Evaluation of Risk Management among Managers of the Primary Health Care Centers in Baghdad City: Comparative Study

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ABSTRACT

Background: Several risk management standards had been developed including the Project Management Institute, the National Institute of Standards and Technology, actuarial societies, and ISO standards.

Objective: The study aimed at evaluating risk management among managers of model and ordinary primary health care centers in Baghdad City and comparing the risk management among these centers.

Methods: A descriptive comparative design was carried throughout the present study at 55 primary health care centers; 15 model primary health care centers and 40 ordinary health care centers in Baghdad City. The study was initiated from May 25th 2017 up to January 25th 2018. Non-probability (purposive) sample of 55 managers of primary health care centers was selected of 15 model primary health care centers and 40 ordinary primary health care centers in Baghdad City. A questionnaire was constructed for the purpose of the study. The overall number of items included in the questionnaire is 20 items. Internal consistency "split-half" reliability was obtained through computation of Cronbach alpha correlation coefficient. Data were collected through the employment of the questionnaire and the interview technique as means of data collection. Data were analyzed through the application of descriptive and inferential statistical data analysis approaches.

Results: The study revealed that most of the managers of both model and ordinary primary health care centers had employed poor performance of standards of risk management of method of identifying risk (67%) (52.5%); risk management process (67%)(55%); potential risk treatments (60%)(67.5%); and cardinal rules for the practices of risk communication (60%)(50%) respectively.

Conclusions: Managers of both sites unfortunately had performed the risk management standards inadequately**.**

Key words: risk management ,primary health care.

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INTRODUCTION

Risks can come from various sources including uncertainty in financial markets, threats from project failures (at any phase in design, development, production, or sustainment life-cycles), legal liabilities, credit risk, accidents, natural causes and disasters, deliberate attack from an adversary, or events of uncertain or unpredictable root-cause. There were two types of events (i.e. negative events can be classified as risks while positive events are classified as opportunities). Several risk management standards had been developed including the Project Management Institute, the National Institute of Standards and Technology, actuarial societies, and ISO standards. Methods, definitions and goals varied widely according to whether the risk management method was in the context of project management,security, engineering, industrial processes, financial portfolios, actuarial assessments, or public health and safety [(1, 2)].

Risk was considered as part of all our lives. As a society, we needed to take risks to grow and develop. In our fast paced world, the risks we had to manage evolve quickly. We wanted to make sure we manage risks so that we minimized their threats and maximize their potential. Risk management involved understanding, analyzing and addressing risk to make sure organizations achieve their objectives. So it must be proportionate to the complexity and type of organization involved. Enterprise risk management (ERM) was an integrated and joined up approach to managing risk across an organization and its extended networks [(3)].

Risk management was defined as the identification, analysis, assessment,

control, and avoidance, minimization, or elimination of unacceptable risks. An organization may use risk assumption, risk avoidance, risk retention, risk transfer, or any other strategy (or combination of strategies) to manage threats (uncertainties with negative consequences) typically included avoiding the threat, reducing the negative effect or probability of the threat, transferring all or part of the threat to another party, and even retaining some or all of the potential or actual consequences of a particular threat, and the opposites for opportunities (uncertain future states with benefits) in proper management of future events [4]. Risk management referred to the practice of identifying potential risks in advance, analyzing them and taking precautionary steps to reduce/curb the risk [5].

Risk management was the identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events [6] or to maximize the realization of opportunities. Risk management's objective was to assure uncertainty does not deflect the endeavor from the business goals [7].

Effective risk management systems can best be achieved in an atmosphere of trust. Successful risk management provided assurance that the organization's objectives will be achieved within an acceptable degree of residual risk. It also created an environment in which quality improvement occurs as the natural consequence of the identification, assessment and elimination or minimization of risk. Risk management can therefore also be considered as an aspect of the organization's ongoing continuous quality improvement program [8].

