

Brief Communication

Measuring Evidence-based Decision Making Capacity in Public Health Managers of Kermanshah University of Medical Sciences 2013-2014

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Abstract

The aim of this study was to evaluate the status of health managers' evidence-based decision-making in Kermanshah University of Medical Sciences in 2013. In this descriptive - analytical survey, research tool was a 33-item questionnaire based on Kansas standard. The study sample was randomly drawn from among 180 experts, heads and deputies of health care centers in Kermanshah province. The collected data were analyzed deductively by SPSS 16. There was a significant difference between the number of times evidence-based decision making was used based on gender ($P < 0.023$). However, no difference was observed in terms of management levels ($P > 0.495$). As a result, decision-making based on evidence has been accepted as a new reliable approach among medical staff of Kermanshah University of Medical Sciences and considered to improve the quality of evidence-based decision-making.

Keywords: Evidence-base, Decision-making, Kansas questionnaire, Medical sciences

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Introduction

A systematic Evidence Based Medicine (EBM) is used to search, select, critically evaluate, and use scientific information and evidences for providing medical care (1). The ultimate goal of a health care system is to provide quality care in order to improve public health. Due to rapid expansion of medical knowledge, and considering that today access, evaluation and use of health information using traditional methods is not feasible in practice, it is expected that health services are provided based on scientific evidence, methods and decision-making (2). Factors associated with barriers to provide evidence-based healthcare services are found in two personal and managerial dimensions. Regarding the managerial dimension, these factors include the insufficient number of employees and lack of awareness

of managers about the need for evidence-based healthcare. With regards to personal care, however, the lack of sufficient time to study the research conducted is the most important factor (3). Based on the available evidence, the use of traditional methods may divert education and learning (4). To improve the educational system and student learning, medical education must change based on personal opinions and beliefs in education according to the Best Evidence Medical Education (BEME) (5). Thus the use of evidence and scientific resources can play a key role in educational decision making and ensure quality services in universities (4). In a research conducted in Poland, deficiencies in information management have been identified as a barrier to evidence-based decision making

by health and treatment managers (6). Roberts and Yeager (2004) also suggested that there is overlap between evidence-based practice and practice-based evidence and that research-based practice is considered as a platform for the development and improvement of practice based on evidence and documentation (7). These results indicate that evidence-based decision-making process fully corresponds with the activities of an inquiring mind.

Research shows that although health managers have started their shift towards evidence-based practice, but this change is very slow in many countries including Iran. This problem is not only caused by lack of knowledge and skill about document-based or evidence-based practice, it is also due to several obstacles in its implementation (8). Today in Iran with regard to the implementation of the family physician plan as the most important national health system, importance of using evidence for health care decision making is doubled. Thus, the aim of this study was to evaluate and determine the status of evidence-based decision-making by health managers of Kermanshah University of Medical Sciences.

Methods

This was a descriptive-analytical survey in which the study population was composed of experts, deputies and managers of Kermanshah University of Medical Sciences working in health centers of Kermanshah province. The study sample was composed of 150 experts and 30 heads and their deputies selected randomly. In this survey, Kansas questionnaire was used containing 33 items in 5 axes as follows: 1. Biography (11 items); 2. Evidence-based decision-making (4 items); 3. Importance of and access to evidence-based decision-making (9 items); 4. The use of data for studying public health, planning and evaluation of plans (2 items); 5. Potential resources for evidence-based decision making (7 items), all of which were scored using a Likert scale.

Although validity and reliability of this questionnaire were already determined in a research (Ahari, 2013) according to which Cronbach's alpha coefficient for the whole research tool was 0.936 and between 0.110 and 0.917 for subcategories (9), in this survey, its validity and reliability were again studied. To check the internal consistency and stability of the questionnaire, it was given to 20 managers similar to the study sample. It was then analyzed by calculating Cronbach's alpha coefficient and Spearman correlation coefficient in two pilot and main stages within 2 months. After completing the questionnaires, data were analyzed and entered into Spss16 statistical software. The results were analyzed through final tests including an independent t-test and

one-way analysis of variance, with a significance level of $p < 0.05$.

Results

16.7% of respondents were managers and their deputies and 83.3% were experts in charge of health care centers of Kermanshah province. 62.2% of the study population was male. Evaluation of the use of evidence-based medicine by gender indicated a difference between female and male employees of the Kermanshah University of Medical Sciences regarding the use of evidence-based medicine. Men (14.21) and women (12.43) used evidence-based medicine (Table 1).

Table 1. Test of difference (independent two-sample t-test) to determine the extent of using evidence-based medicine by gender of respondents

Sex	Number	MD±SD	t-test	P value
Male	112	14.21±2.469	2.29	0.023
Female	68	12.43±1.748		

This study also showed that there is not much difference between managers and experts of University regarding the extent of use of evidence-based medicine. Experts (12.89) and managers and their deputies (13.20) used evidence-based medicine almost equally (Table 2).

Table 2. Test of difference (independent two-sample t-test) to determine the extent of using evidence-based medicine according to management level of respondents

Sex	Number	MD±SD	t-test	P value
Male	150	12.89±2.111	-0.685	0.495
Female	30	13.20±2.809		

Discussion

In this survey, there was a significant relationship between the extents of using evidence-based decision-making by gender. However, there was no significant relationship with regards to managerial levels. It should be noted that the questionnaire used in this study was only used by Jacobs et al in Kansas and Mississippi states, in which all plans, 75% of decisions made by managers of health care groups, 59% of decisions made by colleagues and 40% of decisions of other employees were based on evidence (10). Other studies have rather focused on knowledge and attitude. Except the research performed by Jacobs et al in Kansas and Mississippi states, and the study conducted by Ahari (2013) on validity, reliability

and standardization of Kansas questionnaire, no other research has been carried out by this questionnaire (9, 10). In the research done by Ahari (2013), alpha of all items and, subsequently, final alpha value were over 0.70, i.e. 0.88. In this study, however, these values were 0.80 in the main study and 0.82 in the pilot one, which indicates the alignment of both researches. Also, the results obtained from this study were consistent with findings of Sadeghi et al (2011) and those of the similar foreign research conducted by Jacobs et al (2012) in the US states of Kansas and Mississippi (10, 11).

Given that self-reported questionnaire was used in this study, responses are likely to be more unrealistic than it should be shown; hence, this problem may have affected results of the study; accordingly, caution is warranted in generalizing the results. To achieve international standards, additional measures have to be identified and studied on the status of evidence-based decision-making in medical sciences. Meanwhile, the results should be made available to relevant authorities so that managers and public health officials are better able to identify the strengths and weaknesses of health centers and take steps in health services needed in the community. The statistical community was composed of healthcare centers in Kermanshah province; it is so recommended that such studies take place also in other provinces in order to achieve improved results.

Conclusion

Gender influenced the extent of using evidence-based decision making, however, no significant relationship was observed with regards to managerial levels.

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