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JORDANIAN HEALTH EMPLOYEES' JOB SATISFACTION.
A VROOM THEORY INVESTIGATION

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Abstract

The National health strategy in Jordan for 2015-2019 has the objective of building a viable health care system, utilizing both public and private service providers and improving the quality of health services by implementing a national health services accreditation program. Human resources are the main drivers for achieving the needs of citizens optimally and a special attention need to be granted to managing these resources in order to raise the productivity of the health sector.

In this context, the paper aims to prove the validity of Vroom's expectancy theory on six Jordanian both public and private hospitals having as main purpose the main determinants of employee motivation. According to Vroom's theory, the motivation is regarded as function of three distinct perceptions: expectancy, instrumentality, and valence. The study aims to test the hypotheses that each component- expectancy, extrinsic instrumentality, intrinsic instrumentality, extrinsic valence and intrinsic valence have a positive effect on employee motivation using data from 325 health workers (doctors and nurses). The results show that from all five components, three of them best explains the process of motivating hospital employees- expectancy, extrinsic instrumentality and intrinsic valence.

The results of the study emphasised the influential role of intrinsic factors comparative with the extrinsic factors, highlighting the importance of intrinsic factors on increasing the level of motivation of Jordanian employees.

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Keywords: Expectancy theory, hospital employee motivation, expectancy, instrumentality, valence, Jordan.

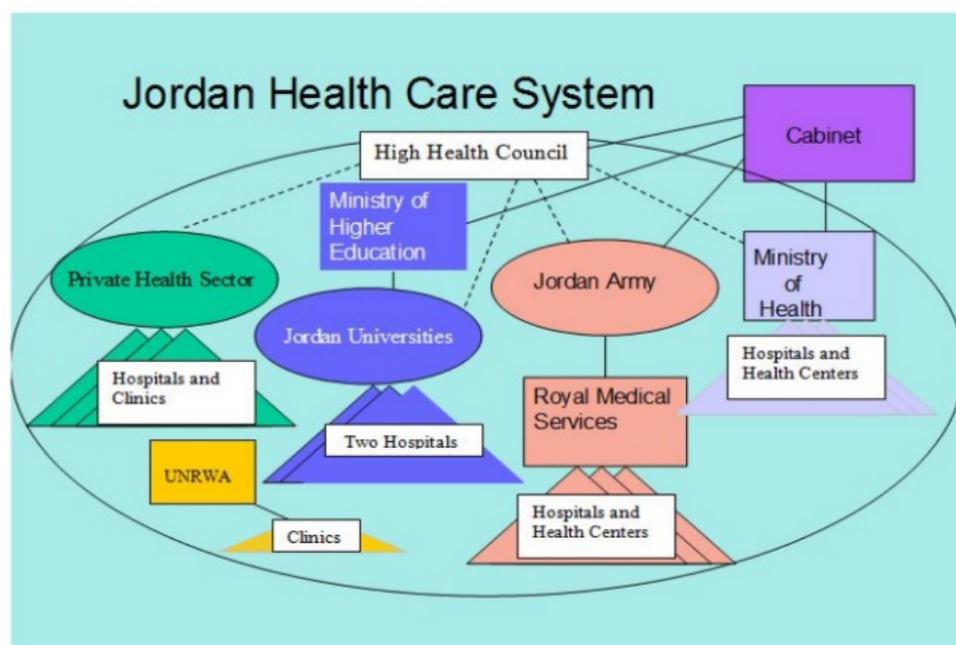


1. Introduction

The health system in Jordan is composed from three sectors: public, private and donors. The public sector includes the Ministry of Health (MOH) and Royal Medical Services (RMS), university hospitals-Jordan University Hospital (JUH) in Amman and King Abdullah Hospital (KAH) in Irbid- and the centre for diabetes and Endocrinology and Genetics. The private sector includes private hospitals. The international sector provides services through UNRWA clinics for Palestinian refugees and the UNHCR and King Hussein Cancer Center and charity association clinics.

