

Research Article

Evaluating Effectiveness of evidence Based Decision-making Educational Course on Healthcare Domain Managers based Krick-Patrick Model

**Behrouz soltany¹, Abol Hassan afkar^{2,3}, Seyedeh Hoda Mousavi⁴,
Tahereh Khazaei⁴, Somaieh Roohani_Majd⁴, Mohsen Nouri⁴,
Mohsen Mohammadi⁴ and Nasim Hatefi_Moadab*⁵**

¹Kermanshah University of Medical Sciences, Kermanshah, Iran

²School of Health, Guilan University of Medical Sciences, Rasht, Iran

³Social Determinants of Health Research Center,
Guilan University of Medical Sciences, Rasht, Iran

⁴Student Research Committee,

Kermanshah University of Medical Sciences, Kermanshah, Iran

^{5*}Student Research Committee, Kermanshah University of Medical Sciences,
Kermanshah, Iran (corresponding Author)

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ABSTRACT

Introduction: Now a day, Increasing growth of information and increase in complexity of jobs has lead to an increasing importance of educating employees. Toffler believes that education is the most important action and way to face great changes in future life and accepting changes. present study aims to study the effect of evidence based decision making workshop on healthcare managers by means of Krick-Patrick model.

Methods and Material: present study was executed among 60 of health managers in Tabriz Medical University between years 2013 to 2014. managers took part in an evidence based decision making workshop and data related to their reaction toward the workshop, higher learning level and their behavior change were gathered by means of three stable and justified questionnaires and analyzed by SPSS version 18 software, descriptive and deducing statistical methods.

Results: based on obtained results, following variants improved significantly in managers after the study: managers learning level and knowledge improvement, managers awareness level of evidence based medical practice concept, level of managers awareness of evidence based policymaking concept, level of managers awareness of evidence based decision making, level of managers usage of data sources in decision makings and policy making, level of evidence based decision making skills' knowledge and level of managers behavioral improvement.

Conclusion: presenting such educational courses could lead to an improvement in health managers level of knowledge and learning and improves their behavioral abilities in decision making.

keywords: evidence based decision making, Krick-Patrick, evaluation, managers

INTRODUCTION:

Now a day, managers experience a period where real capital of organizations is wisdom and intelligence. in our age, organizations no longer take pride in mass production, financial resources and surplus of their human force, but take pride in

their intelligence capital and knowledge. Peter Draker believes that now a day, hand work has been replaced by knowledge work. in such circumstances, you cannot succeed unless you consider a high value or intelligence and

knowledge capital and try to develop and stabilize it (Eidee& et al., 2008). now a day, importance of educating employees has increased due to the fact that information has grown increasingly and jobs have become complicated. Toffler believes that education is the most important action and way to face changes in life and accepting change (Alhosseiny, 1379). educating and improving human resource is a type of useful investment and a key factor in development. in case it is planned properly and correctly, it could have a considerable economic output. result of researches indicate that paying attention to educate and improve human resource will lead to an increase in put. for example, in 2044, after evaluating the effect of educational courses in Motorola Company, it became clear that each dollar invested in educating employees had an outcome equal to 33 dollars (Sam Khanian, 2004). executive managers of healthcare system, medical education expertise and health policy making analysts all believe that now a day, students are not properly trained to run tomorrow's healthcare system and do not receive required education. even students, themselves, believe that their education in regard to management, improving quality and health economy is not enough (Robiniwits& et al., 2001), and many individuals led toward various managerial roles in healthcare system, have rarely been prepared for such responsibilities while receiving their education (Naylor, 2006). the important point is that teaching management and leadership methods to various study field students receives very small amount of attention in faculties (Composalo& et al, 2003).

paying serious attention to healthcare, hygiene and improving medical care quality in developing countries and community's deprived areas which usually face lack of developed equipment to achieve latest medical achievements, is one of important indexes of development in every country. achieving such goal depends on using the best methods of applying latest valid and related data resources in various medical fields. one of the most important resources in this case is evidence

based medical procedure aiming to cure, improved care, increase life span and improve living condition of patients (Motamedi, 2013).

meanwhile, evaluating human resource and studying its barriers, problems, weaknesses and strengths is increasingly common but it is time to study the effectiveness of educational courses and attitude, learning level, students function and finally output of educational courses before doing any research in regard to evaluation so we can find weak and strength points of the course and also judge educational courses (Sam Kan, 2012). as it has been expressed in educational and management articles and books, there are various models and patterns to determine value of educational courses and we could mention to Krick-Patrick model as one of most important samples among them. Krick-Patrick expresses three main reasons for educational evaluation: justifying existence of an educational course or unit by showing its role and importance in achieving organizational goals and missions, decision-making about continuing the educational program and improving education (Salvatore, 1998). present research, understanding importance and necessity of the issue, studies effect of evidence based decision-making on healthcare managers so consider results obtained from the research based on special presented procedure (Krick-Patrick) and create a basis for navigating educational course and making it effective, prevent waste of resources, present realistic goals, selecting proper methods and detailed execution for multi-dimension improvement and growth and finally create a basis for correct and essential evaluation and logical decision making in all educational fields.

