DESIGNING AND VALIDATING A QUESTIONNAIRE TO EVALUATE KNOWLEDGE, ATTITUDE AND PRACTISE OF LEADERSHIP AMONG MEDICAL DOCTORS

BY

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A dissertation submitted in fulfilment of the requirement for the degree of Master of Medicine (Anaesthesiology)

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ABSTRACT

Leadership by healthcare professionals is essential in healthcare settings as it improves clinical outcomes in patients and cost-efficient care. This study aims to develop and determine validity and reliability of the Knowledge, Attitude and Practise questionnaire that evaluate leadership among medical doctors in Malaysia (KAP-LM). The KAP-LM was developed with 16 knowledge, 14 attitude and 14 practise items on medical leadership. The instrument then was tested for content and face validity followed by construct validity and internal consistency reliability. The questionnaire was completed by 180 medical officers from Hospital Selayang, Selangor and International Islamic University Malaysia Medical Centre, Pahang. Content validity and face validity of the KAP-LM were determined by six experts and 15 medical doctors respectively. Two factors were identified through factor analysis in construct validity. All the item in KAP-LM is reliable based on its internal consistency reliability with overall α=0.792. Inter correlation between dimensions of attitude and practise section in KAP-LM presented with good r-values ranging from 0.308 ~ 0.698. Evidence of validity and reliability of the KAP-LM (12 knowledge, 12 attitude, 12 practise items) have been obtained. The KAP-LM instrument can be used to assess KAP of leadership among medical doctors in Malaysia.

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion, it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Master of Medicine (Anaesthesiology).

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DECLARATION

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

CVR	Content Validity Ratios
EFA	Exploratory Factor Analysis
ITC	Inter Item Correlation
KAP-LM	Knowledge, Attitude and Practise - Leadership Malaysia
KAP	Knowledge, Attitude and Practise
LAI	Leader Attributes Inventory
MLQ	Multifactor Leadership Questionnaire
NHS	National Health Services
SPSS	Statistical Package for the Social Science
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Leadership is an imperative quality and the very definition of leadership went through an evolution in recent years. Even though there are numerous definition on leadership in literature, an expert on leadership defines leadership as a process that is characterized by the leader's action: they motivate people, they cope with change, they set direction and they organize people to take part in that new direction (Kotter, 1997) (Kotter, 1999).

Leadership is vital to the survival of all profession including the health professionals. There is now widespread recognition that effective leadership by healthcare professionals is essential in modern healthcare settings (Kumar & Khiljee, 2016). Regardless of specialism, greater attention is required to management and leadership skills among health care providers (NHS, 2010). Doctors in particular are expected not only to act as a practitioner in their respective discipline but also play a vital role in leadership and management of others (Council & General Medical Council, 2009). When it is necessary, doctors are expected to work with other healthcare providers to change the system by offering leadership for the advantage of patients. The significance of effective healthcare leadership cannot be disregarded as leadership not only improves clinical outcomes in patients, but also improves the healthcare professionals well-being by increasing workplace engagement and reducing burnout (Ham, 2003)(Cochran, Kaplan, & Nesse, 2014)(Majmudar, Jain, Chaudry, & Schwartz, 2010). In the recent years, there are number of curricula or courses that incorporated leadership training for medical doctors. In the United States, 90 physicians undergone

a two-year program with monthly sessions of lectures and discussion on organizational leadership, financial management, management strategy, applied skills and tools (Gagliano et al., 2010). Meanwhile in Canada, a one-day seminar on leadership was conducted for 43 senior surgical residents (Hanna, Mulder, Fried, Elhilali, & Khwaja, 2012)(Hanna et al., 2012). The topic covered includes duties delegation, teamwork and stress management. The various courses addressing leadership for medical doctors found to be useful and beneficial by the participants (Edler, Adamshick, Fanning, & Piro, 2010) (Korschun, Redding, Teal, & Johns, 2007) (Murdock & Brammer, 2011). However, in Malaysia training on leadership is not given to medical doctors and it has been proposed by a researcher that the Ministry of Health should provide leadership training for selected healthcare providers (Mastura, 2008).