The higher Health Council through the law no.9 of 1999 elaborates the general policy for the health sector in Jordan. According to Health System profile Jordan report published by World Health Organization (2006, p.7), “the main challenges related with health care system in Jordan are problems related to accessibility, equity, duplication of services, poor coordination among major providers, unregulated private sector, low utilization rates in the private sector, limited quality improvement programs, inefficient use of available resources, poor management”.

The Ministry of health hospitals suffers of several limitations in providing a better health care among which the lack of incentives for the hospital staff occupied an important place. Ajlouni (2013) presented the scheme of the Jordan health care system highlighting the main actors involved in the process of health decision making.



Source: Musa Ajlouni (2013)

Figure 01. The scheme of the Jordan Health care system

The National health strategy in Jordan for 2015-2019 has the objective of building a viable health care system, utilizing both public and private service providers and improving the quality of health services by implementing a national health services accreditation program.

According to Health System profile Jordan report published by World Health Organization (2006, p. 8), “Jordan has 2.3 physicians, 3.0 nurses, 1.2 pharmacists and 0.7 dentists per thousand population.

During the last four years, the number of all health professions and their percentages to population has been increasing. Human resources are the main drivers for achieving the needs of citizens optimally and a special attention need to be granted to managing these resources in order to raise the productivity of the health sector.

Although the number of health personnel was increased the last decade, there is a certain shortage on specific specialties, like cardiovascular surgery, psychological or family medicine. The women were the most affected by this shortage and they represent almost 44% of total health workers.

The non-governmental sector (private and civil organization sector) is the main employer of health cadres in Jordan, while the private sector attracts experienced professionals from the public sector due to the high financial returns in the private sector, noting that it is prohibited for public sector doctors and other health personnel to work in the private sector. According to the Jordanian Health Sector (2012), there were 57000 employees in the health sector, most of them physicians and nurses and is worth to mention that about 56% of these employees work for private sector despite its smaller size.

2. Problem Statement

The Vroom's theory has proved his utility in analysing the motivational factors at the workplace (Regis, Falk, & Dias, 2008; Kanfer, 1990; Ghoddousi, Bahrami, Chileshe & Hosseini, 2014). Chiang & Jang (2008) proposed an adapted version of the expectancy theory for the investigation of work motivation.

The most commonly applied motivational theories in empirical studies who investigate the main factors of employees' motivation were Maslow theory, Herzberg theory and Vroom theory. Unlike the first two theories, the last one, a process theory highlights how the motivation occurs (Chiang and Jang, 2008). The theory is based on three elements: expectancy (E), instrumentality (I) and valence (V). According to Chiang and Jang (2008, p. 314), the motivation force can be regarded as the result of following interaction:

$$\text{Motivation force} = \text{Expectancy} * \text{Instrumentality} * \text{valence}$$

Expectancy (E) is seen as the conviction that performance could be obtained is the effort is applied. Instrumentality (I) refers to the perspective of rewards when the conditions of performance are achieved. Valence (V) is more related to the associated with the rewards (Regis, Falk & Dias 2008).

Empirical evidence on the health employee motivation in Jordanian hospitals have been offered by the studies of AbuAIRub & AL-ZARU (2008); AbuAIRub (2007); AbuAIRub, Omari & Al-Zaru (2009); Abualrub, Omari, Abu Alrub & Fawzi (2009); Alhusban & Abualrub (2009); Abualrub (2010); Hayajneh, AbuAIRub, Athamneh, Almahzoomy (2009); AbuAIRub, El-Jardali, Jamal & Al-Rub (2016).

AbuAIRub and AL-ZARU (2008) analysed if the recognition of nurses' performance could be considered as an important factor for retention diminishing the effects of stress, indicating that the recognition of nurses' performance could be considered as an important factor for the intention to stay.

AbuAIRub (2007) pointed out that one of the main causes of the fall of the number of nurses in Jordanian hospitals is the slow increase of the nurse wage mentioning that a potential solution for retention could be improving working conditions and the satisfaction associated with their profession.

