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Study on Hospital Administrators' Beliefs and Attitudes toward the Practice of Evidence-Based Management

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Abstract

The purpose of this study was to explore hospital administrators' beliefs and attitudes toward the practice of evidence-based management (EBMgt) and to identify the needs for EBMgt training programs. A cross-sectional, non-experimental design was utilized. Survey data were analyzed using descriptive statistics and Spearman's correlation. The study results showed that hospital administrators had positive attitudes toward the practice of EBMgt. There was a significant correlation between attitudes and percentage of healthcare management decisions made using an evidence-based practice approach ($p < 0.01$). The study findings suggest EBMgt educational training programs would likely help hospital administrators adopt evidence-based practice in management decision-making.

Keywords

hospital administrators; attitude; behavior; evidence-based management

INTRODUCTION

Health care administrators' decisions have significant impacts on the effectiveness of quality patient care delivery, and the success of health care organizations. Every year there are reports of medical errors in health care across the nation (Agency for Healthcare Research and Quality 2015; Bleich, S. 2005; Havens and Boroughs 2000). However, the reporting of management errors in judgment and decision-making has not been similarly tracked. Kovner and other scholars stated that an evidence-based approach would improve the competence of

decision-makers and their motivation to use more scientific methods in health care management decision-making (Kovner and Rundall 2006; Pfeffer and Sutton 2006). Evidence-based management (EBMgt) has been slowly adopted by healthcare administrators, while other healthcare professionals, e.g. physicians, physical therapists, nurses, and other allied health professionals, have generally embraced the principles and practices of evidence-based medicine/practice (Kovner, Fine, and D'Auila 2009; Amin et al. 2007; Bartelt et al. 2011; Heiwe et al. 2011; Jette et al. 2003; Shuval et al. 2007).

Evidence-based management is defined as making decisions about the management of employees, teams or organizations through the conscientious, explicit and judicious use of the best available scientific evidence, organizational data, professional experiential evidence, and stakeholders' values and concerns (Center for Evidence-Based Management 2015). A review of the literature indicates that few studies have been published regarding current beliefs and attitudes of hospital administrators toward the practice of EBMgt in today's U.S. healthcare environment. The purpose of this study was to explore hospital administrators' beliefs and attitudes toward the practice of EBMgt, their decision-making style, and to identify the need for future development of a training program on evidence-based management for hospital administrators.

METHODS

Study Design

A cross-sectional, descriptive, and non-experimental design was utilized in this study to identify beliefs and attitudes among Idaho hospital administrators, and the need for an EBMgt training program.

Study Population

The study population included all hospital administrators who were members of the Idaho Hospital Association. These participants were hospital chief executive officers, chief financial officers, chief operating officers, and chief nursing officers.

Instrumentation

There is little published research on hospital administrators' beliefs and attitudes toward the practice of EBMgt. The literature reveals some published studies on personal perceptions and attitudes toward evidence-based medicine (EBM)/evidence-based practice (EBP) among health care providers such as physicians, physical therapists, and dietitians (Amin et al. 2007; Bartelt et al. 2011; Heiwe et al. 2011; Jette et al. 2003; Shuval et al. 2007). We reviewed the existing literature and developed a new survey instrument based on the purpose of the study.

Content validity was established based on the literature review and expert opinions from health care administrators. A pilot test was conducted among 6 hospital administrators who were practicing healthcare management outside of Idaho. Survey questions were modified or eliminated based on pilot study feedback.

To determine the consistency and reliability of the instrument, we conducted a test-retest procedure among 10 healthcare management professionals across the nation. The results showed 81% consistency and reliability of the instrument. Cronbach's alpha analysis was performed to test internal consistency of the survey items related to beliefs and attitudes. The results of Cronbach's alpha analysis (0.94) showed a high correlation among the survey items.

Administration of Survey

Prior to the administration of the survey, a proposal was approved by Idaho State University's Human Subjects Committee. As required, the investigators completed online training in the protection of human subjects through the Collaborative Institutional Training Initiative (CITI).

Data collection occurred through the Qualtrics® online survey software system between July and August, 2013. The hospital administrators were informed, via email, of the purpose of the study and were further advised that they could withdraw freely, for any purpose, at any time, during the survey. Three reminders were emailed to potential participants. It took online survey participants an average of seven minutes to complete the survey.

To increase the response rate, we provided participants with the option of a hard-copy mail survey. Participant names were drawn for prizes as further incentive to participate. The survey data were kept confidential in a secured filing cabinet in the key researcher's office.

Data Analysis

Following completion of the survey, the data were collected and analyzed using IBM Statistical Package for the Social Sciences (SPSS) 21.0. Frequency and descriptive statistical analyses were performed. Means and standard deviations were applied to analyze the data. Spearman's correlation was performed to identify any relationships among attitudes and participant demographic characteristics and the percentage of decisions made using an EBMgt approach.

RESULTS

General Survey Information

108 surveys were distributed to IHA members via the Internet and mail. 48 hospital administrators returned the questionnaires, for a 44.4% response rate. The return results of the two-mode survey delivery were: 25 via online (52%) and 23 via mail (48%).

Demographic Information

Of the 48 respondents, 25 (52%) were chief executive officers and/or presidents of hospitals and multi-hospital health systems; 11(23%) were chief financial officers; and 12 (25%) were chief operating officers or chief nursing officers. Among the respondents, 69% (33/48) were male and 31% (15/48) were female. Concerning educational level, 17% (8/48) had bachelor's degrees, 75% (36/48) had master's degrees, and 6% (3/48) had either a medical doctoral degree or doctoral degree. One participant did not respond to the level of education.

