

An Analysis of the Self-rated Job Performance and Job Satisfaction  
Relationship in Jordanian hospitals

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## Abstract

### An Analysis of the Self-rated Job Performance and Job Satisfaction Relationship in Jordanian hospitals.

The purpose of this study was to examine the relationship between nurses' performance and nurses' satisfaction in Jordanian government and private hospitals. Specifically, it aimed to answer the following questions:

1. What is the relationship between nurses' performance and nurses' satisfaction?
2. What is the relationship between each nurses' individual performance aspect and each nurses' individual satisfaction aspect?
3. Are there any significant differences between government and private hospitals on nurses' ratings of their Satisfaction and on each individual satisfaction aspect?
4. Are there any significant differences between government and private hospitals on nurses' total performance and on each individual performance aspect?

This study consisted of 303 registered nurses working in the five largest government hospitals and the five largest private hospitals in Jordan. A Job Satisfaction Index Scale developed by Smith and his colleagues ( Smith, Kendall & Hulin 1969) and an instrument developed by Zammuto, et al. (1982) were adapted and translated into Arabic for this study.

The results showed a moderate relationship between nurses' overall effectiveness and nurses' overall satisfaction ( $r=.36$ ). A weak relationship was found between nurses' total performance and nurses' overall satisfaction ( $r=.15$ ). A strong relationship was found between nurses' overall effectiveness scores and nurses' overall satisfaction scores ( $r=.43$ ). A moderate relationship was found between nurses' total performance and their total satisfaction ( $r=.29$ ). A strong relationship between nurses' overall satisfaction and between nurses' satisfaction total scores ( $r=.66$ ). A strong relationship was found between nurses' overall effectiveness and nurses' performance total scores ( $r=.51$ ). Significant differences were found between government and private hospitals in nurses' satisfaction ( $t=-3.97$ ,  $p=.000$ ). No significant differences were found between government and private hospitals in nurses' total performance scores ( $t=-1.52$ ,  $p=.128$ ).

### **The Importance of the Study**

The field of nursing has not been an attractive one to employees and to researchers in Jordan. One reason may be attributed to the stigma which has long been associated with the nursing

profession. As organizations, hospitals are structured, with parts, positions and levels that are systematically interrelated (Pugh, Hickson, Hinings, & Turner, 1968). Hospitals vary in their structures; this variation raises the question of whether differences in the structure of the hospitals are related to differences in the behavior, performance, and satisfaction of their members (Freidson, 1963). Kane and Lawler (1979) concluded that the social characteristics of the organization may significantly impact performance ratings. Poor organizational climate as characterized by low levels of trust and openness are likely to result in biased and inaccurate ratings (Landy & Farr, 1980).

Performance rating is recognized as an important element of the job for managers and supervisors as well as for employees. Results of ratings are helpful for making administrative decisions about employees (e.g, efforts to reward employees and promotion); performance ratings can be used to help employees identify potential areas for improvement and growth and to narrow the gap between supervisors' opinions and subordinates' opinions about what is considered a good performance. As a result of these functions, managers can obtain higher levels of productivity from employees. Rendero, 1980, found that most frequently mentioned uses of performance ratings included merit review on salary action, employee development, and feedback to employees. Other uses of performance ratings were studied by Campbell, Dunnette, Lawler, and Weick (1970). Their survey of 33 organizations found that performance appraisals were used in replacement and promotion decisions, training needs assessment, and as a motivation tool.

The major reasons for use of self-appraisals comes from the trend toward the use of a developmental focus. This places major emphasis on the personal growth, self-motivation, and organizational potential of the employee. It becomes an important part of the feedback process to the employee. Self-appraisals may complement evaluative supervisory ratings, may help employees to improve their job performance (Campbell & Lee, 1988), and can serve several distinctive functions within an organization (Bassett & Meyer, 1968). Another function of self-appraisals is to lessen defensiveness of employees regarding the overall appraisal process and to improve job performance.

A number of scholars have argued that self-ratings can promote personal development, improve communication between supervisors and subordinates, and clarify differences of opinion

between supervisors and other managers (Cummings & Schwab, 1973; Schneider, 1977). Researchers have begun to emphasize self-appraisal as developmental tools (Mabe & West, 1982; Wexley & Klimoski, 1984). Campbell and Lee (1988) concluded that research on self-appraisal must go beyond the agreement approach. One research direction involves empirical tests of future-oriented self-appraisal and the effects they have on job performance.

## **THEORY AND REVIEW OF RELATED LITERATURE**

### **1. THEORY**

#### **A. Structural Theories**

The importance of structural factors in affecting the employees' attitudes and satisfaction within the organization is taken as a fundamental principle in the theoretical literature in sociology in the area of organizations, from Weber's first writing on bureaucracy in the 1920s, and in industrial psychology, since the time of Hawthorne studies in 1927. Merton (1968) focuses attention on the influence exerted by social structures on patterns of conduct. He analyzes how social regularities in behavior become institutionalized and modify the social structure. Merton's emphasis is on the relationships between elements of the social structure and an observable pattern of conduct rather than directly on the relationships between various abstract elements of social structure, as it is in Parsons. Kane and Lawler (1979) argued that organizational characteristics and structures influence employees' performance. Structural characteristics like high formalization, high centralization, and big size are believed to have different effects on employees' attitudes and behavior than low formalization and loosely coupled organizations. Herman et al. (1975) argued that employees who held similar positions and ranks in the organizational structure reported similar satisfaction with the work and pay, experienced the same level of motivation, and agreed on contingencies for interpersonal behavior; and employees at the same level agreed in their description of their supervision. Herman et al. concluded the following:

If organizational-structure characteristics are more highly related to organizational behavior than are demographic characteristics in a variety of different organizational settings, then the effect must be related to employees' ability and willingness to adapt to their work environments (p. 230).

Merton addressed this problem and analyzed why certain bureaucratic characteristics stifle individual initiative and foster ritualistic overconformity. Merton found unanticipated consequences of bureaucratic features for individual performance.

Structural characteristics of organizations have been found to be related to variations in job attitudes and behavior such as job satisfaction, productivity, and turnover (Berger & Cummings, 1979; Blau, 1960; Dalton, 1950; Haire, Chriselli, & Porter, 1963; Kane & Lawler, 1979; Kimberly, 1967; Porter & Lawler, 1965, 1968).

