

Hospital Supervisory Staff's Perceptions Regarding the Effectiveness of Financial Management in University Hospitals

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Abstract

Financial management helps hospital managers make rational financial and administrative decisions and choose effective methods for spending money. Therefore, this study aims to examine hospital supervisory staff's perceptions regarding the effectiveness of financial management in hospitals, with a focus on university hospitals in Jordan. This study used a quantitative method and employed a cross-sectional design to achieve the study aims. The study was conducted in teaching hospitals located in different areas of Jordan, and the study participants consisted of staff members who have supervisory duties. A questionnaire was developed in order to examine the effectiveness of financial management in hospitals, as perceived by hospital managers. The sample size was 172 participants. The results showed that university hospitals in Jordan have effective financial management based on the supervisory staff's perceptions. Both budget allocation and human resources domains were effective. However, the results for the process and procedures domain were moderate. The results also showed that there was no significant difference in the mean scores according to gender (P-value= 0.66), age groups (P-value= 0.48), education level (P-value= 0.38), experience (P-value= 0.28), and position (P-value= 0.13). Hospital managers should be aware of issues related to processes and procedures and budget allocations that are likely to affect financial management. Hospital managers need to draw more attention to the importance of implementation of financial management in order to enable their hospitals to operate in a financially effective and efficient manner.

Keywords: Financial management, hospital management, university hospitals, health systems management.

1. Introduction

The main functions of financial management include securing, controlling, and allocating financial resources, and financial management is an important tool for achieving a hospital's goals and objectives. Nowadays, financial management plays a significant role in business management. Therefore, the main objectives of financial management are to maximise profits and operate capital or funds to maximise the value and efficiency of the organisation. The financial management goals rely heavily on the function of the organisation (Zager, 2006). However, the functions of financial management include the assessment of the financial effectiveness and efficiency of the current procedures and planning for the organisation's future; providing senior managers with accurate financial information to take the right decisions; properly managing cash, receivables, and inventories in order to reduce costs and operate efficiently. In addition, financial management engages with handling the routine work of financial operations, such as making funds available for operating expenses, preparing payroll, and maintaining cash money for any unexpected costs (Hatzakis, Nair, & Pinedo, 2010).

Financial management is considered a science and an art; it is needed for any type of organisation. However, financial managers at hospitals should be qualified and have special knowledge and skills in order to face the fast and dynamic changes in health care services. Financial management helps hospital managers to make rational financial and administrative decisions and choose effective methods for spending money (Al Raoush, A'aqoulah, Albalas, & Athamneh, 2020). Most of the payments made to hospitals for patient services are made by government programmes or commercial insurance companies. Therefore, hospitals need effective financial management in order to provide hospital managers with accurate information to make the right decisions. These decisions could reduce the cost of health care services in hospitals and enable more sustainable development (Honor'e & Costich,

2009).

When there are plentiful financial resources and high profitability, the role of the finance department in hospitals tends to decline in importance. Modern hospitals in most countries are gradually facing a more aggressive financial environment and scarce resources, and any hospital ignoring the role of finance runs the risk of financial deterioration, which can eventually lead to closure. Moreover, hospitals are facing many financial challenges as a result of declining governmental reimbursements and increasing costs (Dawsey, 2014). Therefore, this study aims to examine the hospital supervisory staff's perceptions regarding the effectiveness of financial management in hospitals, with a focus on university hospitals in Jordan.

The integration of health information systems in hospitals and the enhancement of financial health systems could improve both the efficacy and efficiency of health care services (Saksena, Hsu, & Evans, 2014). Moreover, long term care facilities and health insurance could enhance hospitals' abilities to improve financial performance (Moreno-Serra, Millett, & Smith, 2011). Most countries attempt to reduce healthcare costs, and in turn coerce healthcare providers to reduce the costs of health care.