Six respondents (13%) indicated they had more than 30 years of senior healthcare management experience; 17 (35%) reported between 20–29 years; 9 (19%) between 10–19 years; and 16 (33%) declared fewer than 10 years of healthcare management experience. There was no significant correlation between attitudes toward the practice of EBMgt and any demographic characteristic (e.g., age, education, and years of management in health settings).

Twenty four (50%) participants reported that their hospitals were not for profit; 7 (15%) were for profit; 16 (33%) were owned by the government; and 1 (2%) was other type. 85% (41/48) of participants reported that their hospitals provided general health services. There was no statistical significance among attitudes, hospital ownership, and type of health services.

Beliefs and Attitudes

In the survey, participants were asked to answer items about their personal beliefs of the practice of EBMgt in healthcare management. A seven-point Likert scale was used to measure participants' beliefs and attitudes toward the practice of EBMgt. After examining the response frequencies, the four survey items related to beliefs and attitudes were recoded into a dummy variable, such as positive or negative beliefs and attitudes. Overall, the respondents had positive beliefs and attitudes toward the practice of EBMgt. See Table 1 for detailed results of participants' responses about their beliefs and attitudes toward the practice of EBMgt. The study findings differed from the results of the study conducted by Kovner and Rundall (Kovner and Rundall 2006). Their results showed a low inclination toward the use of EBMgt among health service managers. Seemingly, EBMgt practice in management decision-making was accepted by this target study population. We would hope that the findings from this study and related work on EBMgt will encourage more widespread use of an evidence-based decision-making approach among hospital administrators.

Percentage of Major Decisions Made Using an EBMgt Approach

Participants were asked what percentage of their major decisions were made using an EBMgt approach. 10% (5/48) reported that 76–100% of their major decisions were made using an evidence-based management approach. 18 participants used an EBMgt approach for 51–75% of their major decision-making. 26–50% of the decisions were made using an EBMgt approach by 12 participants and less than 25% by 13 participants. There was a statistical significance between attitudes toward the practice of EBMgt and the percent of decisions using an EBMgt approach. The higher the positive attitudes, the higher the percentage of decisions made using the EBMgt approach (Spearman's $\rho=0.426$; $p<0.01$).

Interest in EBMgt Training

In this study, 83% (40/48) of participants reported that they had not previously attended any formal EBMgt training. 77% (37/48) of the participants were interested in receiving EBMgt training. Among the participants who were interested in training, 67% (32/48) would be interested in learning the principles of EBMgt; 56% (27/48), in the implementation of EBMgt; 46% (22/48), in evaluating the quality of evidence; and 27% (13/48), in information searching.

DISCUSSION

This study has its practical implications. First, the concept of EBMgt was originally derived from evidence-based medicine (EBM) and the EBMgt movement began in 1998 (Stewart 1998). Kovner and Randall conducted 68 interviews of health managers and found that there was a low level of attitudes toward EBMgt among these health managers (Kovner and Rundall 2006). The results of this study differed from their results. In the present study, the respondents had overall positive attitudes toward the use of EBMgt. It is indicated that the practice of EBMgt has been accepted by the participating hospital administrators. Health care administration is a fast-changing and challenging field. Influenced by the movement of evidence-based medicine/evidence-based practice, more and more hospital administrators realize that it is important to take an evidence-based practice approach when making managerial decisions. It is not wise to make decisions based solely on personal experiences and intuition. Many medical errors occur due to personal judgements. Hospital administrators must be held accountable for both their patients and health care organizations. Decisions have to be made based on the best available scientific evidence, organizational data, stakeholders' concerns and values, in addition to hospital administrators' personal management experiences.

In this study, we also identified a significant need for developing a training program on EBMgt for hospital administrators and health executives. 77% (37/48) of the participants were interested in receiving EBMgt training workshops and learning the principles of EBMgt, searching evidence, evaluating quality of evidence, and implementing EBMgt. Some scholars stated that EBMgt would improve the competence of decision-makers and their motivation to use more scientific methods in healthcare management decision-making (Kovner and Rundall 2006; Pfeffer and Sutton 2006). To provide quality patient care and to reduce health costs, it is necessary for hospital administrators to learn EBMgt principles and processes, to develop information searching skills, to evaluate the quality of evidence, and to apply the evidence to their decision-making in healthcare management. Providing EBMgt training would increase hospital administrators' knowledge of EBMgt and competence of decision-making in health care organizations. The knowledge and skills gained through educational training will help them identify the best available evidence and apply it to improve decision-making for their organizational performance and patient care.

Study Limitations and Strengths

There were two limitations in this study. First, generalizability of the research findings may be limited due to small sample size. A national study on this topic may be needed to support the findings. Secondly, a cross-sectional study may not have the ability to establish causality. The strengths of this study were that we identified hospital administrators' positive attitudes toward the practice of EBMgt and the need for developing an EBMgt educational training program for them.

Future Study

Based on the study findings, a funded EBMgt training program for Idaho hospital administrators has been developed and the outcomes of the training program will be

assessed. The primary goal of the EBMgt training program is to promote the practice of evidence-based management in decision-making among hospital administrators by increasing their knowledge of the principles and process of EBMgt. The knowledge and skills gained will help hospital administrators use the best available evidence to improve their decision-making in healthcare management.

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TABLE 1

Beliefs and Attitudes toward the Practice of EBMgt (N=48)

Beliefs and Attitudes	% of Positive Beliefs and Attitudes	Number of Participants
I believe that it is important for healthcare administrators to make decisions based on the best available evidence.	94%	45/48
I support the adoption of EBMgt in healthcare management.	96%	46/48
Employing EBMgt improves my organization's performance.	92%	44/48
Evidence-based decision making increases the quality of my healthcare management decisions.	96%	46/48

Note: EBMgt=evidence-based management