### **B. Attitude-Behavior Relationship**

The word *attitude* comes from the Latin *aptus* meaning fit, connoting a readiness for action. Many definitions of attitude have been offered, Alport cited in 1935 sixteen definitions of attitude, he defined attitude as:

"An attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with it is related" (Alport, 1935:810)

This definition contains five parts: (1) it is a mental and neural state, (2) of readiness to respond, (3) organized, (4) through experience and exerting a directive and/or dynamic influence on behavior {as quoted in McGuire, 1968:142}. Organizational researchers have failed to take the components of attitudes in account and the relationship between attitude and behavior, when analyzing job satisfaction- job performance. Problems of the relationship between attitude and behavior can be applied to job performance and job satisfaction. Performance is measured at one point in time, by one method and then correlated with a satisfaction measures. Fisher, (1980) sum up this point,

he said that there is no reason to expect a single measure of performance to be related to overall satisfaction. What should be strongly related to job satisfaction is a multiple-act, multiple-observation measure of variety of work behaviors" (1980:609),... and should be aware of the need to have an appropriate fit between attitude measures specificity and behavioral criteria to obtain maximum predictability (611).

Based on the relationship between attitudes and behavior, there are three different propositions regarding the relationship between job performance and job satisfaction. These are:

(1) Performance causes satisfaction, (2) Satisfaction causes performance, and (3) Moderator approach to the relationship between satisfaction and performance.

The relationship between job performance and job satisfaction has been one of the most controversial issues that has evolved from decades of research on employee attitudes (Petty, Mcgee & Cavender, 1984). Schwab and Cummings (1970) identified three major theoretical approaches utilized by the students of the organizations in the study of the relationship between job performance and job satisfaction: (1) performance causes satisfaction, (2) satisfaction causes performance, and (3) the relationship between performance and satisfaction is moderated by a number of other variables.

(1) Performance Causes Satisfaction. This approach is based on the assumption that satisfaction is a function of performance. Lawler and Porter (1967), were the principal proponents of this approach. They argued that evidence indicated that a low but consistent relationship existed between satisfaction and performance. According to Lawler and Porter (1967), performance may lead to rewards and rewards to satisfaction. They developed a model distinguished between two types of rewards. Extrinsic rewards, such as pay, promotion are likely to be related to performance, these rewards are associated with satisfaction of the lower order needs. On the other hand, intrinsic rewards such as self-actualization are more directly related to performance. Both extrinsic and intrinsic rewards are indirectly related to job satisfaction and moderated by expected equitable rewards, which refer to the amount of rewards that a person feels he should receive as a result of his job performance. Moreover, the imperfect relationship between rewards and performance and the moderate influence of perceived equity would be expected to produce a low but positive relationship between performance and satisfaction. Claims that performance causes satisfaction or vice versa are based on correlational studies. This kind of study supports the existence and direction (+ or -) of the relationship between performance and satisfaction and not on causal relationship.

(2) Satisfaction Causes Performance. Human relations approach theorists—which emerged from Hawthorne studies of the 1920s and early 1930s—have their own viewpoint on the relationship between performance and satisfaction (Schwab & Cummings, 1970). Vroom (1964) stated the following:

It was typically assumed by most people associated with the human relations movement that job satisfaction was positively associated with job performance. In fact human relations might be described as attempts to increase productivity by satisfying the needs of employees (p. 181).

A review of more than 50 studies (Brayfield & Crockett, 1955) showed that satisfaction causes performance. Vroom (1964) reviewed 20 studies relating satisfaction to performance that had been conducted between 1949-1963 and found correlation from -0.31 to 0.86 with a median correlation of 0.14.

Application of the exchange theory by Organ (1977), suggested that a reappraisal of the logic underlying the satisfaction cause performance notion. According to Organ, social exchange theory can be applied to the assumption that satisfaction causes performance. Organ argued that performance or production might be viewed as an appropriate form of reciprocal exchange for satisfaction afforded an employee by his/her job.

(3) Moderator Approach. The moderator approach assumes that satisfaction-performance are related under certain conditions. This approach is attributed Lawler and Porter's (1967) work, which emphasized the effects of moderator variables such as rewards contingency and perceived equity of rewards to the relationship between performance and satisfaction. Herman (1973) suggested that performance could be expected to relate to satisfaction only when workers are given control over their production. Other factors that are expected to influence the relationship between performance and satisfaction are the degree of job fit (Carlson, 1969), pressure for production and task difficulty (Jacobs & Solomon, 1974), and a need for achievement (Steers, 1975). Theorists who take this approach do not assume unidirectional relationship; some posit circular relationship, others assume bidirectional relationship.

The performance satisfaction controversy is not solved yet. Unclear relationships still remain. Weak empirical support for each theoretical approach and causality claims based on correlational studies are important reasons for this ambiguity in the relationship between satisfaction and performance. Two major interrelated sources are responsible for the ambiguity in the relationship between performance and satisfaction. (1) theory. There is agreement between theorists of attitudes that attitudes have three components (cognitive, affective & behavioral component). (2) measurement. This source has two parts. the first one is which construct of

attitude components is to be measured in relation to satisfaction. The second part is strategy of measurement (manipulation of variables, control ...etc). Steers (1981) indicated that satisfaction causes performance approach, when he stated “the fact that workers are satisfied does not mean they will necessarily produce more, only that they are satisfied” (p. 309).

In criticizing the performance causes satisfaction approach, Steers stated: “There is no compelling argument that performance must necessarily cause satisfaction” (p. 310). Finally, with regard to the moderating approach, Fisher (1980) stated that “this approach, too, has failed to produce unambiguous and reliable findings” (p. 607).

Most of the studies which dealt with performance-satisfaction relationship were correlational studies, with no real manipulation for either satisfaction or performance. More importantly, there were no random assignment for subjects to the varying conditions of either performance or satisfaction. As a consequence, claims and arguments of causal relationship are groundless and constitute methodological deficiencies. What is needed in this regard is an experimental design to take care of the problems of an unclear relationship between satisfaction and performance. Another approach would use meta-analysis to sum up the previous literature and reach a valid conclusion. Petty et al. (1984) conducted a meta-analysis on empirical studies of individual job performance and individual job satisfaction with studies which reported overall satisfaction or used the Job Description Index scale, and were conducted after Vroom’s (1964) review. It appears in some of the major organizational journals (Academy of Management Journal, Academy of Management Review, Journal of Applied Psychology, Organizational Behavior and Human Performance, and Personnel Psychology) from 1964 to 1983. According to the meta-analysis conducted by Vroom (1964), the average correlation between performance and satisfaction was ( $r = .14$ ), and the variance of correlation ( $r = .0107$ ). The results of meta-analysis between overall job satisfaction and performance indicate that average correlation of ( $r = .23$ ).