Even though it is evident that leadership among medical doctors is essential, to date, there has been no locally validated questionnaire to gauge leadership among Malaysian doctors. There are several self-administered instruments used to assess leadership skills. The Multifactor Leadership Questionnaire (MLQ) is used to assess leadership styles and leadership outcomes (Rowold, 2005) while the Leader Attributes Inventory (LAI) measures the degree to which individuals possess various leadership attributes (Nickels & Ford, 2017). The self-assessment of leadership skill is effective and is widely being used as a tool in researches (Houghton & Neck, 2002) (Mahembe & Engelbrecht, 2013). In the medical field, knowledge, attitude and practise (KAP) surveys are widely used among researchers to collect information for development of public health programmes. World Health Organization (WHO) has adapted KAP survey as it provides representation of a specific population aimed to collect information on what is known, understood and done in relation to a particular topic (WHO, 2008a). It is also designed to explore the health behaviors and to obtain data on health-seeking

practises (Ribera, Nyamongo, & Hausmann-muela, 2003) (Manderson & Aaby, 1992). A KAP survey is useful to establish the baseline value for future assessments and supports measurement of effectiveness of health education in changing health behaviors (Gumucio, 2011).

1.2 STATEMENT OF THE PROBLEM

Leadership among medical doctors is imperative for better quality of care and sustainability of healthcare. However, till date we do not have a validated instrument in Malaysia that can be used to assess leadership of the medical doctors.

1.3 PURPOSE OF THE STUDY

This study aims to develop a KAP tool to assess leadership among medical doctors in Malaysia. The research sought to test the validity and reliability of the developed tool. In addition, the study can serve as preliminary data on leadership knowledge, attitude and practise among medical doctors in Malaysia.

1.4 RESEARCH OBJECTIVES

The study aimed to achieve the following objectives:

General objective:

The aim of this study is to construct and validate a new knowledge, attitude and practise tool called KAP-LM to evaluate leadership among medical doctors in Malaysia

Specific objectives:

1. To develop a KAP-LM instrument that evaluate leadership among medical doctors.
2. To evaluate the content validity of the items in the KAP-LM instrument.
3. To evaluate validity and reliability of the KAP-LM instrument.

1.5 RESEARCH QUESTIONS

This study was conducted to search for answers of the following questions:

i. What are the domain and items suitable to evaluate leadership among medical doctors?
ii. Is the content of the KAP-LM instrument acceptable by the expert panels?
iii. What is the validity of the KAP-LM instrument?
iv. What is the reliability of the KAP-LM instrument?

1.6 THEORETICAL FRAMEWORK

Figure 1.1 illustrates the steps involved in constructing and validating the KAP-LM tool.

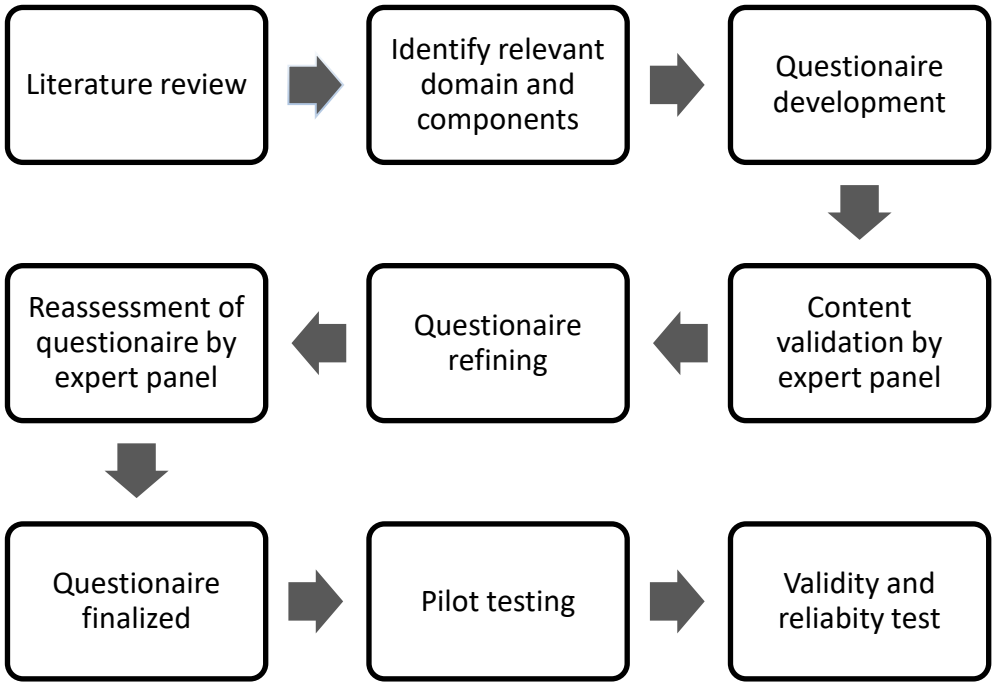

Figure 1.1 Theoretical Framework

1.7 RESEARCH HYPOTHESES

The study aimed to test following hypotheses:

a. The items constructed in the KAP-LM has good content validity ratio indicating the questions in the instrument measures the same underlying concept.
b. The dimensions or the sub domain in the KAP-LM construct shows significant and positive correlation.
c. Consistent with a determination of good stability, the Cronbach's alpha would score more than 0.70, indicating good internal consistency without repetitive of questions in the instrument.