AbuAlRub, Omari & Al-Zaru (2009) highlighted the higher level of work motivation and also the higher intention to stay of nurses in private hospitals comparative with public hospitals.

Abualrub, Omari, Abu Alrub & Fawzi (2009) have proved that social support from co-workers and supervisors increase the level of satisfaction for Jordanian nurses, while Abualrub (2010) have shown that female nurses who are mothers, have a full-time job and receive support from co-workers and supervisors tend to have a higher level of retention than others.

Hayajneh, AbuAlRub, Athamneh, & Almakhzoomy (2009) determined the rate of nurses' turnover in Jordanian hospitals to be 36.6% and also identified significant differences by geographical region, health sector and place of residence pointing out that further research is need to reveal the cause of these differences.

AbuAlRub, El-Jardali, Jamal & Al-Rub (2016) investigated if there is a potential connection between work environment, job satisfaction and the level of retention using a sample of 330 Jordanian hospitals' nurses, revealing that receiving housing, the level of job satisfaction and also work environment significantly influenced the level of retention of nurses.

Usually, the studies that treat job satisfaction, the intention of stay at work and other factors related to work motivation for health employees in Jordan take into account mostly the perceptions of nurses. The present study aims to investigate the level of work motivation and especially the factors who contribute to motivation for all employees (doctors, nurses, administrative staff, support staff, helpers) and also to reveal potential differences of opinions regarding these factors.

3. Research Questions

The study aims to respond to the following questions: What makes health employees satisfied with their jobs in Jordanian hospitals?" There are significance differences between the opinions of doctors versus nurses regarding the degree of satisfaction and the main factors? What kind of statistical differences in opinions can be revealed among the main determinants of work motivation? What is the level of work motivation among health employees in Jordanian hospitals?

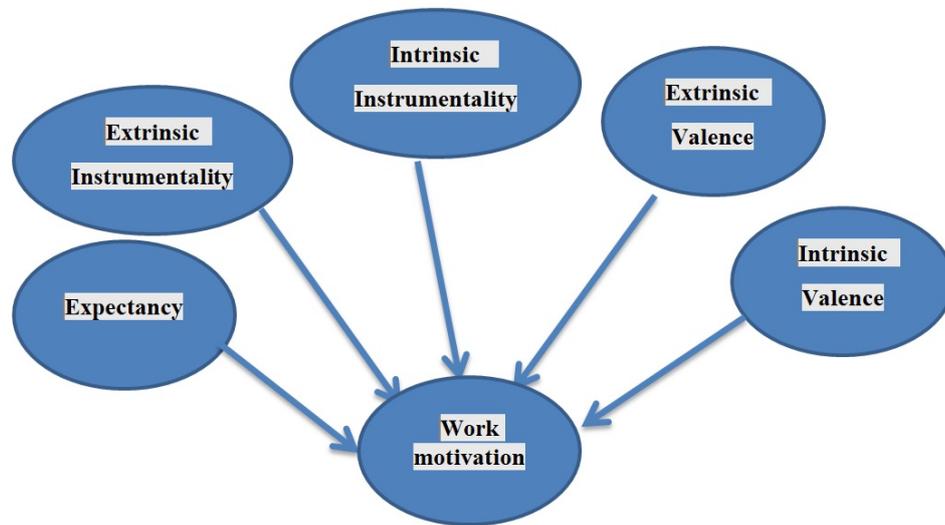
4. Purpose of the Study

The main goal of this paper is to investigate the level of motivation of employees in Jordanian hospitals and to reveal the main factors who lead to an increase of a job motivation applying one of the most known theories in the field-the expectancy theory of Vroom (1964). The paper aims to respond to the following questions" What makes health employees motivated and satisfied with their jobs?" and which kind of determinants of motivation according to Vroom's theory are more influential for the Jordanian employees?, investigating also if among employees there are differences of opinion regarding the main determinates of motivation.

5. Research Methods

The starting point in the investigation of the main drivers of work motivation in hospitals was the study of Chiang and Jang (2008), according to which the expectancy theory was adapted by dividing

instrumentality and valence into extrinsic instrumentality, intrinsic instrumentality, extrinsic valence, and intrinsic valence in order to capture the impact of intrinsic/extrinsic components.