## **2. Review of Selected Empirical Studies**

Research on performance appraisal has increased the accuracy and reduced the bias in performance ratings (Zammuto et al., 1982). Other researchers (Guion, 1965) reported that 81 percent of the published studies in the Journal of Applied Psychology and Personnel Psychology

between 1950-1955 used ratings as criteria. A review of literature since Guion's reports shows that performance ratings still play a major part in validation. Blum and Naylor (1968) sampled articles from the Journal of Applied Psychology for the period 1960 to 1965 and found that of those using criterion measurement, 46 percent measured performance via judgmental indices. Similar findings reported by Landy and Farr (1976) also reported that 89 percent of 196 police departments in major metropolitan areas used supervisory ratings as the primary form of performance measurement.

### **Job Performance and Job Satisfaction**

The relationship between performance and satisfaction in the organizations has been studied by many researchers. For example Lawler, and Porter (1967) concluded, based on a study of five organizations, that instead of trying to maximize satisfaction in organizations, organizations should pay attention to the requirement that high performance be rewarded by satisfying such higher order needs as "self-actualization" and autonomy. The accuracy of performance evaluation in organizations varies inversely with the rank being evaluated. The higher one moves in an organization, the more problematic and ambiguous performance appraisal becomes. Petty , McGee and Cavender, (1984) conducted a meta-analysis on empirical studies of job performance and job satisfaction for studies which used the Job Description Index and were conducted after Vroom's (1964) review. Petty et al. identified 15 studies of the relationships between job performance and job satisfaction that were included in Vroom's review. The meta analysis of these studies showed that the the average correlation between job satisfaction and job performance for all studies included was .14, the variance of correlation =.0107, and the sampling error variance= .0043. The results also showed that 40% of the variance was due to the sampling error. As can be seen from Table 1, the highest correlation was found between job performance and job satisfaction with work ( $r = .27$ ) and supervision ( $r = .27$ ).

Table 1  
Studies Cited by Vroom 1964 on the Relationship Between Individual Job Satisfaction  
And Individual Job Performance as cited by Petty et.al., 1980:716)

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Study	Performance Measure	r	N
Baxter	Ratings & Objectives	.25	233
Bellows	Ratings	.005	109
Bernberg	Ratings	.05	890
Brayfield	Ratings	.14	231
Brayfield & Mangelshorf	Ratings	..20	55
Brayfield & Marsh	Ratings	.11	50
Brady	Objectives	.68	40
Gadel & Kriedt	Ratings	.08	193
Hamid	Objectives	.22	552
Heron	Objectives	.30	144
Lopez	Ratings	.12	124
Mossion	Ratings	-.03	94
Sirota	Ratings	.11	377
Sirota	Ratings	.13	145
Vroom	Ratings	.21	96

The results of the meta analysis of the more recent studies which conducted after Vroom's review are summarized in Table 2. Iaffaldano and Muckinsky, (1985) synthesize the existing

Table 2  
Results of the Meta-Analyses of the Relationship Between Job Description Index Measures of Job Satisfaction and Job Performance\*

Job Description Index Scale Measures	N	Mean $\bar{r}$	% Variance Due to the Sampling Error
Pay	2,149	.15	35.4%
Promotion	1,467	.22	58.4%
Work	1,619	.27	8.9%
Co-Workers	1,467	.18	18.5%
Supervision	1,927	.27	26.8%

\* Adapted from Petty et al., 1984 (p. 719)

findings of the job satisfaction and job performance using meta analytic techniques of Hunter et al., (1982) and Glass et al., (1981). They were able to identified 74 studies with subjects sample size of 12,192, and providing a total of 217 satisfaction-performance correlations (Table 3).

Some researchers studied the relationship between different job satisfaction aspects and propensity to leave the job (Parasuraman & Futrell, 1983). They reported correlation coefficients between propensity to leave and job, co-workers, supervision, pay and promotion were -0.471, -0.163, -0.23, -0.288, and -0.205 respectively. Abedel-Halim (1980) studied the relationship between satisfaction and performance; he reported that the correlation between performance and work, supervision, co-workers, pay, and promotion was 0.21, 0.22, 0.23, 0.11, and 0.00 respectively. Larson (1984) studied patients' perceptions of nurses' caring behavior. Larson pointed out that "Caring permeates the cure and coordination dimensions of nursing practice, but for some patients perceptions of caring are most closely associated with the cure dimension" (p. 50)

### Table 3

Summary of the Studies included in the Meta-analysis of Laffaldano & Muchinsky, 1985

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Study	Size	Satisfaction measure	Performance criterion	r
Abdel-Halim (1980)	123	JDI	Supervisors ratings	5 rs (.00-.23)
Arvey & Gross (1977)	116	MSQ	Self	.38
Bagozzi (1978)	161	8 items	\$ volum sales	.30
Baired(1976)	167	JDI	Supervisors ratings	5 rs(.03-.23)
Bhagat (1981)	32	JDI	problem,test scores	.39,.38
Bhagat (1982)	104	JDS	Supervisors ratings	.35
Brayfield (1944)	231	B-RJSS	Supervisors ratings	.14
Brayfield+ Mangelsdorf (1950)	55	B-RJSS	Supervisors ratings	.20
Brayfield+ Marsh (1957)	50	B-RJSS	Instructor ratings	.11
Breaugh (1981)	112	JDS	Supervisors ratings	4 rs (-.11-.24)
Brief & Aldag (1976)	77	JDI	Self & Supervisors	4 rs(-.20-.17)
Carlson (1969)	254	HJSB	Supervisors ratings	.17,.13
Cherrington et al.,(1971)	90	SDS	Laboratory task	8 rs (-.03-.22)
Dipboye et al., (1979)	222	MSQ	Self &Supervisors	6 rs (.02-.35)
Doll & Gunderson (1969)	195	GS	Peer & Supervisors	-.09, .12
Dyer & Theriault (1976)	392	JDI	Self-ratings	-.21
Gadel & Kriedt (1952)	193	GS	Supervisors ratings	.08
Gavin & Ewen (1974)	471	53 Items	Supervisors ratings	5 rs (.01-.31)
Gould (1979)	134	JDI	Supervisors ratings	.35
Green et al., (1983)	100	JDI	Supervisors+\$value	-.01..06, .05
Greene (1972,1973b)	142	BSJB	Supervisors ratings	.58
Greene (1973a)	62	BSJB	peer ratings	.21,.33
Greenhaus & Badin (1974)	61	OTS	Laboratory task	.28, .33
Griffin (1980)	88	A-ERG	Average daily PI	-.13,-.04,-.26
Hackman & Lawler (1971)	208	GS	Supervisors ratings	.07, .08, .16
Hall et al., (1978)	153	JDI	Self-ratings	.22
Harding & Bottenberg (1961)	376	JF	Supervisors ratings	.26
Heron (1954)	144	SF	Supervisors+\$+lates	.35
Inkson (1978)	93	JDI	Supervisors ratings	5 rs (.08-.32)
Ivancevich (1978)	170	MSQ	Supervisors +daily PI	8 rs (.13-.23)
Ivancevich (1979)	90	MSQ	Supervisors ratings	8 rs (.15-.24)
Ivancevich (1980)	249	MSQ	ICR+SI+GI	.11,.12
Ivancevich & Donnelly (1975)	295	SF	Effciency index	6 rs (.05-.22)
Ivancevich & McMahon (1982)	209	MSQ	Cc+QC+ UO+SR	4 rs (-.35-.39)
Ivancevich & Smith (1981)	150	MSQ	NA+Peer+P	.06, .10
Jacobs & Solomon (1977)	251	JDI	Supervisors ratings	6 rs (-.04-.19)
Joyce et al., (1982)	193	JDI	Supervisors ratings	.08