The purpose of risk management evaluation was to ensure that the systems the organization has implemented work effectively. This applies not only to the evaluation of clinical systems but also to the evaluation of policy, programs and corporate systems. Evaluation was arbitrating the value of something by gathering valid information about it in a systematic way and by making a comparison. The purpose of evaluation was to help the user of the evaluation to decide what to do, or to contribute to scientific knowledge [9].

Due to the fact that research in area of interest is still in its infancy, the present study ought to evaluate the performance of risk management standards for managers of primary health care centers and to compare between their performance of such management at the ideal and ordinary ones.

METHODS

A descriptive comparative design was carried throughout the present study at (55) primary health care centers in Baghdad City. The study was conducted from May 25th 2017 to January 25th 2018.

Non-probability (purposive) sample of (55) managers of primary health care centers is selected of only (15) model primary health care centers and (40) ordinary primary health care centers in Baghdad City.

A questionnaire was constructed for the purpose of the study. The overall number of the items included in the questionnaire is (20) items. These items were distributed with respect to the standards of method of identifying risk (5 items); risk management process (4 items); potential risk treatments (4 items); and cardinal rules for the practices of risk communication (7 items). All items are rated and scored on 3-level type Likert scale of always=3, sometimes=2 and never=1. Internal consistency "split-half" reliability was obtained through computation of Cronbach alpha correlation coefficient of (r= 0.83). Content validity of the questionnaire was determined through panel of (10) experts in management.

Data were collected through the employment of the questionnaire and the interview technique as means of data collection. Data were analyzed through the application of descriptive statistical data analysis approach (frequency, mean, mean of scores, total scores and range) and inferential statistical data analysis approach (t-test). Statistical tests were measured on probability of $P \leq 0.05$.

Mean of scores was measured as Low (≤1.4), Moderate (1.5-<2.5) and High (2.5-3). Total scores and ranges were measured as poor (5-8.2), fair (8.3-11.5) and good

(11.6-15) for method of identifying risk; poor (4-6.5), fair (6.6-9.1) and good (9.2-12) for risk management process; poor (4-6.5), fair (6.6-9.1) and good (9.2-12) for potential risk treatments; poor (7-11.5), fair (11.6-16.1) and good (16.2-21) for cardinal rules for the practices of risk communication; and poor (20-32.7), fair(32.8-45.5) and good (45.6-60) for the overall evaluation of risk management.

RESULTS

The study revealed that most of the managers of both model and ordinary primary health care centers had employed poor performance of standards of risk management of method of identifying risk (67%) (52.5%); risk management process (67%)(55%); potential risk treatments (60%)(67.5%); and cardinal rules for the practices of risk communication (60%)(50%) respectively. Managers of both sites unfortunately had performed the risk management standards inadequately**.** The above findings are shown in tables (1.2.3.4.5)

Table (1): Evaluation of Risk Management at Model Primary Health Care Centers

List	Risk Management Standards	Poor	Fair	High
A	Method of Identifying Risk	10(67%) (5-8.2)	0(0%) (8.3-11.5)	5(33%) (11.6-15)
B	Risk Management Process	10(67%) (4-6.5)	1(7%) (6.6-9.1)	4(26%) (9.2-12)
C	Potential Risk Treatments	9(60%) (4-6.5)	2(13%) (6.6-9.1)	4(26%) (9.2-12)
D	Cardinal Rules for the Practices of Risk Communication	9(60%) (7-11.5)	4(26%) (11.6-16.1)	2(13%) (16.2-21)
Overall Evaluation		10(67%) (20-32.7)	2(13%) (32.8-45.5)	3(20%) (45.6-60)

Table (2): Mean of Scores on Items of Risk Management at Model Primary Health Care Centers