MATERIAL AND METHODS:

present research is functional and measuring research based on the way it gathers data, also a descriptive-cross sectional research and semi-experimental, studying before and after execution condition and due to the fact that everyone is counted in this research, there is no witness and

control group. present research has been executed during 2013 to 2014 in medical office of assistance of Tabriz Medical University. statistical society of present research includes 60 healthcare office of assistance’s managers in Tabriz medical University taking part in an educational workshop. three questionnaires were used to achieve study goals. one questionnaire to study the reaction of participants and their satisfaction with the course, second questionnaire for time period before and after the course to study the level of education before and after the education and a third questionnaire was presented to participants by researchers after eight months to study behavior resulted from learning. Cronbach’s alpha was used to test questionnaires stability and context admissibility method as used to evaluate admissibility of questionnaires and their admissibility and stability were confirmed. data was analyzed by SPSS version 18 software and

descriptive, deductive statistical tests. median, abundance percentage and standard deviation were used for descriptive statistical tests and to determine effect of such course in deducting statistics test we used Coupled and single statistical t test.

RESULTS

based on obtained results, most managers are men (83.3%), network experts (70%), managers with a work history of 11 to 15 years (37.7%) and ,managers with a managerial background less than five years (58.3%). only 3 participants had a previous experience of taking part in an evidence based decision-making workshop and 57 had no background of participating in evidence based decision-making workshops. table 1 shows managers abundance distribution divided based on various variants.

Table 1: Managers Abundance Distribution Divided Based On Variants

Variant	Abundance	Abundance Percentage
Gender:		
Male	50	83.3
Female	10	16.7
Service location:		
Tabriz	38	63.3
townships	22	37.7
Position:		
Network director	10	16.7
Network manager	8	13.3
Network expert	42	70
Working background (years):		
0-5	14	23.3
6-10	16	26.7
11-15	22	37.7
16-20	4	6.7
21-25	4	6.7
Management background (years):		
0-5	35	58.3
6-10	15	25.0
11-15	6	10.0
16-20	2	3.3
21-5	2	3.3

based on obtained results, 21 managers used their personal experience from previous managerial

posts in their decision makings and policymaking. 4 managers used other managers personal

experience, 9 managers used experts experience, 24 managers used regulations and office guidelines in decision making and policymaking and only on manager in health management domain used reference books in decision making and policymaking and only one manager used latest valid managerial articles and guidelines which would be equal to 35.0 percent, 6.7 percent,

15.0 percent, 40 percent, 1.7 percent and 1.7 percent of statistical sample, respectively. most managers of healthcare domain in Tabriz medical University (40%) used regulations and office guidelines in third policy and decision makings. table 2 presents pre- and post- educational course results related to studied variants.

Table 2:Results Related To Statistical Tests Of Studied Variants in Pre- and Post- educational Period

Variant		Before	After	Comparison with before and after	Significance level
Managers learning level and knowledge	Median	39.90	6.65	-22.75	000
	Standard Deviation	6.78	7.65	9.86	
Managers awareness of evidence based medical care concept	Median	1	2.08	-1.08	000
	1	2.15	-1.15		
Managers awareness level of evidence based policy making concept	Median	1	2.15	-1.15	000
	Standard deviation	000	0.732	0.732	
Managers awareness level of evidence based decision making concept	Median	1	2.21	-1.21	000
	Standard deviation	000	0.666	0.666	
Level of using information and data resources in decision making and policy making by health care domain managers	Median	26.40	39.51	-3.11	000
	Standard deviation	6.49	10.81	14.04	
Level of knowledge on evidence based decision making skill	Median	17.58	32.43	-14.85	000
	Standard deviation	4.96	4.23	5.83	
Level of improvement in managers behavior	Median	10.09	12.20	-61.56	000
	Standard deviation	10.09	12.20	15.72	

based onobtained results in regard to managers reaction to educational program, total median calculated for desirable reaction or managers satisfaction toward taking educational courses is equal to 2.99 (society’s median in considered equal to 2.5 in this study).