Table 3 continued

Study	Size	Satisfaction measure	Performance criterion	r
Kesselman et al., (1974)	76	JDI	Supervisors ratings	5 rs (.18-.46)
Kirchner (1965)	72	B-RJSS	Total Sales points	.46
Landy (1971)	175	FS	Co-workers ratings	5 rs (-.02-.06)
Lichtman (1970)	95	GS	Supervisor ratings	.21
Locke (1965)	183	JDI	Laboratory task	.43, .41
London & Klimoski (1975)	153	JDI	Self, Peers +SP	5 rs (-.17-.12)
Lopez (1982)	579	JDI	Supervisor ratings	8 rs (.08-.52)
Mirvis & Lawler (1972)	160	IS	shortages	.10
Mossion (1949)	94	GS	Shopper ratings	-.05
Motowidlo (1982)	92	PS	sales \$+ self SP	4 rs (-.11-.35)
Nathanson & Becker (1977)	57	GS	peer ratings	.37
Oldham et al., (1976)	201	JDI	Supervisor ratings	4 rs (-.17-.01)
O'Reilly & Roberts (1978)	301	JDI	Supervisor ratings	4 rs(-.19--.02)
Orpen (1974)	225	B-R IJS	Errors in production	.33
Orpen (1978)	103	B-R IJS	Supervisor ratings	.23
Penley & Hawkins (1980)	264	JDI	Supervisor ratings	5 rs (-.05-.07)
Pierce et al., (1979)	398	MSQ IOR	Supervisor ratings	.09, .20, .25
Podsakoff et al. (1982)	72	JDI	Supervisor ratings	5 rs(-.11--.39)
Porac et al (1982)	138	Gs	self-ratings	.72, .69
Pritchard (1973)	166	MSQ	Laboratory task	4 rs (-.21-.28)
Schriesheim (1980)	308	JDI	Self-ratings	.15
Schriesheim & Murphy (1976)	54	MSQ	Supervisor ratings	-.09
Sheridan & Slocum (1975)	94	PNDQ	Supervisor ratings	4 rs (-.09-.25)
Siegel & Bowen (1971)	86	GS	Instructor Ranking	4 rs (.03-21)
Spencer & Steers (1981)	295	JDS	Supervisor ratings	.17
Steers (1975)	133	JDS	Supervisor ratings	.26
Strauss (1966)	49	HJSS	Self, peer & Sup	.19, .29
Stumpf (1981)	102	JDI	Many	18rs(-.05-.29)
Sundstrom et al. (1980)	97	GS	Self-&supervisors	.12,.12
Szilagyi (1980)	128	JDI	Self-& supervisors	.07
Tharenou & Harker (1982)	166	JDS	Supervisor ratings	.11
Wanous 1974)	80	JDI	Supervisor ratings	.12,.21
Wexley et al., (1980)	194	MSQ	Supervisor ratings	5 rs (.01-.25)

\* Adapted from Laffaldano & Muchinsky, 1985 PP 256- 261

\*\*Note. JDI=job Descriptive Index; MSQ=Minnesots Satisfaction Questionnaire; ERG=Existence Relatedness Growth; IOR=Index of Organizational Reactions, PNDQ=Proter Need Description Questionnaire; JDS=Job Diagnostic Survey; HJSS=Hoppock's Job Satisfaction Scale; GS=general satisfaction; B-RJSS= Brayfield-Rothe Job Satisfaction Scale; B-RJSB= Brayfield-Rothe Job Satisfaction Blank

As can be seen from Table 4, the estimated true correlation between performance and satisfaction (after correcting for sampling error and attenuation due to unreliable measures of satisfaction and performance) is 0.17

Table 4

## Average Observed Correlations and Estimated Population Values

Satisfaction type	No. $r_{xy}$	$r_{xy}$	$\sigma^2_{r_{xy}}$ size	$\Sigma$ sample sampling error	$\sigma^2$ predicted	$\phi_{true}$	$\sigma^2_{pture}$
Pay	25	.054	.020	3609	.007	.062	.017
Promotion	18	.123	.015	3170	.007	.145	.013
Supervision	21	.162	.036	3630	.005	.186	.041
Work	35	.175	.037	5061	.006	.207	.043
Co-workers	20	.102	.021	3037	.006	.123	.021
Intrinsic	18	.169	.023	2069	.007	.230	.019
Extrinsic	17	.149	.035	2205	.007	.175	.039
JDI & MSQ overall	9	.247	.019	1534	.005	.286	.018
Others (e.g., global)	54	.155	.025	5472	.009	.185	.023
Total Sample	217	.146	.029	12192	.017	.172	.016

Adapted from Laffaldano & Muchinsky, 1985:262 Note. Values for  $\phi_{true}$  and  $\sigma^2_{pture}$  have been correlated for sampling error and attenuation due to satisfaction and performance measure unreliability using the Hunter et al., (1982) formulas;  $r_{xy}$  and  $\sigma^2_{r_{xy}}$  represent frequency-weighted observed values.