List	Risk Management Items	n=15				
		Always	Sometime	Never	M S	Evaluation
		F	F	F		
A	**Method of Identifying Risk:**					
1	Objective-based risk identification.	4	3	8	1.7	Moderate
2	Scenario- based risk identification.	3	2	10	2.1	Moderate
3	Taxonomy- based risk identification.	5	1	9	1.7	Moderate
4	Common –risk checking.	3	1	11	1.4	Low
5	Risk- charting (Reporting)	4	1	10	1.6	Moderate
B	**Risk Management Process:**					
1	Initiate Risk Management: Determining the rate of occurrence (composite risk index).	1	5	9	1.4	Low
2	Creates a Risk Management Plan.	2	1	12	1.3	Low
3	Implementation of the Plan: Implementation follows all of the planned method for mitigating the effect of the risks.	6	1	8	1.8	Moderate
4	Review and Evaluation of the Plan: Risk analysis results and management plan are updated periodically.	5	3	7	1.8	Moderate

C	**Potential Risk Treatments:**					
1	Avoidance (eliminates, withdraw from or not become involved).	1	1	13	1.2	Low
2	Reduction (optimize- mitigate).	5	0	10	1.6	Moderate
3	Sharing (transfers-outsource or insure).	2	3	10	1.4	Low
4	Retention (accepts and budget).	6	1	8	1.8	Moderate
D	**Cardinal Rules for the Practices of Risk Communication:**					
1	Accepts and involves the public/ other consumers as legitimate partners (i.e., Stakeholders).	4	1	10	1.8	Moderate
2	Plans carefully and evaluates the efforts with a focus on the strengths and weaknesses, opportunities, and threats (SWOT).	5	2	8	1.8	Moderate
3	Listen to the stakeholders' specific concerns.	0	2	13	1.1	Low
4	Being honest, frank, and open.	0	5	10	1.3	Low
5	Coordinates and collaborates with other credible sources.	2	10	3	1.9	Moderate
6	Meets the needs of media.	1	8	6	1.6	Moderate
7	Speaks clearly with compassion.	0	2	13	1.1	Low

MS= Mean of scores, Low (≤ 1.4), Moderate (≥1.5), High= (2.5-3)

Table (3): Evaluation of Risk Management at Ordinary Primary Health Care Centers

List	Risk Management Standards	Poor	Fair	Good
A	**Method of Identifying Risk**	**21(52.5%) (5-8.2)**	**13(32.5%) (8.3-11.5)**	**6(15%) (11.6-15)**
B	**Risk Management Process**	**22(55%) (4-6.5)**	**10(25%) (6.6-9.1)**	**8(20%) (9.2-12)**
C	**Potential Risk Treatments**	**27(67.5%) (4-6.5)**	**5(12.5%) (6.6-9.1)**	**8(20%) (9.2-12)**
D	**Cardinal Rules for the Practices of Risk Communication**	**20(50%) (7-11.5)**	**11(27.5%) (11.6-16.1)**	**9(22.5%) (16.2-21)**
Overall Evaluation		**22(55%) (20-32.7)**	**10(25%) (32.8-45.5)**	**8(20%) (45.6-60)**

Table (4): Mean of Scores on Items of Risk Management at Ordinary Primary Health Care Centers

List	Risk Management Items	Always	Some time	Never	M S	Evaluation
		F	F	F		
A	**Method of Identifying Risk:**					
1	Objective-based risk identification.	6	6	28	1.4	Low
2	Scenario- based risk identification.	5	9	26	1.4	Low
3	Taxonomy- based risk identification.	4	8	28	1.4	Low
4	Common –risk checking.	7	22	11	1.9	Moderate
5	Risk- charting (Reporting)	11	24	5	2.1	Moderate
B	**Risk Management Process:**					
1	Initiate Risk Management: Determining the rate of occurrence (composite risk index).	17	18	5	2.3	Moderate
2	Creates a Risk Management Plan.	7	3	30	1.4	Low
3	Implementation of the Plan: Implementation follows all of the planned method for mitigating the effect of the risks.	2	12	26	1.4	Low

