



## Essential managerial skills for financial and budgetary management in medical universities: The top managers' perspective

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### Abstract

**Background:** Achieving organizational objectives depends on the effectiveness of administrators. However, managerial efficacy largely depends on the knowledge and skills of managers. This study aimed at assessing the skills of financial and budget management of the Ministry of Health from the perspective of resource development assistants of universities of medical sciences nationwide.

**Methods:** This cross-sectional study was conducted in 2012. Study participants were resource development assistants of universities of medical sciences in Iran. We adopted simple random sampling method in locating participants. Data were collected using pretested questionnaires and analyzed using descriptive statistics and Mann-Whitney test (as a non-parametric test) and Friedman test.

**Results:** The highest mean recorded under financial management skills was technical skills (3.58±0.50), followed by human skills (3.50±0.048), and perceptual skills (3.32±0.52). With regards to financial and budget management and performance monitoring, the means of technical skills, as prioritized by directors, was 3.72±0.71, followed by human skills (3.72±0.70), and perceptual skills (3.66±0.75). A significant association was found between perceptual skills of financial managers and budgeting and performance monitoring managers (p= 0.014).

**Conclusion:** Operational level managers, such as financial and budgetary managers, need to acquire more technical skills. Therefore, we support activities that promote technical skills and awareness of managers within organizations, such as organizational training courses and distribution of educational materials like brochures.

**Keywords:** Managerial skills, Financial management, Medical universities

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### Introduction

Management is a basic and an important element behind the success of every organization; and achieving organizational goals depends on managerial knowledge and experience in ensuring efficiency and effectiveness of organizational activities (1, 2). In addition, it is highly important that managers possess some unique skills. However, for an organization to reach its optimal level of performance, managers should possess the ability to convert their knowledge, experience, and competencies into action (3-6) Managerial skills are among issues that have been discussed in many ways from the very beginning of development of management to date. Peterson believes that managerial skills improve performance of managers and help organizations achieve their goals (7). One of the im-

portant managerial skills is communication skills, which includes negotiation skills, political skills, analytical skills, computer skills, interpersonal skills, functional skills, and organizational skills. Since technology plays a decisive role in any organization, managers need many skills to control and use technology (8).

Robert Katz also classified managerial skills into the 3 following categories: technical, human perceptive and cognitive skills. To him, although technical skills and human perception may vary according to positions of directors, the variation in the skills and perceptions across the organizational hierarchy is essential for successful management (9, 10).

Robbins also categorized skills that successful managers

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#### ↑What is "already known" in this topic:

Promoting and improving technical skills in operation managers is of prime importance.

#### →What this article adds:

Emphasis should be placed on technical skills of financial and budgetary executives by providing organizational training courses and distributing educational materials.

should possess into 4 main themes: technical, human, perception, and political skills. To Robinson, effective managers should have the needed skills in information technology (technical skills) to be able to work with others (human skills) and understand data processing framework (perceptual skills) to achieve organizational goals (11).

Technical skill refers to one's ability to use knowledge, skills, and resources, and the mastery in applying tools and techniques, and practical competencies in behavior and performance of duties (12, 13). Technical skill involves the following features: the ability to plan, organizational skills, personnel managerial skills, financial and budgeting abilities, skills in assessment, and skills needed for coordination and control. Human skill refers to the ability to understand, change, lead, control, or influence the behavior of individuals and groups. It is one's ability to communicate ideas and feelings with others in receiving the desired response.

Conceptual skill entails the ability to understand complexities and difficulties by distinguishing between cause and effect (14, 15). Since learning is related to perceptual skill, managers must update themselves and find the best ways for learning (16).

Perceptual skills, however, encompass the mental ability to understand, analyze, and understand organizational elements (ie, working units and all organizational activities as a whole). It includes the ability to understand and identify the different functions of organizations and their interlinkages (ie, how changes in any sector affect the others). Each level of management within an organization demands special managerial skills. For example, operational managers need more technical skills as compared to high level managers, as activities of high level managers are mostly related to decision- and policy- making of the organization, which require more perceptual skills (17). In recent years, the health system has moved toward a decentralized model. Universities of medical sciences in each province have some degrees of decision- making power in planning and allocating resources and in delivery of care, all of which require perceptual skills (18).