Some healthcare providers argue that an efficient financial management programme leads to a better financial performance in hospitals and increases the market share. Researchers showed that the performance of financial management in hospitals supports the thought that hospitals continue to run despite being in a poor financial condition by reducing the quality of their healthcare services (Bazzoli, Chen, Zhao, & Lindrooth, 2008). Injuries in hospitals were more common among financially suffering hospitals. They are also widespread in hospitals that have very low in-patient operating costs per hospital discharge.

The previous studies concluded that an efficient hospital can provide high quality healthcare with low costs. However, when the profitability is decreased or revenues are reduced, the adherence to healthcare services is limited and the quality of healthcare suffers (Bazzoli, Chen, Zhao, & Lindrooth, 2008). The findings pertaining to a gradual decline in the quality of healthcare were associated with a rise in the overall cost to the hospital. Volpp, Konetka, Zhu, Parsons and Peterson (2005) considered net patient revenues (NPR) and operating margins as measures of hospital financial management performance when assessing the impact of the quality of healthcare on costs.

Volpp also et al. (2005) also identify the effects of the Balanced Budget Act (BBA) on the outcome measures for Acute Myocardial Infarction (AMI). This study specifically investigates the impact of the variation in reimbursement on the operating net and margin revenues in order to identify if a decline in profitability would result in a drop off in the AMI scores. The researchers found that the variation in reimbursements did not have a significant effect on the outcomes for hospital patients with AMI, but there was a decline in the hospital operating revenues and margins. Cleverly and Cleverly (2011) examined the impact of the potential costs of healthcare quality on acute care hospitals. The variables of their study for profitability and cost included operating net and margins patient revenues. The healthcare quality measures included the composite scores for AMI, congestive heart failure (CHF), pneumonia PNU and undergoing a surgical procedure. The study recognised that there is an increased cost associated with healthcare quality. It did not make any determination about the impact of the increased costs on a hospital's financial stability.

Financial management experts usually focus on the effectiveness of an operating hospital's margins. They emphasise that operating margins reflect the return for each dollar spent by the organisation. In addition, they agree that operating margins are a suitable measure of hospital profitability. Operating margins are defined as the proportion of a hospital's revenue remaining after paying for the variable costs (Ward & Calabrese, 2018).

2. Methods

This study used a quantitative method and employed a cross-sectional design in order to investigate the hospital supervisory staff's perceptions regarding the effectiveness of financial management in hospitals. The study was conducted in teaching hospitals located in different areas of Jordan. The study participants consisted of staff members who have supervisory duties such as general directors, directors, heads of departments, and supervisors who work in the hospitals. The study was restricted to those members of staff because they possess accurate information about the financial and administrative issues. The study exclusion criteria were staff members who did not have supervisory duties, who were less than 20 years old, had less than one year of experience, and had less than a diploma degree. A questionnaire was developed in order to examine the effectiveness of financial management in hospitals, as perceived by hospital managers. The study developed a series of statements about financial management derived from various studies. These statements were refined and pruned into 17 items. The study questionnaire was divided into two sections. The first section includes the demographic variables of the

participants, such as gender, age, profession, education, and years of experience. The second section has 17 items, with 5-point Likert scale response options ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). A high score on this scale indicates very effective financial management and a low score indicates very ineffective financial management. The items of the questionnaire were made up of positive and negative statements.

The content validity of the questionnaire was achieved by distributing the questionnaire among four peer Ph.D. holders, who are experts in hospitals and financial management. The experts provided the researchers with some comments that improved the validity and reliability of the questionnaire.

Before distributing the questionnaire to the study population, a pilot study was conducted in order to assess the validity and reliability of the questionnaire so as to obtain an indication of whether the statements are clear; to receive comments about the questionnaire statements; to ensure that the research instrument as a whole functions well; to ensure that survey statements have operated well; to examine cultural sensitivity; and to check the possibility of applying the study in the real world. The data collected from the pilot study was subjected to a reliability analysis. The Cronbach's Alpha value of the questionnaire was 0.92, which means that the study questionnaire is a reliable instrument. A total of 220 questionnaires were randomly distributed among the study population in hospitals. Participation was voluntary and participants could withdraw at any time. Filling out the survey was construed as consent. Participants' responses were confidential and only used for the research purposes, and the data collected was securely stored in an electronic database. The total number of returned questionnaires was 172 out of 220, with a response rate of 78.2%.