4	Review and Evaluation of the Plan: Risk analysis results and management plan are updated periodically.	6	8	26	1.5	Moderate
C	**Potential Risk Treatments:**					
1	Avoidance (eliminates, withdraw from or not become involved).	8	3	29	1.4	Low
2	Reduction (optimize- mitigate).	2	9	29	1.3	Low
3	Sharing (transfers-outsource or insure).	5	4	31	1.3	Low
4	Retention (accepts and budget).	17	5	18	1.9	Moderate
D	**Cardinal Rules for the Practices of Risk Communication:**					
1	Accepts and involves the public/ other consumers as legitimate partners (i.e., Stakeholders).	6	7	27	1.4	Low
2	Plans carefully and evaluates the efforts with a focus on the strengths and weaknesses, opportunities, and threats (SWOT).	7	5	28	1.4	Low
3	Listen to the stakeholders' specific concerns.	16	24	10	2.6	High
4	Being honest, frank, and open.	1	13	26	1.3	Low
5	Coordinates and collaborates with other credible sources.	15	12	13	2.1	Moderate
6	Meets the needs of media.	6	6	28	1.4	Low
7	Speaks clearly with compassion.	11	16	13	2	Moderate

MS= Mean of scores, Low (≤1.4), Moderate (≥ 1.5), High= (2.5-3)

Table (5): Comparative Difference between Model and Ordinary Primary Health Care Centers Managers' Performance of Risk Management

PHC center	Mean	N	Standard Deviation	Standard Error	t	df	Sig.
Model	**31.53**	**15**	**9.054**	**2.338**	**0.356**	**53**	**0.723**
Ordinary	**32.35**	**40**	**6.956**	**1.100**			

N= Sample size, t=T-test, df= Degree of freedom, Level of significance at P ≤ 0.05

DISCUSSION

Throughout the course of data analysis, the study displayed that the most managers of both model and ordinary primary health care centers have employed poor performance of standards of risk management. Such findings presented obvious empirical evidence that these managers may have developed insufficiencies associated with their application of risk management standards. So, managers can be monitored and evaluated on a regular base for the purpose of ensuring that they can manifest better performance of the risk management standards. Performance of the risk management standards is noted in the low mean of scores on items of common –risk checking, initiate risk management: Determining the rate of occurrence (composite risk index), creates a risk management plan, avoidance (eliminates, withdraw from or not become involved), sharing (transfers-outsource or insure), listen to the stakeholders' specific concerns, being honest, frank, and open, and speaks clearly with compassion at the model primary health care centers. In contrast, such performance at the ordinary primary health care centers is well-known in the low mean of scores of items of objective-based risk identification, scenario- based risk identification, taxonomy- based risk identification, creates a risk management plan, implementation of the plan: Implementation follows all of the planned method for mitigating the effect of the risks, avoidance (eliminates, withdraw

from or not become involved), reduction (optimize- mitigate), sharing (transfers-outsource or insure), accepts and involves the public/ other consumers as legitimate partners (i.e., Stakeholders), plans carefully and evaluates the efforts with a focus on the strengths and weaknesses, opportunities, and threats (SWOT), being honest, frank, and open, and meets the needs of the media.

Based on the early reported facts, the present study recommended that items belong to standards of risk management can be encompassed in a planned instructional program through which managers can be enrolled to pursue benefits for adequately performing these standards. Mandatory participated of managers can be initiated and required with support and encouragement.

It had been documented that the process of risk management is not only restricted to controlling the threats or reducing their negative effects. It was a much deeper concept that also involves risk avoiding as well as risk taking. Every work involved some or other kinds of risk [10].

Literatures had provided supportive evidence that evaluation was an integral part of the risk management decision-making process. However, in most developing countries, it was often the weakest link in the whole risk management process. Risk management was only as good as its weakest link – every step from risk characterization to evaluation was important [11].