DISCUSSION

results of the study show that level of learning and improving managers knowledge, equal to a median of 62.65, was higher than their learning level and knowledge improvement before the workshop, with a median of 39.90. therefore, participating in educational workshop improved learning level and improved knowledge of health

managers working in Tabriz Medical University. results of this study are coordinated with results presented by MahnazYadegary (2008) and Mahdi Rajabian (2006). they concluded in their studies that educational courses will lead to increase of technical and cognitive skills in expertise. Rejo& et al. (2009) also evaluated an educational course in India Typology Studies Center with a new look toward famous Krick-Patrickmodel. results of this research show that not only this course led to a considerable knowledge intake by means of education, but it also led to improvement in practical and functional skills by means of various methods. Steven 92001) and Polchino (2007) also achieved similar results.

In present study , level of health managers' knowledge of evidence based medical practice or care after the workshop, with a median equal to 2.01, was higher than third level of knowledge about evidence based medical practice before the workshop, with a median equal to 1. therefore, participating in educational workshops will lead to an improvement in health managers knowledge of evidence based medical practice. level of health managers' knowledge of evidence based policymaking after the workshop, with a median equal to 2.15, was higher than third level of knowledge about evidence based policymaking before the workshop, with a median equal to 1. therefore, participating in educational workshops will lead to an improvement in health managers knowledge of evidence based policymaking. based on results, level of health managers' knowledge of evidence based decision-making after the workshop, with a median equal to 2.21, was higher than third level of knowledge about evidence based decision-making before the workshop, with a median equal to 1 and this shows that, participating in educational workshops will lead to an improvement in health managers knowledge of evidence based decision-making. level of health managers' usage of information and data sources after the workshop, with a median equal to 39.51, was higher than third level of using information d data sources before the workshop, with a median equal to 26.40 and it can be concluded that participating in educational workshops will lead to an improvement in health managers usage of information and data sources. median of all indexes calculated for desirable reaction or Tabriz Medical University's health managers satisfaction toward participating in the course is equal to .99. considering society's hypothetical median which is equal to 2.5 here, we consider the role of presented educational course in desirable reaction (satisfaction level) of Tabriz Medical University Health managers to be higher than average. therefor we could claim that, presented educational course has increased satisfaction level of managers and created a

satisfactory reaction in them. results obtained from present research are in accordance with results presented by Tomlin & et al. (2002). these researchers achieved acceptable results in three levels of knowledge, action and behavior. Merili Watson (2001) achieved to acceptable results in all 4 levels of Krick-Patrick model in a study titled "Effectiveness Of Violence Management Educational Course For Nurses", but Abtahi&Pidaiee (2003) achieved different result by means of Krick-Patrick pattern, where participants has a low satisfaction level of educational program in relation to action level. based on findings presented by Barzegar (004), darabi, (2006) and Vafadar (2009) and based on Krick-Patrick Model, three levels of action, learning and behavior have higher effectiveness in educational courses. Ghahroudy (2008) also evaluated four levels of Krick-Patrick model to be effective and satisfactory during educational courses in his study.

based on results obtained from present study, level of behavioral improvement in managers after the workshop, equal to a median of 105.55, is higher than behavioral improvement level in managers before the workshop, with a median equal to 43.98 and statistical tests show that there is a statistical significant in this difference ($P=000$). as a result, presenting educational workshops has improved managers behavior. considering that Krick-Patrick four level pattern has been extensively used as an educational program evaluation model in organizations, result of present study is in accordance with results presented by Gorgy (2007); where he showed that educational courses during working years had a positive effect on performance of Tehran South Islamic Azad University employees. Samary (2005) concluded in his study that employee receiving short term educations while working are better than individuals which do not participate in such courses. according to findings presented by Nbarzegar (2004), darabi (2006) and Vafadar (2009) and Krick-Patrick Model, three levels of action, learning and behavior have high

effectiveness in educational periods. Fllen (2003) concluded in his study that education is the reason of more desirable and efficient behavior in managers. Rejo& et al. (2009) also evaluated an educational course in India Typology Studies Center with a new look toward famous Krick-Patrick model. results of this research show that not only this course led to a considerable knowledge intake by means of education, but it also led to improvement in practical and functional skills by means of various methods. Steven 92001) and Polchino (2007) also achieved similar results.

CONCLUSION

considering results of present study, presenting such educational courses could lead to an increase and improvement in knowledge level and learning of health managers and also improve their behavioral abilities in decision-making so it can somehow fill the gap created due to lack of educating proper managerial discussions while studying in college and university and finally leads to omission of decision making based on personal interests and desires of managers and improve general condition of organization by management.

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