The data was analysed using the Statistical Package for Social Scientists (SPSS) programme. The coding for the negatively worded items of the questionnaire was reversed. The data was analysed using descriptive statistics (count, percentage, mean, and standard deviation). Descriptive statistics were run for the responses of the participants to find the hospital supervisory staff's perceptions regarding the effectiveness of financial management in hospitals. Based on the five-point Likert scale, the study considers the item to be very ineffective, ineffective, moderate, effective, or very effective, according to Table 1.

Table 1. The intervals and their classification based on the Likert scale

Interval (Mean Score)	Classification
1 – 1.80	Very Ineffective
1.81 – 2.60	Ineffective
2.61 – 3.40	Moderate
3.41 – 4.20	Effective
4.21 – 5.00	Very Effective

Moreover, the *t*-test and the One-way between Groups ANOVA tests were carried out in order to find the influence of demographic data on financial management. The *t*-tests were carried out for the variables with two categories e.g. gender. One-way between Groups ANOVA was carried out for variables with more than two categories e.g. age, education level, work experience, and profession.

3. Results

3.1 Characteristics of the Participants

Table 2 shows that male participants exceeded the number of female participants, as male participants accounted for 59.9% of the sample population. The percentage of participants who had a bachelor's degree accounted for 75.0%. Half of the participants were supervisors, and based on the age group, the highest percentage belonged to the age group from 41 to 50 years old, with 44.2%. Participants with experience of more than 15 years had the highest percentage (39.5%) in the work experience category.

Table 2. Characteristics of the participants

Characteristics	Groups	Count	%
Gender	Male	103	59.9
	Female	69	40.1
Education level	Diploma	5	4.7
	Bachelor	129	75.0
	Postgraduate	35	20.3
Position	General Directors	2	1.2
	Directors	32	18.6
	Head of Department	52	30.2
	Supervisor	86	50.0
Age	20 - 30 years old	6	3.4
	31 - 40 years old	67	39.0
	41 - 50 years old	76	44.2
	More than 50 years old	23	13.4
Work experience	1 - 5 years	11	6.4
	6 - 10 years	37	21.5
	11 - 15 years	56	32.6
	More than 15 years	68	39.5

3.2 Effectiveness of Financial Management in Hospitals

The results of the descriptive statistics (Table 3) show the effectiveness of the financial management domains. The table also shows the mean, standard deviation and the degree of effectiveness for all domains of the questionnaire.

The study results in Table 3 show that financial management is effective in the university hospitals. The mean of all domains is 3.52 and the standard deviation is 0.67. Moreover, both the budget allocations and human resources domains are effective, whereas the process and procedures domain was scored as moderate. The means are 3.58, 3.62, and 3.38 and the standard deviations are 0.71, 0.80, and 0.76 respectively.

Table 3. Mean, standard deviation, and the degree of effectiveness of the financial management domains as perceived by the hospitals' supervisory staff

Domain	Mean	Standard Deviation	Degree of Effectiveness
Budget allocations	3.58	0.71	Effective
Human resources	3.62	0.80	Effective
Process and procedures	3.38	0.76	Moderate
All financial management domains	3.52	0.67	Effective

The results in table 4 show the mean, standard deviation, and the degree of effectiveness of the Budget Allocations domain. All items in the domain are effective, except for one item which was scored as moderate; 'The salaries of the hospital staff are fair based on the nature and size of work'.