Additional support was presented in survey which was administered to (701) project managers, and their supervisors, in seven industries and three diverse countries (New Zealand, Israel, and Japan), in multiple languages during the 2002-2007 period. Results of this study revealed that project context--industry and country where a project is executed--significantly impacts perceived levels of project risk, and the intensity of risk management processes. The findings also suggested that risk management moderates the relationship between risk level and project success. Specifically, the study found that even moderate levels of risk management planning are sufficient to reduce the negative effect risk levels have on project success [12].

The benefit of adequately performing risk management assisted to overcome severe individual and organizational biases that prevent managers and employees from thinking deeply and analytically about their risk exposure [13].

Analysis of such comparative difference indicated that managers of both sites unfortunately had performed the risk management standards inadequately. This finding provided observed evidence that managers of model primary health care centers did not develop benefits with reference to the implementation of risk management standards than managers of ordinary primary health care centers. However, the present study acclaimed that all managers can be considered target for development in the area of risk management as being critical and crucial part of their management style.

It had been evidenced in the literature that risk management in healthcare was potentially more important than in any other industry. In most industries, an organization develops and implements risk management strategies in order to prevent and mitigate financial losses. The same can be said for healthcare, but this is to go along with patient safety. Risk management in this industry can mean the difference between life and death, which makes the stakes significantly higher [14].

As a matter of fact, risks to patients, staff, and organizations were highly considered ubiquitous in healthcare. Thus, it was essential for an organization to have qualified healthcare risk managers to assess, develop, implement, and monitor risk management plans with the goal of minimizing exposure. There were numerous priorities to a healthcare organization, such as finance, safety and most importantly, patient care [15].

Throughout the process of risk management, decisions were made to accept a known or assessed risk or the implementation of action to reduce the consequences or the probability of occurrence of an adverse event [16].

CONCLUSION

All primary health care centers' managers had experienced inadequate performance of risk management standards. Managers of model primary health care centers did not present any difference in their performance of risk management standards than those of ordinary primary health care centers.

References:

1. ISO/IEC Guide: **Risk management** Vocabulary. International Organization for Standardization, 73, 2009.
2. ISO/DIS 31000: Risk Management — Principles and Guidelines on Implementation. International Organization for Standardization, 2009.
3. Institute of Risk Management (IRM): About Risk Management. England and Wales, 2016.
4. Business Dictionary (BD): Risk Management. 2017.
5. The Economic Times (TET): Definition of Risk Management, 2017.
6. Hubbard, B. and Douglas, A.: The Failure of Risk Management: Why It's Broken and How to Fix It. John and Sons, 2009, p. 46.
7. Antunes, R. and Gonzalez, V.: A Production Model for Construction: A Theoretical Framework. 2015, pp. 209–228.
8. Dahms, T.: Risk Management and Corporate Governance: Are they the Same? Risk Magazine, 2008.
9. Greenfield, D.; Hinchcliff, R. and Westbrook, M.: An Empirical Test of Accreditation Patient Journey Surveys:Int J Qual Health Care, 24(3), 2012, pp. 1-6.
10. Management Study Guide (MSG): Risk Management: Aspects of Risk Management, 2017.
11. Canadian International Development Agency (CIDA): Monitoring and Evaluation of Risk Management Programs. 2004.
12. Zwikael. O. and Ahn, M.: The Effectiveness of Risk Management: An Analysis of Project Risk Planning Across Industries and Countries. Risk Anal., 31(1), 2011, pp. 25-37.
13. Kaplan, R. and Mikes, A.: Risk Management—the Revealing Hand. Harvard Business School, 2016, pp. 16-102.
14. Moskowitz, D.: The Importance of Healthcare Risk Management. 2015. Accessed from
15. The University of Scranton (UOS): The Purpose of Risk Management in Healthcare. Pennsylvania: Scranton, 2017. 16. Ennouri, W.: Risk Management: New Literature Review. Polish Journal of Management Studies, 8, 2013, pp. 288-297