In organizational settings, a study by Ben-Porat (1981) studied 104 blue-collar employees from industrial organizations in Israel and reported the correlation on different job dimensions and overall satisfaction with their jobs as follows: promotion 0.28; responsibility 0.32; pay 0.21; supervisors 0.36; peers 0.06; subordinates 0.47; work conditions 0.33; work achievement 0.27; tenure 0.41; work variety 0.50; and professional development 0.35.

### Sample

This study consisted of two different samples: (1) the total hospital sample consisted of ten hospitals; (2) the registered nurse sample consisted of 303 registered nurses.

#### 1. Hospitals

The sample of hospitals consisted of five of the largest hospitals in the government sector and five of the largest hospitals in the private sector. Seven hospitals were excluded from

selection. Six military hospitals administered by Royal Medical Services were excluded due to the difficulties of obtaining permission to conduct the study, as was one mental hospital administered by the Ministry of Health. However, one hospital was dropped from the study because the researcher felt the data from that hospital were contaminated.

Structural Differences The hospital sample was composed of the top ten large hospitals in government and private sectors in Jordan. The hospital sample was based on the size of the hospital measured by the number of beds (capacity). As can be seen from Table 5, Al-Karak Hospital is the only government hospital located in the southern region; the rest of government hospitals are located in Jordan's central region. The largest government hospital in terms of number of employees is the University of Jordan hospital, with only four major departments. The number of the medical staff increases as the number of employees increase. Most of government hospitals have been operating for a long period of time.

Table 5  
Participating Government Hospitals by the Structural Characteristics

Hospital Characteristics	Albasheer 1	Alkarak 2	Alzarka 3	Jordan University 4	Alsalet 5
Departments	14	8	13	4	12
Employees	1222	305	573	1750	350
Medical Staff	583	92	253	275	131
Registered Nurses	145	17	75	297	32
Assisted Nurses	181	69	89	246	92
Capacity	514	80	260	507	150
Patients	412	65	178	413	90
Length of Service	22	16	29	27	29

As can be seen from Table 6, private hospitals, with the exception of Alislami Hospital, are small hospitals in terms of number of employees and the capacity of the hospital. Also, most of private hospitals have operated for a short period of time, with the exception of Malhas Hospital.

Table 6  
Participating Private Hospitals by the Structural Characteristics

Hospital Characteristics	Alislami	Alhekma	Alamal	Alkhaledi	Malhas
	6	7	8	9	10
Departments	18	10	11	18	13
Employees	800	240	65	95	70
Medical Staff	100	14	9	7	11
Registered Nurses	100	60	14	5	9
Assistant Nurses	184	40	12	27	14
Capacity	300	100	25	60	40
Patients	220	55	11	41	33
Length of Establishment	8	13	4	3	45

## 2. Nurses

All registered nurses who worked in shift A (238 registered nurses employed in the five largest government hospitals and 65 registered nurses employed in the five largest private hospitals) made up the nurse sample.

### Characteristics of the Nurses' Sample

As can be seen from Table 7, the total number of registered nurses working in the ten hospitals were 756. The total number of registered nurses who participated in the study was 303. The sample of registered nurses was 40.1% of the total number of registered nurses working in the ten hospitals. The lowest rate of participation was 19% from Alislami Hospital. The sample of registered nurses were composed of 303 registered nurses who work in the ten hospitals. The majority of registered nurses in the sample were females (86.1%) between the ages of 18 and 39 years (95.7%) and the majority were Muslims (71.3%), and 28.7% were Christians. The majority of the of the registered nurses were unmarried (57.1%).

Table 7

Total Number of Registered Nurses and Participants by Sex and Hospital

Hospital	Total #	Sample	%	<u>M</u>	<u>F</u>
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Albasheer	145	54	37	12	42
Alkarak	17	8	47	00	8
Alzarka	75	33	44	6	27
Jordan University	297	126	42.4	12	114
Alsalet	32	17	53.1	3	14
Alislami	100	19	19	5	14
Alkhaleedi	60	27	45	2	25
Alamal	14	8	57.1	0	8
Alhekmah	5	3	60	0	3
<u>Malhas</u>	<u>9</u>	<u>8</u>	<u>88.8</u>	<u>2</u>	<u>6</u>
Total	754	303	40.1	42	261

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## **DESIGN AND METHODOLOGY**

### **Instrumentation**

The Nurses' Questionnaire consisted of four major parts: (1) a cover letter describing the instructions and the aim of the study ; (2) the Performance Rating Index (Zammuto et al., 1982), consisting of 19 items. For each item registered nurses were asked to rate themselves on a single 20-point continuum for the day before the day the Performance Rating Questionnaire was distributed in each hospital; (3) the Job Satisfaction Index (Smith, Kendall, & Hulun, 1969) consisting of 10 items; and (4) demographic characteristics .

### **Instrument Development**

#### **1.Performance Rating Index**

An instrument developed by Zammuto, et al. (1982) was adapted for use in this study in order to measure nurses' performance in Jordan. The instrument was translated by the author

into the Arabic language, with some modifications. When the items were vague and hard to understand, Arabic synonyms were included and added in parentheses. The Performance Rating Index consisted of 19 items. Using self-report-paper-pen, straight answer questionnaire techniques, registered nurses were asked to rate their preference on a single 20-point continuum. The instrument consists of two parts. The first part included the performance aspects and consisted of 19 items. The items consisted of 18 characteristics derived from performance evaluation instruments used in four hospitals in California, and the 19th item was a rating of overall performance. The 19 items are: (v1) technical competence, (v2) ability to organize and schedule work loads, (v3) skills in planning nursing care, (v4) acceptability of completed work, (v5) attendance and promptness, (v6) observance of rest and lunch periods, (v7) amount of work performed, (v8) completion of work on schedule, (v9) adaptability in emergencies, (v10) quality of work, (v11) dependability, (v12) willingness to perform duties, (v13) observance of rules and regulations, (v14) effort applied, (v15) accepting responsibility for own behavior, (v16) making a high impression on visitors, (v17) personal appearance, (v18) skills in communications, and (v19) overall effectiveness. The second part consisted of demographic data including age, sex, education, income, and so forth.