Table 4. Mean, standard deviation, and the degree of effectiveness of the Budget Allocations domain

Items	Mean	SD	Degree of Effectiveness
The annual financial budget of the hospital is prepared before the beginning of each year.	4.15	0.82	Effective
The finance department coordinate with the hospital departments to prepare the annual financial budget.	3.86	1.03	Effective
Each department in the hospital has an independent financial budget.	3.78	1.04	Effective
Financial allocations cover the work needs at the hospital.	3.26	1.07	Moderate
The financial allocations are distributed among departments according to the priorities of work at the hospital.	3.62	0.94	Effective
The allocated budget for developing and maintaining the equipment is enough.	3.45	1.01	Effective
There is enough financial budget to cover emergency needs.	3.61	1.01	Effective
The salaries of the hospital staff are fair based on the nature and size of work.	2.92	1.22	Moderate
All items of budget allocation domain	3.58	0.71	Effective

The results in table 5 show the mean, standard deviation, and the degree of effectiveness of the Human Resources domain. All items in the domain are effective.

Table 5. Mean, standard deviation, and the degree of effectiveness of the Human Resources domain

Items	Mean	SD	Degree of Effectiveness
The finance department has enough members of staff.	3.87	1.04	Effective
The finance manager has adequate qualifications and experience.	3.55	0.99	Effective
The finance department has qualified staff.	3.44	.93	Effective
All items of human resources domain	3.62	0.80	Effective

The results in table 6 show the mean, standard deviation, and the degree of effectiveness of the Process and Procedures domain. Four out of six items in this domain are moderate. The items that showed moderate effectiveness are 'the completion of the work in the finance department has been achieved in a timely manner', 'there is an internal control system with a high efficiency', 'financial procedures are simplified and fast' and 'the finance manager has a clear vision to develop the work at the hospital'.

Table 6. Mean, standard deviation, and the degree of effectiveness of the Process and Procedures domain

Items	Mean	SD	Degree of Effectiveness
The completion of the work in the finance department has been achieved in a timely manner.	3.24	1.01	Moderate
There is an internal control system with a high efficiency.	3.28	0.99	Moderate
There are specific standards to adhere to in the work of the finance department.	3.45	0.94	Effective
Financial procedures are simplified and fast.	3.32	1.06	Moderate
The finance manager has a clear vision to develop the work at the hospital.	3.27	1.00	Moderate
The achievements of the finance department positively affect the quality of health services.	3.72	1.05	Effective
All items of process and procedure domain	3.38	0.76	Moderate

3.3 The Effects of the Demographic Characteristics on the Participants' Perceptions Regarding the Effectiveness of Financial Management

The study examined the effect of gender, age, education level, experience, and position on the hospital supervisory staff's regarding the effectiveness of financial management. The results showed that there is no statistically significant mean difference of the hospital supervisory staff's perceptions regarding the effectiveness of financial management based on gender (P-value= 0.66), age groups (P-value= 0.48), education level (P-value= 0.38), experience (P-value= 0.28), and position (P-value= 0.13).

4. Discussion

The results showed that hospitals in Jordan have effective financial management based on the supervisory staff's perceptions. Both the domains of budget allocations and human resources were effective. However, the process and procedures domain was moderate. Therefore, university hospitals should reinforce the role of financial management to keep providing health services in an efficient manner.

It appears from the results that university hospitals in Jordan have effective payment policies. This includes collecting revenue from a whole series of medical services such as diagnosis, treatment, laboratory tests, radiology tests, and rehabilitation. The revenue from these payments helps to pay satisfying salaries for employees, purchase equipment and materials, and improve the quality of services to meet patient needs. The financial decisions in hospitals rely heavily on accurate financial information, and professionals in the financial administration department provide decision makers with regular reports about the financial situation of the hospital. Based on the information, the decision makers adopt concepts, theories and tools in order to make the right decisions (Bazzoli, Chen, Zhao & Lindrooth, 2008).