A study conducted by Kaifi on managerial skills also considered technical, human, and conceptual skills and compared them in terms of gender. This study revealed that women obtain an extremely high score in the technical and human skills and men achieve a high score in the conceptual skills (19). In his analytical study, Kamble examined the conceptual, technical, and human skills of administrators. This study found that the managers should enhance their managerial skills to achieve organizational effectiveness (4). A study conducted by Tajaddini and Mujtaba between India and Iran evaluated managerial skills by comparing the skills of participants based on their demographic characteristics. The results of 421 respondents indicated that age and management experience are positively related to better technical, human, and conceptual scores (20). A study conducted by Ahmadi and Hosseininia also revealed a positive correlation between managerial skills and effective communication (21, 22). Effective managerial skills are considered as key components of any successful organization. However, in general

terms, differences do exist between the health sectors and other institutions. The health sector plays a major role as a primary contributor of wellbeing, human development, and economic growth (23-26). Given that the health system in Iran is organized into 3 levels, (specialty and super-specialty healthcare services, district general hospitals, and primary healthcare networks), management skills are highly important for managers (27). Thus, demands for health system management have doubled due to its influence on patients' lives and public health. This study, therefore, was conducted to investigate managerial, financial, and budgetary skills of directors of universities of medical sciences across Iran.

## Methods

This cross-sectional study was conducted in 2012. Study participants were mainly resource management development deputies across 40 universities of medical sciences in Iran. To identify the required skills of managers at financial and budgetary division, staff assessment was conducted and training sessions were held. Questionnaires, comprising of 2 sections, were used for data collection. The first part comprised of personal characteristics, such as age, profession, qualification, average work experience, work experience out of the current posts, kind of working relationship, and work of resource development and management assistants in university; and the second part involved participants' skills (perceptual, human, and technical skills). Participants' skills were ranked, ranging from 1 (very low) to 5 (very high). We developed 54 questions to cover financial management: 16 questions on conceptual skills, 17 on human skills, and 21 on technical skills. Also, 56 questions were designed to cover inventory management and monitoring budget performance, out of which 16 were related to conceptual skills, 17 to human skills, and 23 to technical skills.

To ensure the validity of the questionnaires, we sorted the questions based on experts' opinions and approval. Moreover, to ensure reliability, questionnaires were tested using Cronbach's alpha. Coefficient  $r$  was obtained for financial managers ( $r=0.95$ ), and budget and performance managers ( $r=0.96$ ). Data were analyzed using SPSS Version 22 using Kolmogorov-Smirnov test to explore the normality of data. According to this test, data were not normal and significance level was less than 0.05. Thus, we used descriptive statistics and Mann-Whitney test, as a non-parametric test. Moreover, Friedman test was used to determine the priorities of managerial skills for both managers.

## Results

A total of 40 distributed questionnaires were completed and collected from financial directors, and 38 questionnaires were received from budget and performance monitoring managers. The mean age of the respondents was 44.72. Most participants (65%) held a doctorate degree in medicine; and of the managers, 45% held MD degree. Average working experience of the respondents was 17.62 years. However, the average duration of employment at their current position was 2.68 years. The majority of par-

**Table 1.** Demographic distribution of resource development and management assistants in universities of medical sciences

Demographic variables		% (n)
Field of study	Doctorate of medical department	65 (39)
	Bachelor of medicine	5 (3)
	Other disciplines	12.5 (8)
	No reply	17.5 (11)
Final degree received	Bachelor	5 (3)
	MS	7.5 (5)
	Medical Doctor (MD)	45 (26)
	PhD	25 (16)
	No reply	17.5 (11)
Working relationship	Faculty	25 (16)
	Non-faculty	57.5 (34)
	No reply	17.5 (11)
Place of service	University Type 1	17.5 (11)
	University Type 2	45 (26)
	University Type 3	12.5 (8)
	College	15 (10)
	No reply	10 (6)

**Table 2.** Descriptive statistics of managerial skills in the opinion of the participants

Scope of management	Managerial skills (mean±SD)		
	Human skills	Perceptual skills	Technical Skills
Financial managers	3.50±0.48	3.32±0.52	3.58±0.50
Budgetary and performance monitoring managers	3.72±0.70	3.66±0.75	3.73±0.71

participants in the study (57.5%) were not faculty members. Also, 45% of the participants worked at Type II medical sciences universities (Table 1).

According to our findings, the highest average skills in financial management and in budgetary and performance monitoring managers were mostly related to human conceptual skills (Table 2).

To determining the priorities of managerial skills in both groups of managers, 3 priorities of managerial skills were identified for financial managers, based on the Friedman test, as follow: Technical skills (average of 2.46), human skills (average of 2.05), and conceptual skills, with an average of 1.49. Moreover, 3 priorities of managerial skills for budgetary and performance monitoring managers were as follow: technical skills, human skills, and conceptual skills, with an average score of 2.13, 2.05, and 1.82, respectively. The financial managers obtained the highest score in human skills (ie, the ability to exhibit the spirit of cooperation and team work). Also, directors' ability to cope effectively with international financial market was ranked highest with regards to perceptual skills, while trade regulations and directives received the highest score under technical abilities (Table 3).