Source: Chiang & Jang (2008)

Figure 02. The model of the constructs of work motivation

The study aims to test the hypotheses that each component—expectancy, extrinsic instrumentality, intrinsic instrumentality, extrinsic valence and intrinsic valence have a positive effect on employee motivation. From the five component of expectancy theory, expectancy, extrinsic instrumentality, intrinsic instrumentality were measured using four items, while extrinsic and intrinsic valence were measured using five items. For work motivation there were used four items. The items were rated using a 5 point Likert scale where 1=very dissatisfied and 5=very satisfied. In order to analyse the responses of items were used descriptive statistics (mean and standard deviation). Comparisons of work motivation elements following the expectancy theory and the demographic and employment variables were performed using t-test and one-way between-groups analysis of variance (ANOVA). To validate the constructs, we applied CFA (confirmatory factor analysis). Following Cohen and Cohen (1983), we have applied multiple regression models to reveal the factors with a relevant role on increasing the level of satisfaction of Jordanian employees. The Statistical Package for Social Sciences version 22.0 (SPSS) was used to analyse the data from the questionnaire.

The data was collected using a sample of 325 health workers from six Jordanian hospitals: King Abdullah Hospital public hospital in north of Jordan IRBID city, Amman Specialist Hospital private hospital in Amman, Irbid Specialist Hospital private hospital, Ibn Al-Nafees private hospital in Irbid city, Al-Shona public hospital in the middle area of Jordan, and Princess Basma hospital. The respondents were doctors, nurses, helpers, support staff, administrative staff and other health related staff.

6. Findings

6.1. Sample profile

From our sample of respondents, the majority of them are from public hospitals (66.5%), with the largest age group as being the group of 25-35 years old (51.4%). Of the total number of respondents, the majority was male employees (52.9%) and 43.3% have a bachelor degree in science. Almost 33.5% of the respondents declared to an experience of the same position of more than 10 years and about 51% of them work in the therapeutic area.

Regarding the proportions of nurses vs. doctors, only 36% of the respondents declared to be nurses and only 19% are doctors. Heavy workload and health care financing issues were mentioned by the respondents as the main changes that affect the hospitals. The number of patients treated per day was declared to be more than 20 for almost 62.5% of the employees. Regarding the intention to stay, 61.2% of the respondents confirmed the intention of staying.

6.2. Revealing the determinants of work motivation among Jordanian employees

The mean scores for four measures of expectancy ranged from 2.90 to 3.67, and the mean scores of components are extrinsic instrumentality, from 2.87 to 3.00; intrinsic instrumentality, from 3.46 to 3.54; extrinsic valence, from 2.83 to 2.99; intrinsic valence, from 3.43 to 3.59; work motivation, from 3.62 to 3.72. From the all five components of the expectancy theory, intrinsic valence pointed out the highest level of satisfaction among employees. Another important result is related to the correlation between performance and highly motivation.

Table 01. Descriptive Statistics

	Mean	Std. Deviation
Expectancy	3.49	0.8577
If I work very hard, my job performance will significantly improve	3.66	1.078
If I work very hard, I will get a lot more accomplished	3.43	1.119
If I put more effort into my job, my productivity will improve significantly	3.59	1.060
If I put more effort into my job, I will definitely be regarded as an effective employee	3.28	1.188
Extrinsic instrumentality	2.91	1.159
Performing well in my job will definitely result in		
-getting good pay	2.89	1.241
-getting monetary bonuses	2.87	1.227
-getting pay increases	2.91	1.233
-having more opportunities for promotion	3.00	1.239
Intrinsic instrumentality	3.50	1.00
Performing well in my job will definitely result in		
-having more responsibility and control over my job	3.46	1.148
-taking on more challenging work tasks	3.54	1.070
-having feelings of accomplishment	3.54	1.064
-feeling very good about myself	3.48	1.145