Researchers refer to the importance of the items that showed moderate effectiveness in financial management. They mention that covering financial needs is an essential matter in hospitals that enables departments to achieve their objectives, with sustainable development in improving their quality of services and meeting patients' needs (Naranjee, Ngxongo & Sibiya, 2019). Employers have to pay the right pay rate to their employees, and payment rate requires a reference wage to determine a fair wage that should be paid to employees. High and low wages should be considered based on different factors such as the nature and scope of work, in addition to the average wage of work in the same sector – because employees compare themselves to other employees who do similar work (Schweitzer, Kuron, Lyons & Ng, 2014). Managers and supervisors should focus on timely implementation of employees' assignments and tasks. They should consider the factors that facilitate the implementation in a timely manner, such as prioritisation of tasks, appropriate planning, avoidance of distractions, and utilising the benefits of technology (Haq, De Clercq, & Azeem, 2021). Internal control systems are put in place to ensure safe custody of all assets, and to detect and safeguard against probable fraud. Internal financial control on the origin of the financial budget in hospitals and successful implementation of the financial plan refers to the effectiveness of the financial management system. An initiative to avoid the deviation of hospitals from their financial objectives is recommended as an important step to achieving the hospital financial management requirements and objectives (Xu, Hou, & Chen, 2017). The financial department should follow quick and achievable financial procedures to identify and avoid potential issues in their organisation. This helps organisations to take quick action when addressing any financial issues in the future (Karim, Nevola, Morris, Tilford, & Chen, 2021). A clear vision is a path towards developing an effective finance management function in organisations. The vision makes a shift from accounting for the balance sheet to improving financial effectiveness (Paarima, Kwashie, & Ofei, 2021).

In many hospitals, the role of financial managers is to secure the financing needed in order to achieve a business's operations, and they evaluate the assets needed to meet the hospital demand. In university hospitals, financial managers show an increased responsibility in the management of businesses compared to managers in other types of hospitals. They utilise capital to maximise the value and efficiency of services. In addition, they estimate the financial efficiency of current operations and future plans (Ward & Calabrese, 2018). Financial managers are concerned with the capital investment decision process. Some of these decisions are related to new equipment or new facilities and implementing strategic plans. They are engaged with the choice between the use of external or internal resources and the use of long-term versus short-term debt. Even though hospital directors make financing decisions, managers, department heads and supervisors at all levels have to be involved with critical decisions. Financial managers properly manage cash, inventories, marketable securities, and receivables in order to ensure operational efficiency so as to reduce costs, and control financial risk (W. O. Cleverly & J. O. Cleverly, 2011). Hospitals have been redesigning their finance department roles in order to identify the changes that have happened in the healthcare industry. Hospitals need to maximise their revenue. Thus, the finance department profession must support cost-containment efforts and managed healthcare and payer contract negotiations. Finance departments

should lead hospitals into their future goals rather than only record what happened historically.

5. Conclusion

There are some issues related to processes and procedures and some issues related to budget allocations which are likely to affect financial management in university hospitals in the future. Therefore, hospital managers should be aware of these issues. They need to be cognisant of financial allocations to departments based on need. The salaries of the hospital staff should be fair based on the nature and size of work, and the completion of the work in finance departments needs to be achieved in a timely manner. The internal control system should be managed in a highly efficient manner, and all financial procedures have to be clear and achievable in a reasonable time. The finance managers need to have a clear vision to develop the work at hospitals, and hospital managers need to understand functions such as processes and procedures and budget allocations. In addition, most hospital supervisory staff's decisions have financial implications, which should compel hospital managers to have enough information about the function of financial management to rely on financial considerations in their decisions.

Competing Interests Statement

The authors declare that there are no competing or potential conflicts of interest.