## **2. Job Satisfaction Index**

The Job Satisfaction Index is based on the Job Descriptive Index (Smith et al., 1969) and was chosen as a satisfaction measurement tool. Smith et al. (1969) defined job satisfaction as “feelings or effective responses to facets of the satisfaction” (p. 6). The researcher added item #9 “Satisfaction with Benefits” and item #10 “Propensity to Leave” and divided satisfaction with work into two variables: (1) satisfaction with working hours and (2) satisfaction with working conditions. The researcher used only one measure for each dimension by asking the participant to report his/her satisfaction on each dimension on a scale from 1 to 20, 1 for very dissatisfied and 20 for very satisfied.

The following ten items were used to measure job satisfaction for the nurse and supervisor participants: (v21) satisfaction with pay, (v22) satisfaction with co-workers, (v23) satisfaction with supervisors, (v24) satisfaction with job security, (v25) satisfaction with for advancement,

(v26) satisfaction with working hours, (v27) satisfaction with working conditions, (v28) satisfaction with benefits, (v29) overall satisfaction, and (v30) propensity to leave.

Reliability of the Job Satisfaction Index. The Job Description Index Scale has been shown to have a high internal and discriminate validity with INDSALEs, another standard scale used by researchers to measure sales people’s satisfaction (Futrell, 1979). Furthermore, the Job Description Index Scale has been used by other researchers to measure sales people’s satisfaction (Churchill & Pecotich, 1982). Other support for the Job Description Index was reported by Lopez (1982), who measured the reliability of the Job Description Index Scale using the Sperman-Brown split equation. He found the scale reliability to be ranged from 0.86 to 0.97

Cronbach’s alpha was computed for nurses’ satisfaction index. The alpha coefficients for nurses shown in Table 8. Cronbach alpha for the Job Description Index Scale was 0.86. Each of the eight items representing the major variables was (excluding overall satisfaction, and propensity to leave) correlated with each of the remaining items and alpha derived from Cronbach’s formula using SPSS-X. Hinshow and Atwood (1982) suggested that an acceptable alpha for a new scale is 0.70 or above, and for a mature scale it is 0.80 or above.

Cronbach’s alpha was computed for nurses’ performance index. The alpha coefficients for nurses shown in Table 9 range in value from a low of 0.91 to 0.92. Cronbach alpha for the Job Description Index Scale was 0.91. Each of the eighteen items representing the major

Table 8

Job Description Index Scale Reliability Analysis for Nurses

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Nurses N=303

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Variable	Mean	MR <sup>2</sup>	α
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Satisfaction with pay	87.53	.2145	.8683
with co-workers	84.47	.2351	.8667
Supervisors	85.27	.4507	.8490
Job security	87.10	.5291	.8401
Promotion	87.60	.5711	.8348
Working hours	87.51	.5472	.8460
Working condition	88.22	.6246	.8365
Benefits	90.02	.4207	.8533

\* Note. alpha = .8663  
Standardized Item alpha = .8644

variables was (excluding overall effectiveness) correlated with each of the remaining items.

Table 9  
Reliability Analysis for Performance Index for All Nurses Combined

	Mean	$R^2$	$\alpha$		Mean	$R^2$	$\alpha$
V1	292.23	.61	.91	V10	292.09	.45	.91
V2	291.98	.60	.91	V11	293.20	.21	.92
V3	291.67	.56	.91	V12	291.18	.52	.91
V4	291.39	.51	.91	V13	291.28	.57	.91
V5	290.68	.42	.92	V14	291.04	.61	.91
V6	292.05	.18	.92	V15	290.72	.49	.91
V7	291.36	.64	.91	V16	291.79	.44	.92
V8	291.19	.57	.91	V17	291.00	.44	.91
V9	291.89	.63	.91	V18	291.51	.44	.91

Pilot test. All research instruments were pilot tested on a group of 10 subjects. Ten registered nurses (five from the government and five from the private hospitals) were selected. Subjects were given the instrument and asked to evaluate the services that they received and to rate nurses' job performance. Construct validity had been established through consensus among the consultants and pilot respondents that the behaviors were, in fact, descriptive of nursing behaviors contributing to good client care.

### Procedures

All shift A registered nurses in the ten large government and private hospitals included in this study received letters stating the purpose of the study, accompanied by a copy of the research instrument in Arabic language for Arabian participants, and in English for foreign participants,

along with answer sheets . A Performance Rating Questionnaire was given to all registered nurses. All registered nurses were asked to rate themselves, An identical English form was given to English-speaking nurses (e.g., Filipino).

All subjects were asked to rate performance only for the day the instrument was administered to avoid problems of recalling nurses past performance. Subjects were asked to indicate on a 20-point scale (1 = lowest to 20 = highest) how they would rate the job performance of each registered nurse on that day. The researcher collected these forms the next day after the administration.

Confidentiality was assured to all participants by stating on the cover letter that they well not to write their names on the instruments, and assurance was given that no individual responses would be singled out. The cover letter contains the elements of protection for nurses. The following information was included:

1. The researcher's name and educational status.
2. The purpose of the study, and
3. A description of the nature of subjects' participation was included (e.g., fill out forms).

### **Research Questions**

The following questions were generated from the research hypotheses:

1. What is the relationship between nurses' performance scores and satisfaction scores within all hospitals combined ? This question is divided to five sub-questions.

1. a What is the relationship between nurses' overall performance and overall satisfaction within all hospitals combined?

2. b What is the relationship between nurses' total performance and overall satisfaction within all hospitals combined?

3. c What is the relationship between nurses' overall effectiveness and total satisfaction within all hospitals combined?

4. d What is the relationship between nurses' total performance and total satisfaction within all hospitals combined?

5. e What is the relationship between nurses' overall effectiveness and each individual satisfaction item score within all hospitals combined?

2. What is the relationship between nurses' individual performance item scores and nurses' individual satisfaction item scores within all hospitals combined as well as within the government hospitals and within private hospitals?

3. Are there any differences between government and private hospitals on the total satisfaction index scores and on the individual satisfaction item scores for all registered nurses combined?

4. Are there any differences between government and private hospitals on the total performance index scores and individual performance item scores for all registered nurses combined.?