Extrinsic valence	2.90	1.08
Performing well in my job will definitely result in		
-Good salary/wage	2.90	1.191
-More monetary bonuses	2.83	1.179
-More pay increases	2.86	1.190
-Interesting work	2.99	1.215
-Opportunities for advancement/promotion	2.97	1.169
Intrinsic valence	3.53	1.04
Performing well in my job will definitely result in		
-More responsibility/control over my job	3.43	1.144
-More challenging work tasks	3.55	1.098
-Full use my skills and abilities	3.56	1.114
-Feelings of accomplishment	3.59	1.084
-Personal growth and development	3.55	1.160
Work motivation	3.67	1.118
When I am highly motivated, I will definitely	3.67	1.186
-expend more effort on the job		
-enhance quality of my job performance	3.72	1.173
-increase productivity on the job	3.70	1.160
-be willing to get involved in my job	3.62	1.189

To validate the new measures and also to verify the validity, a measurement model was estimated with a confirmatory factor analysis. The factor loading for all items was positive, ranging from 0.77 to 0.964. The mean standardized factor loadings for each dimension are: expectancy 0.77, extrinsic instrumentality 0.955, intrinsic instrumentality 0.93, and extrinsic valence 0.95, and intrinsic valence 0.96, work motivation 0.964, suggesting that all items have enough interval consistency to construct a single measure.

Table 02. Results of confirmatory factor analysis

Theoretical dimensions	Constructs	Standardized factor loadings	Cronbach Alpha
Expectancy	EXP1	1.00	0.77
	EXP2	0.67	
	EXP3	0.85	
	EXP4	0.86	
Extrinsic instrumentality	EXT_INSTR1	1.17	0.955
	EXT_INSTR2	1.18	
	EXT_INSTR3	1.17	
	EXT_INSTR4	1.30	
Intrinsic instrumentality	INT_INSTR1	1.88	0.933
	INT_INSTR2	1.79	
	INT_INSTR3	1.78	
	INT_INSTR4	1.64	
Extrinsic valence	EXT_VAL1	1.30	0.951
	EXT_VAL2	1.30	
	EXT_VAL3	1.40	

	EXT_VAL4	1.41	
	EXT_VAL5	1.37	
Intrinsic valence			0.96
	INT_VAL1	2.01	
	INT_VAL2	2.02	
	INT_VAL3	2.01	
	INT_VAL4	1.95	
	INT_VAL5	2.07	
Work motivation			0.964
	WORK_MOT1	1.76	
	WORK_MOT2	1.69	
	WORK_MOT3	1.59	
	WORK_MOT4	1.54	

In the multiple regression models that are aim to reveal the relevant motivational factors from the perspective of Vroom's theory among Jordanian employees, the dependent variable was worker motivation determined as mean score of the four items of motivation. The independent variables are the mean score of expectancy, extrinsic instrumentality, intrinsic instrumentality, extrinsic valence and intrinsic valence and personal and employment characteristics.

Table 03. Coefficients^a

		Coefficients^a				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.500	.502		.997	.320
	expectancy	.209	.065	.160	3.229	.001
	extrinsic_instrum	-.112	.069	-.116	-1.632	.104
	intrinsic_instrum	-.037	.073	-.033	-.506	.613
	extrinsic_valence	.067	.071	.065	.934	.351
	intrinsic_valence	.643	.065	.598	9.936	.000
	Type of hospital	.357	.108	.151	3.322	.001
	GENDER	.029	.091	.013	.312	.755
	AGE	-.043	.053	-.036	-.802	.423
	Graduation degree	-.065	.035	-.084	-1.872	.062
	TIME WORKING IN HOSPITAL	.013	.042	.015	.315	.753
	Years in the same position	.099	.042	.113	2.348	.019
	MARITAL STATUS	-.121	.100	-.055	-1.209	.228
	POSITION	.025	.030	.039	.833	.406
	Area of work	-.104	.056	-.090	-1.850	.065
	MANAG.POSITION	-.009	.114	-.004	-.076	.939
	INTENTION_LEAVE	.003	.098	.001	.026	.980
ORGANIS_STRUCTURE	.044	.039	.052	1.125	.261	
CHANGES AFFECT HOSPITAL	.017	.039	.019	.438	.662	

a. Dependent Variable: work_motivation

The empirical results pointed out the statistical significance of the following components of Vroom theory-**expectancy, extrinsic instrumentality and intrinsic valence** together also with the hospital type, graduation degree, experience in the same position, the area of work.