References

- Al Raoush, A. T., A'aqoulah, A., Albalas, S., & Athamneh, S. (2020). Impact of Financial Management on Improving Quality at Jordanian Public University Hospitals. *Journal of Information & Knowledge Management*, 19(03), 2050025. <https://doi.org/10.1142/S0219649220500252>
- Bazzoli, G. J., Chen, H. F., Zhao, M., & Lindrooth, R. C. (2008). Hospital financial condition and the quality of patient care. *Health economics*, 17(8), 977-995. <https://doi.org/10.1002/hec.1311>
- Cleverley, W. O., & Cleverley, J. O. (2011). Is there a cost associated with higher quality? Value-based purchasing (VBP) is on a path to becoming the new reality for the future of U.S. health care. But will hospitals be able to manage the potential costs associated with the improved quality that VBP will require? *Healthcare Financial Management*, 65(1), 96-102.
- Dawsey, A. E. (2014). Externalities among creditors and personal bankruptcy. *Journal of Financial Economic Policy*, 6(1), 2-24. <https://doi.org/10.1108/JFEP-09-2013-0037>
- Haq, I. U., De Clercq, D., & Azeem, M. U. (2021). Job insecurity, work-induced mental health deprivation, and timely completion of work tasks. *Asia Pacific Journal of Human Resources*. <https://doi.org/10.1111/1744-7941.12291>
- Hatzakis, E. D., Nair, S. K., & Pinedo, M. (2010). Operations in financial Services-An overview. *Production and Operations Management*, 19(6), 633-664. <https://doi.org/10.1111/j.1937-5956.2010.01163.x>
- Honoré, P. A., & Costich, J. F. (2009). Public health financial management competencies. *Journal of Public Health Management and Practice*, 15(4), 311-318. <https://doi.org/10.1097/PHH.0b013e31819c1308>
- Karim, S. A., Nevola, A., Morris, M. E., Tilford, J. M., & Chen, H. F. (2021). Financial Performance of Hospitals in the Appalachian Region Under the Hospital Readmissions Reduction Program and Hospital Value-Based Purchasing Program. *The Journal of Rural Health*, 37(2), 296-307. <https://doi.org/10.1111/jrh.12475>
- Moreno-Serra, R., Millett, C., & Smith, P. C. (2011). Towards improved measurement of financial protection in health. *PLoS Med*, 8(9), e1001087. <https://doi.org/10.1371/journal.pmed.1001087>
- Naranjee, N., Ngxongo, T. S., & Sibiyi, M. N. (2019). Financial management roles of nurse managers in selected public hospitals in KwaZulu-Natal province, South Africa. *African journal of primary health care & family medicine*, 11(1), 1-8. <http://dx.doi.org/10.4102/phcfm.v11i1.1981>
- Paarima, Y., Kwashie, A. A., & Ofei, A. M. A. (2021). Financial management skills of nurse managers in the Eastern Region of Ghana. *International Journal of Africa Nursing Sciences*, 14, 100269. <https://doi.org/10.1016/j.ijans.2020.100269>
- Saksena, P., Hsu, J., & Evans, D. B. (2014). Financial risk protection and universal health coverage: evidence and measurement challenges. *PLoS Med*, 11(9), e1001701. <https://doi.org/10.1371/journal.pmed.1001701>
- Schweitzer, L., Lyons, S., Kuron, L. K., & Ng, E. S. (2014). The gender gap in pre-career salary expectations: A test of five explanations. *Career Development International*, 19(4), 404-425. <https://doi.org/10.1108/CDI-12-2013-0161>
- Volpp, K. G., Konetka, T., Zhu, J., Parsons, P. S., & Peterson, E. D. (2005). The Effects of Cuts in Medicare

Reimbursement on Process and Outcomes of Care for AMI Patients. *Circulation*, 112(15), 2268-2275.
<https://doi.org/10.1161/CIRCULATIONAHA.105.534164>

Ward, D. M., & Calabrese, T. (2018). *Accounting fundamentals for health care management*. Sudbury, MA: Jones & Bartlett Learning.

Xu, P., Hou, W., & Chen, Z. (2017). Study on the Strengthening of Hospital Internal Control and Externalization Regulating of Hospital Financial Management. In *2017 4th International Conference on Education, Management and Computing Technology (ICEMCT 2017)* (pp. 863-866).
<https://dx.doi.org/10.2991/icemct-17.2017.185>

Zager, K., & Zager, L. (2006). The role of financial information in decision making process. *Innovative Marketing*, 2(3), 35-40.

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