## Results

Pearson correlation coefficients were computed for the relationship between the nurses' mean of the overall satisfaction and the mean of the nurses' rating of the registered nurses' overall effectiveness (item 19 only) as well as nurses' mean on the total satisfaction index and nurses' mean on the total performance scores for ratings of registered nurses in all hospitals combined. Pearson correlation coefficients were computed for the relationship between nurses' ratings of the registered nurses' overall effectiveness and nurses' individual satisfaction items. This section aims to answer the question 1.a through question 1.e

As can be seen from Figure 1, a positive relationship was found in registered nurses mean scores on the overall performance (effectiveness) scores and the overall satisfaction index scores ( $r = .36$ ,  $p = .001$ , Q.1.a). A positive relationship was found in registered nurses mean scores on the total performance scores and the overall satisfaction index scores ( $r = .15$ ,  $p = .001$ , Q.1.b). A positive relationship was found in registered nurses mean scores on the total satisfaction index scores and the overall effectiveness scores ( $r = .43$ ,  $p = .001$ , Q.1.c). Finally, a positive relationship was found in registered nurses mean scores on the total performance index scores and the total satisfaction index scores ( $r = .29$ ,  $p = .001$ , Q.1.d).

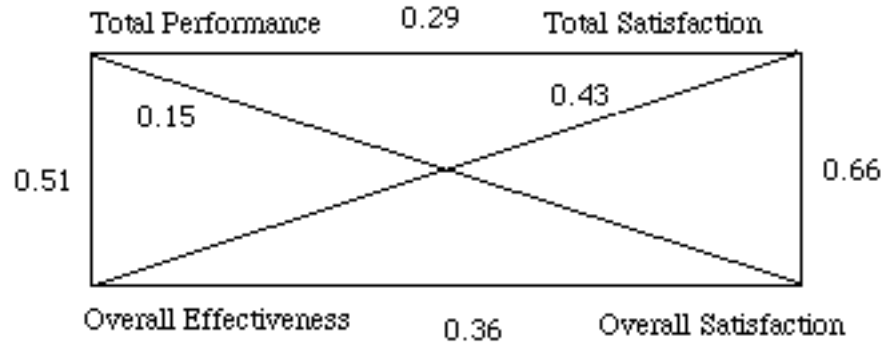


Figure 1. Pearson Correlation Coefficients Between Registered Nurses' Satisfaction and Performance Ratings.

As can be seen from Table 10, there is a positive relationship between nurses' overall effectiveness scores and each individual satisfaction scores (Q. 1.e). The relationship between nurses' overall effectiveness and nurses' satisfaction with pay was highly correlated with nurses' overall effectiveness ( $r=.36$ ) followed by satisfaction with co-workers ( $r=.22$ ), with supervisors, and promotion ( $r=.17$ ,  $r=.16$  respectively). The relationship between nurses' satisfaction and job security, working hours, benefits and working conditions was a weak positive relationship  $r=.08$ ,  $.02$ ,  $.08$ , &  $.07$  respectively.

Table 10

Tests of Pearson Correlation Coefficients Between the Overall Effectiveness Scores and the Individual Satisfaction Item Scores for All Registered Nurses Combined

Job Satisfaction Index	<u>r</u>	<u>P</u>
Satisfaction with pay	.3659	.08*
Co-workers	.2252	.00*
Supervisors	.1703	.00*
Job security	.0809	.10*
Promotion	.1670	.00*
Working Hours	.0207	.68
Working Conditions	.0778	.16
Benefits	.0832	.10

\* Significant at the .05 level.

The findings of this study support the nondirectional causal relationship between satisfaction performance ratings (e.g., Carlson, 1969; Jacobs & Solomon, 1974; Herman, 1972; Petty et al., 1984; and Steers, 1975). It is emphasized that the relationship between satisfaction and performance ratings is correlational. Generalizations should not go beyond the amount of linearity and the direction of the relationship. However, this kind of relationship should be viewed as the first step toward studying a causal relationship.

Q.2 What is the relationship between nurses' individual performance item scores and nurses' individual satisfaction scores within all hospital combined as well as within private hospitals and within government hospitals?

As can be seen from table 11 nurses' performance were found to be correlated with nurses' satisfaction. Overall satisfaction was found to be correlated (moderate) with the following performance aspects: technical competence ( $r=.28$ ), ability to organize work loads ( $r=.26$ ), skills in planning nursing care ( $r=.27$ ), acceptability of completed work ( $r=.29$ ), attendance and promptness ( $r=.30$ ), amount of work performed ( $r=.29$ ), completion of work

Table 11  
Pearson Correlation Coefficients Between Nurses' Satisfaction Aspects and Nurses' Performance Aspects in All Hospitals Combined.

	Satisfaction			Performance						
	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10
V20	0.281	0.260	0.278	0.296	0.300	0.204	0.294	0.324	0.264	0.335
V21	0.083	0.011	0.055	0.039	0.179	0.227	0.001	0.013	0.077	0.038
V22	0.350	0.222	0.200	0.285	0.224	0.284	0.267	0.225	0.328	0.153
V23	0.179	0.155	0.160	0.211	0.253	0.212	0.133	0.138	0.233	0.160
V24	0.146	0.099	0.161	0.194	0.199	0.068	0.159	0.170	0.190	0.141
V25	0.135	0.051	0.103	0.219	0.201	0.157	0.101	0.118	0.166	0.046
V26	0.105	0.069	0.067	0.151	0.241	0.105	0.120	0.193	0.051	0.053
V27	0.126	0.043	0.062	0.103	0.186	0.158	0.052	0.164	0.110	0.105
V28	0.019	-0.020	-0.058	0.061	0.109	0.065	0.003	0.068	0.016	0.084
V29	0.015	0.081	0.031	-0.067	-0.012	0.060	0.008	-0.024	0.007	-0.075
	V11	V12	V13	V14	V15	V16	V17	V18	V19	

V20	0.228	0.440	0.436	0.325	0.204	0.263	0.233	0.285	0.364
V21	0.085	0.117	0.074	0.131	0.135	0.210	0.143	0.119	0.080
V22	0.100	0.194	0.274	0.316	0.289	0.287	0.200	0.240	0.224
V23	0.141	0.309	0.302	0.252	0.243	0.192	0.113	0.182	0.168
V24	0.146	0.309	0.352	0.274	0.203	0.223	0.075	0.148	0.078
V25	0.096	0.332	0.256	0.231	0.230	0.251	0.146	0.186	0.164
V26	0.069	0.246	0.240	0.127	0.092	0.065	0.058	0.115	0.018
V27	0.038	0.214	0.199	0.088	0.176	0.074	0.075	0.140	0.074
V28	-0.016	0.100	0.087	-0.022	0.029	0.085	0.007	0.100	0.079
V29	-0.035	-0.161	-0.109	-0.073	-0.016	-0.058	-0.053	0.001	-0.081

on schedule ( $r=.32$ ), adaptability in emergencies ( $r=.26$ ), quality of work ( $r=.33$ ), willingness to perform duties ( $r=.44$ ), observance of rules ( $r=.43$ ), effort applied (.32), making a high impression on visitors ( $r=.26$ ), skills in communications ( $r=.28$ ) and with overall effectiveness ( $r=.36$ ). Table 12, illustrates the relationship between nurses' performance and nurses' satisfaction in all government hospitals combined.

