primary care doctors thus addressing men's health by relevant discipline in the undergraduate medical program will ensure the competency of future doctors to deliver better health services to men.

Malaysia has introduced its National Men's Health action plan in 2016 to address gender disparity by combining the three key aspects, namely policy, research, and implementation. Currently, only very few countries, such as Brazil, Ireland, Australia and Malaysia, have plans of comprehensive health programmes targeting men [18]. In line with the Ministry of Health's initiative on the improvement of men's health in Malaysia, medical institutions and health clinics should actively participate in raising awareness of this issue not only for the primary care doctors but for undergraduate medical students. Academics and curriculum developers from some Australian medical schools have expressed enthusiasm for men's health teaching and learning through a student-focused implementation approach that would eliminate the discipline-specific nature of implementation strategies. [19] Our study did not cover the faculty's perspective on teaching Men's health and the authors identified it as an area for the future research.

This survey is only a small descriptive cross-sectional survey to explore the awareness of final year medical students toward men's health issues in one private college; therefore, the findings may not be generalisable to other population. The number of items in the questionnaire may be insufficient to assess all areas and aspects of men's health.

## 5. Conclusions

Most of the participants in this study were found to be unfamiliar with men's health definition and unable to list common men's health issues. Evaluation of the depth and breadth of this issues and implementing the measures to increase the awareness of men's health issues among the medical students could help solve the men's health problems.

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