The expectancy manifests a positive impact on work motivation, individuals desiring to be regarded as effective employees, with higher productivity and increasing performance.

Extrinsic instrumentality displayed a negative impact on work motivation at the significance level of 10%, highlighting the fact that financial incentives will not maintain for a long time the level of motivation of employees.

The intrinsic valence manifests an important impact on work motivation, pointing out the need of personal development as a main desire of employees.

While expectancy and intrinsic valence manifest a direct influence on the overall level of motivation, extrinsic instrumentality exhibited a negative influence on the level of work motivation, infirming the results from literature review and this results have been explained by Chiang and Jang (2008) using what is called to be the suppressor effect which was defined as a variable that increases the predictive validity of another variable (or set of variables) by its inclusion in a regression equation. According to the results, an increased level of extrinsic instrumentality will conduct to a less motivated employee.

It is worth to mention that the expectancy and intrinsic valence exhibited a greater impact on the level of overall motivation comparative with the component of extrinsic instrumentality. Another important conclusion is related to the fact that in the employees 'view, the level of responsibility, challenging work tasks, usage of skills and abilities, feelings of accomplishment and the perception of personal growth and development are more important than financial incentives. Expectancy will create among employees the belief that the effort will lead finally to performance. Instrumentality creates the conviction that there is a relationship between performance and rewards.

The perception of employees was that if they will perform well in the job, they will have accomplishment and they do not necessarily link better pay, monetary bonus, pay increases or promotion to performance expectations. For the Jordanian employees, the intrinsic valence elements are indeed very important valorising the responsibility over the job, using their abilities, and feeling of accomplishment. The empirical results of ANOVA analysis pointed out that the model is statistically valid due to the fact that Sig.(F-test) is smaller than 1%.

Table 04. ANOVA^b

		ANOVA ^b				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	208.154	18	11.564	17.943	.000 ^a
	Residual	197.219	306	.645		
	Total	405.372	324			

a. Predictors: (Constant), changes affecting hospital, intrinsic_valence, management position, work experience in the same position, intention to leave, gender, graduation degree, marital status, organizational structure, expectancy, age, type of hospital, position, workinh experience, area of work, extrinsic_valence, intrinsic_instrum, extrinsic_instrum

b. Dependent Variable: work_motivation

The goodness of fit of the model revealed that the degree of determination in the model is 0.51, pointing out that the influence of all significant variables explains 51.3% of the total variance in work motivation.

Table 05. Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.717 ^a	.513	.485	.80281

a. Predictors: (Constant), CHANGES AFFECT HOSPITAL, intrinsic_valence, MANAG.POSITION, YEARS IN THE SAME POSITION, INTENTION_LEAVE, GENDER, GRADUATION DEGREE, MARITAL STATUS, ORGANIS_STRUCTURE, expectancy, AGE, TYPE OF HOSPITAL, POSITION, TIME WORKING IN HOSPITAL, AREA OF WORK, extrinsic_valence, intrinsic_instrum, extrinsic_instrum

6.3. Revealing the main differences on the factors influencing the work motivation

Analysing the differences between the main drivers of work motivation according to the expectancy theory and demographic variables, we can mention the following:

There are statistical significant differences regarding the level of work motivation and intrinsic valence in public hospitals in comparison with private hospitals, stating that the employees in public hospitals have a higher level of work motivation and intrinsic valence, individuals valorising more the responsibility of their job, the challenging work tasks, the usage of their skills and abilities and the feeling of accomplishment and also the personal growth.