1.8 SIGNIFICANCE OF THE STUDY

The results from this study would not only fill the gaps in literature, it would also provide the evidence base to raise awareness on the importance of leadership among doctors in Malaysia. In other words, it can serve as a guideline for policy makers in designing intervention related to leadership among doctors. This study has strong implications on nurturing research path related to leadership among medical doctors.

1.9 LIMITATIONS OF THE STUDY

The first limitation to this study is on the research design chosen in instrument development. The instrument development stage consists of the analysis, design, development, and evaluation phase. The analysis stage is the first step in instrument development where critical decisions pertaining to the research questions design of instrument, data collection technique, and data analysis were made. Insufficient

literature review may result in inaccurate decisions on important matters pertaining developing a reliable and valid instrument. In conclusion, although the development plan is reliable in guiding the process of instrument development, precautions need to be taken to ensure the internal validity of the instrument.

The second limitation is on the data collection technique to obtain the construct validity. Quantitative data is collected using a survey. There will be risk of poor responds since hardcopies of questionnaires were distributed to the respondents. Low response rate will affect the validity of the instrument. To reduce the risk, the respondents are required to return the completed questionnaire within an hour the questionnaire was administered.

1.10 DEFINITIONS OF TERMS

Leadership

A process by which an individual influence others to achieve an objective and directs the organization to make it more coherent and cohesive.

Knowledge

A fact or situation of knowing something with familiarity obtained through experience or association (Merriam-Webster, 2008).

Attitude

Bodily state of readiness to react in certain way to a stimulus (Merriam-Webster, 2008).

Practise

An act to perform repeatedly or habitually in order to obtain or maintain proficiency in it (Merriam-Webster, 2008).

1.11 CHAPTER SUMMARY

This chapter introduced regarding problems that this study intended to investigate and solve. It also outlines the theoretical framework to understand better the steps taken to achieve the objective of the study by this study. Apart from that, it also outlines the significance and limitation, research questions and hypotheses of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The study aimed to construct and validate a new knowledge, attitude and practise tool called KAP-LM to evaluate leadership among medical doctors in Malaysia. Therefore, it is of importance to first understand the definition of leadership and the types of leadership styles. The review will then emphasize on leadership in medical field and the important qualities of a medical leader as these qualities or characteristics will be used as a reference for formulation of domain in the questionnaire development for this study. Other than that, it will also cover overview regarding the Knowledge, Attitude and Practise (KAP) studies.

2.2 WHAT IS LEADERSHIP?

Leadership is a discipline that is constantly evolving and developing. According to Daft, leadership is a relationship between leaders and followers that concentrates on bringing about real change and results that reflects their common purpose (Daft & Pirola-Merlo, 2010). Leadership is a process of influencing others to comprehend and agree about what needs to be done and the way it can be done effectively, the process of facilitating individual and shared efforts to accomplish the mutual objectives (Yukl, 2010)(G. A. Yukl & Yukl, 2002). Leadership can also be defined as an ability of an individual to encourage, influence, and enable others to contribute toward the effectiveness and success of the organization (House, 1977). In summary, leaders construct a vision of what the organization can grow into in the future, and influence followers to work

together around a common vision. The leader sets the direction, sees what lies ahead, visualizes what can be achieved, encourages, and inspires.

2.3 LEADERSHIP STYLES

Leadership style was defined as a style that provides subordinates better discretion in their responsibilities (Fernandez, 2005). Leadership style and skill need to be differentiated as this is regularly misinterpreted. Style emphasis on importance an individual place on a task, people and the characteristics, mannerism, attitude and personality of the leader while skill refer to explicit techniques used by an individual to accomplish a task (Warrick, 1981). The most preferred leadership styles are transformational, transactional, and laissez-faire (Longshore & Bass, 2006).

2. **Laissez-faire Leader** also referred as delegative leadership, is used to describe leadership style with the absence of effective leadership (G. Yukl, 2010). It is a leadership that disregards complications, does not follow through, avoids decision making, and refuses to intervene. Leaders who exhibit laissez-faire leadership are indecisive and do not take leadership responsibility. Laissez-faire leaders demonstrates passive role in group activities and have no initiative to network with group members (Blake & Mouton, 1964). Laissez-faire leaders disregard problems and do not contribute to the progression of the follower (G. Yukl, 2010).