Also, with regards to questions related to human skills, managers' ability to communicate well with employees and other managers recorded the highest score under budget monitoring and performance. Among the questions related to perceptual skills, questions related to one's abil-

ity to look at university as a whole to fulfill the mission and goals of the university (strategic thinking) had the highest score. Also, among technical expertise, writing and preparing affordable reports to directors and senior units scored the highest (Table 3).

We used Mann-Whitney test to investigate the relationship between financial managerial skills and budgetary and performance managerial skills. The results of this study revealed a significant association between perceptual skills of both managers ( $p=0.14$ ).

## Discussion

With the growing global competition among organizations, strategic managerial abilities have become the key requirements to achieve growth and development within any organization. As a result, employers seek for qualified managers who are skillful enough to face organizational threats and weaknesses. Thus, nowadays, managers learn to improve their skills by pursuing courses that will enhance their knowledge, techniques, and decision-making abilities in planning, budgeting, managing, accounting etc. to maintain their position (2, 28).

According to perspectives of participants, with regards to financial management, budgetary and performance monitoring and technical skills were found more relevant compared to human and conceptual skills. Our findings, similar to those of Tajaddini and Kaifi, revealed that managers at the operational level should be more equipped technically (19, 20), however, this finding contradicts with

**Table 3.** The mean and standard deviation of the highest scores in managerial skills

Scope of Management	Skills	Items	Mean Score±SD
Financial managers	Human	The ability to create a spirit of cooperation and team work between employees and regulators	3.78±0.698
	Perceptual	Managements' ability to cope effectively with international financial systems	3.75±0.899
	Technical	Managers ability to control financial regulatory transactions	4.13±0.822
Budgetary and performance monitoring managers	Human	The ability to communicate with employees and other managers at work	3.95±0.899
	Perceptual	The ability to look at university as a whole in fulfilling organizational goals (strategic thinking)	3.89±0.798
	Technical	The ability to prepare reports to senior managers and units	4.03±0.944

that of other studies. For example, according to a study conducted by Afshari and Mujtaba, technical skills were found to be less relevant (2, 29). Differences in findings of this study, in our opinion, might be due to the managerial levels. That is, Afshari and Mujtaba study focused on high level executives, as required technical skills of such managers are lower than perceptual skills.

The nature of the job of financial managers is mastery over the financial transactions and adhering to the regulations of universities of medical sciences. In our study, questions pertaining to directors' ability to control the finance and trading regulations of an organization recorded the highest score, demonstrating its significance in financial management. Also, with regards to managing budgetary and performance monitoring of activities, one's ability to prepare performance reports (assigned duties) to senior managers and units was ranked the highest.

Next to technical skills, human skills recorded the highest average score in terms of its relevance to management ability within the finance and budget division. Organizations that have managers with good human relations experience safe and enabling working environment, serving as an effective and cooperative medium to achieve organizational targets. All managers including financial managers need to exhibit outstanding human skills to be productive. A manager with good human skills should be able to identify his strengths and weaknesses and the impact of his actions on the organization.

Perceptual skills obtained the lowest average score. To Katz, perceptual skills entail one's ability to have a holistic understanding of the complexities that exists within an organization. Financial managers need to possess perpetual abilities to identify and better understand other elements that surround their organization.

Enhancing technical skills of managers leads to an increase in effectiveness and efficiency of operational activities, and thereby increasing organizations' productivity. Nonetheless, with added perceptual abilities, managers will be able to perform complex activities in a more simple and organized manner. Therefore, to achieve its utmost targets, an organization requires the employers to assign managerial tasks to personnel with diverse abilities and skills appropriate to the specified duties.

### Conclusion

This study revealed that technical skills are highly required by managers at the operational level in the both divisions. Financial and budgetary managers need high levels of information to act with minimum errors. Due to the sensitivity of work in monetary areas, organizations should be ensured of the technical and scientific information of the managers, and they should also hire high-level managers in technical aspects or improve their knowledge by providing courses or workshops. Thus, we support activities that would promote technical skills, knowledge, and awareness of managers within organizations, such as an organized training courses and distribution of educational materials like brochures. Furthermore, this study provides a benchmark to assist employers in training and hiring managers to help them acquire the nec-

essary skills to get the job done effectively. Finally, authors of this manuscript acknowledge all managers who participated in this research.

### Conflict of Interests

The authors declare that they have no competing interests.

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