Also, the age seems to create some differences related with extrinsic instrumentality and intrinsic valence. While the young people valorise more the extrinsic instrumentality elements (getting good pay, getting monetary bonuses getting pay increases, having more opportunities for promotion) the elderly appreciate more the elements of intrinsic valence.

One of the results of these comparisons is related to the fact that there is not any difference in perception regarding the work motivation by age group.

The illiterate group of employees has the highest level of work motivation, and they appreciate more the elements of intrinsic valence. At the opposite side, health employees with doctoral studies exhibit the lowest level of work motivation.

Regarding the experience in the hospitals, individuals with more than 10 years' experience in the same position are the most demotivated by extrinsic instrumentality elements (getting good pay, getting monetary bonus getting pay increases, having more opportunities for promotion).

Regarding marital status, separated or divorced individuals are those the most demotivated in terms of expectancy and overall work motivation.

We have also differences between doctors, nurses, administrative staff, support staff or helpers in terms of intrinsic valence and work motivation, revealing that the most motivated are the support staff, while the nurses are the most demotivated personnel.

Another interesting result of our study was the fact that the most motivated people are those from the managerial and diagnostic area of work in terms of work motivation, intrinsic valence or extrinsic instrumentality.

Also, people from the horizontal organizational structure registered a higher level of overall work motivation and extrinsic instrumentality.

It is worth mentioning that there are not statistical significant differences between gender, work experience, and management position and the overall level of work motivation or the main factors identified from expectancy theory-expectancy, intrinsic valence, and extrinsic instrumentality.

Table 06. Socio-demographic differences on the work motivation factors

		expectancy	extrinsic_ instrum	intrinsic_ valence	work_ motivation
		Mean	Mean	Mean	Mean
Type of hospital	Sig(t-test)	0.23	0.83	0.01*	0.00*
Gender	Sig(t-test)	0.36	0.66	0.79	0.89
Age	Sig(ANOVA)	0.91	0.005*	0.083***	0.184
Graduation degree	Sig(ANOVA)	0.65	0.12	0.063***	0.029**
Time working in hospital	Sig(ANOVA)	0.77	0.31	0.28	0.17
Years in the same position	Sig(ANOVA)	0.93	0.08***	0.49	0.19
Marital status	Sig(ANOVA)	0.09***	0.96	0.13	0.079***
Position	Sig(ANOVA)	0.14	0.31	0.00*	0.00*
Area of work	Sig(ANOVA)	0.24	0.00*	0.00*	0.00*
Management position	Sig(t-test)	0.39	0.76	0.65	0.97
Organizational structure	Sig(ANOVA)	0.00*	0.00*	0.24	0.00*

7. Conclusion

Using a sample of 325 health employees from six Jordanian hospitals, the paper certificated the legality of the modified version of Vroom's theory proposed by Chiang and Jang (2008), revealing the statistical significance of three from the five components -expectancy, extrinsic instrumentality and intrinsic valence. In establishing the overall level of motivation of employees it is important to take into account the type of hospital, graduation degree, and experience in the same position and also the area of work, which manifested a significant impact.

For Jordanian hospital employees, the intrinsic valence is the most appreciated followed by expectancy. Expectancy increases employee motivation by creating a sense of accomplishment, while intrinsic valence offers an incentive to employees for assuming a higher level of responsibility, making full use of their abilities and accomplishments. Thus, the main conclusion of our paper concerns the fact that at least for Jordanian employees, the most important factors that could crucially influence the level of motivation are expectancy and intrinsic valence. Extrinsic instrumentality showed no positive effect on work motivation, revealing that the lack of these elements good pay, monetary bonuses, pay increases or promotions are more likely to produce a decrease in the level of employee motivation.

The empirical results highlighted that managers need to be more focused on using the elements that could produce an increase in the level of motivation an satisfaction-intrinsic valence and expectancy

and not to be very focused only of financial incentives, who could produce a stimulation of motivation only on short-run.

Since having a fully use their skills and knowledge in the workplace and a sense of accomplishment and a personal growth and development, taking responsibility, and having challenging work are good motivators for employees, managers should recognize employees who do well.

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