3. **Transactional leadership** focuses transaction or exchange that occur among leaders and followers. The exchange is established based on the discussion between the leaders and followers on the goals and rewards that the followers will obtain if they fulfill those conditions (Bass & Avolio, 1994). Transactional leaders interchange things of value with their followers to achieve both parties' requirements. Followers accomplish the leader's requirement in return for compliment and rewards. The drive

or motivation for goal achievement by the followers is intended to avoid punishment for lack of nonperformance (Bass, Avolio, Jung, & Berson, 2003). Transactional leaders motivate the followers to achieve the desired results by clarifying the target that the followers must achieve, showing the method to achieve the target, explaining the performance evaluation, giving feedback on job outcomes, and providing rewards if the followers met the target (Bass & Avolio, 1994).

4. **Transformational leadership** is leadership that focuses on the need and personal development of the followers. Transformational leaders encourage the followers to go extra mile (Bass & Avolio, 1994). Transformational leaders achieve their goals in several ways: first, by making the followers aware of the importance of task goals; second, by making the followers go beyond their personal self-interest for the benefit of the organization; and third, by making the followers increase their high-level needs (Bass & Avolio, 1994). Moreover, transformational leadership stresses the importance of appreciating and valuing the followers (Gregory Stone, Russell, & Patterson, 2004). Transformational leaders rouse the emotion and accomplishment of followers. Leaders using transformational leadership are more concerned about development and progress of the followers. As a result, followers feel admiration, respect, loyalty and trust toward transformational leaders (G. Yukl, 2010).

2.4 MEDICAL LEADERSHIP

Leadership is vital in all disciplinary including within the health care setting. Medical leadership is progressively considered as critical for improving the quality of care and the sustainability of healthcare (NHS, 2010). It is no longer acceptable for clinicians to avoid addressing the importance of effective leadership in the current health care

environment (Ewens, 2002). In recent times, medical leadership has received increasing attention from researchers and practitioners. Medical leadership is reasoned to play an imperative role in improving organizational performance, including the care, patient safety, quality and cost-efficient care (Warren & Carnall, 2011) (Blumenthal, Bernard, Bohnen, & Bohmer, 2012) (Porter & Teisberg, 2007).

There are literatures that characterized medical leadership as a fundamental component of physicians' daily work (Baker & Denis, 2011). Based on researches, there are two types of medical leadership conceptualizations (Berghout, Fabbricotti, Buljac-samardz, & Hilders, 2017). Type 1 medical leadership includes physicians who work as a formal leader and are defined as medical managers who functions at either the executive or management level at a hospital. This could be in addition to or as an alternative to their clinical practise. Type 2 medical leadership includes physicians who work as informal leaders at the clinical level, i.e., these physicians act as medical leaders within their day-to-day clinical practise (Edmonstone, 2009). It is required by the physician to act as leaders amongst their clinical role, by assigning clinical work and establishing cross-departmental alliance. This informal role that transcends formal managerial work enable the physicians achieve high-quality and cost-efficient care (Warren & Carnall, 2011) (Baker & Denis, 2011) (Edmonstone, 2009).

Regardless of the type of role a medical leader performs, this role must be accomplished not only to achieve and represent organizational vision but also to negotiate for and represent the interests of the medical staff. The practise of leadership among physicians not only enable health and effective care, it also increases professional satisfaction and decreases the current pressures on physicians (Porter & Teisberg, 2007).

It is still debatable whether leaders are born or they can be molded into one. Kotter argues that leadership is constructed by a series of definable skills that are possible to be taught while others argue that there should be a precondition for natural leadership (Kotter, 1999). All physicians can develop their own skill to lead which are critical for effective leadership regardless at the level they work. The method adopted and implemented for leadership development is broad, from one-to-one coaching, seminars, mentoring, action or experiential learning and self-directed learning (Chen, 2018). In the recent years, there are number of curricula or courses that incorporated leadership training for medical doctors. In United States, 90 physicians undergone a two-year program with monthly sessions of lectures and discussion on organizational leadership, financial management, management strategy, applied skills and tools (Gagliano et al., 2010). Meanwhile in Canada, a one-day seminar on leadership was conducted for 43 senior surgical residents (Hanna et al., 2012). The topic covered includes duties delegation, teamwork, stress management, organizational culture and strategic management. The various courses addressing leadership for medical doctors found to be useful and beneficial by the participants (Edler et al., 2010) (Korschun et al., 2007)(Murdock & Brammer, 2011). However, in Malaysia training on leadership is not given to medical doctors and it has been proposed by a researcher that the Ministry of Health should provide leadership training for selected healthcare providers (Mastura, 2008).