Table 12  
Pearson Correlation Coefficients Between Nurses' Satisfaction Aspects and Nurses' Performance Aspects in All government Hospitals Combined.

		Performance Aspects									
Satisfaction		v1	v2	v3	v4	v5	v6	v7	v8	v9	
v20		.266	.245	.277	.298	.306	.200	.275	.294	.231	
v21		.035	-.017	.019	.025	.177	.186	-.052	-.024	.055	
v22		.327	.241	.203	.287	.211	.254	.272	.202	.324	
v23		.170	.163	.186	.236	.247	.214	.136	.103	.229	
v24		.098	.077	.131	.181	.168	.050	.130	.123	.155	
v25		.110	.017	.062	.213	.187	.139	.061	.073	.145	
v26		.058	.061	.076	.150	.240	.070	.083	.155	.022	
v27		.098	.023	.064	.074	.159	.142	.016	.121	.081	
v28		.014	-.023	-.084	.036	.088	.049	-.046	.002	-.016	
v29		-.030	.059	-.006	-.112	-.037	.028	-.013	-.044	-.010	
		v10	v11	v12	v13	v14	v15	v16	v17	v18	v19
v20	.375	.194	.456	.441	.308	.201	.284	.213	.281	.370	
v21	.073	.031	.111	.039	.090	.117	.195	.115	.093	.038	
v22	.154	.080	.188	.273	.312	.281	.338	.175	.228	.186	
v23	.186	.151	.328	.317	.248	.237	.239	.108	.192	.176	

v24	.156	.113	.270	.322	.247	.146	.241	.029	.106	.047
v25	.070	.042	.291	.209	.208	.200	.272	.104	.162	.147
v26	.081	.064	.224	.223	.111	.048	.074	.024	.106	.005
v27	.142	-.013	.199	.172	.058	.136	.102	.059	.142	.062
v28	.059	-.075	.069	.027	-.049	-.021	.097	-.025	.098	.074
v29	-.064	-.064	-.181	-.129	-.128	-.055	-.095	-.072	-.024	-.128

As can be seen from Table 13, there is a positive relationship between nurses' performance and nurses' satisfaction in all private hospitals combined.

Table 13  
Pearson Correlation Coefficients Between Nurses' Satisfaction Aspects and Nurses' Performance Aspects in All Private Hospitals Combined.

		Performance Aspects								
Satisfaction		v1	v2	v3	v4	v5	v6	v7	v8	v9
v20		.378	.364	.274	.211	.248	.183	.376	.491	.452
v21		.318	.165	.202	.044	.165	.432	.216	.166	.158
v22		.460	.122	.187	.284	.293	.458	.243	.358	.351
v23		.217	.104	.012	-.002	.274	.174	.085	.318	.235
v24		.386	.221	.285	.206	.353	.118	.259	.397	.352
v25		.281	.272	.296	.128	.264	.201	.252	.323	.258
v26		.310	.108	.001	.108	.229	.257	.262	.367	.166
v27		.275	.166	-.002	.183	.318	.187	.167	.360	.231
v28		.010	-.022	-.026	.044	.191	.051	.143	.357	.118
v29		.244	.213	.199	.170	.117	.217	.076	.050	.076
v32		.085	.187	.066	-.030	-.010	.013	-.007	-.225	-.098
v33		.367	.347	.359	.152	-.142	.295	.318	.032	.108
	v10									
	v11									
	v12									
	v13									
	v14									
	v15									
	v16									
	v17									
	v18									
	v19									
v20	.248	.375	.276	.351	.441	.214	.165	.362	.304	.354
v21	-.071	.311	.081	.183	.368	.220	.329	.297	.264	.304
v22	.160	.223	.234	.283	.340	.336	.024	.330	.312	.407
v23	.089	.011	.153	.177	.270	.266	-.051	.137	.107	.132
v24	.123	.238	.490	.463	.433	.517	.154	.329	.391	.238
v25	-.017	.279	.554	.454	.393	.430	.199	.422	.349	.296
v26	-.029	.017	.325	.275	.198	.304	.035	.224	.150	.075

v27	.002	.192	.217	.248	.263	.409	-.051	.151	.097	.148
v28	.250	.096	.153	.263	.094	.288	.084	.162	.080	.111
v29	-.114	.067	-.099	-.064	.267	.195	.172	.049	.142	.174
v32	-.289	-.039	.025	-.153	.075	-.121	.210	-.068	-.196	-.005
v33	-.010	-.005	.093	.054	.257	.062	.312	.234	.290	.279

### Q.3

Are there any differences between government and private hospitals on the total satisfaction index scores and on the individual satisfaction item scores for all registered nurses combined?

#### Overall Test

The mean of the registered nurses' self-ratings within government hospitals on the total satisfaction index score was lower than the mean within private hospitals on the total satisfaction index score. Mean difference of the registered nurses' self-ratings within government and private hospitals on the total satisfaction index scores was found to be significant at .05 alpha level (Table 14).

Table 14

t-Test for Differences in the Mean of the Total Satisfaction Index Scores of Registered Nurses Between Government and Private Hospitals

Type of Hospital	<u>N</u>	Mean	<u>SD</u>	<u>df</u>	<u>t</u>	<u>P</u>
Government Hospitals	238	12.3	3.0	301	-3.97	.000*
Private Hospitals	65	13.9	2.5			

\* Significant at the .05 level.

#### Individual Item Tests

As can be seen from Table 15, the mean score for registered nurses' satisfaction in government hospitals on the individual satisfaction item scores was lower than the mean score of private hospitals on the same items. Mean difference between government hospitals, and private

hospitals in registered nurses' satisfaction on each satisfaction index item was found to be significant at alpha level .05 with the exception of three items (satisfaction with co-workers, supervisors, and propensity to leave). The research hypothesis that there are no differences between government and private hospitals in each satisfaction item (not including the exceptional items) was rejected and the alternative hypothesis associated with each satisfaction item that there are differences between government and private hospitals in each satisfaction item was retained. As can be seen from Figure 2 in all satisfaction aspects nurses within private hospitals were more satisfied than nurses within government hospitals. It can be concluded that satisfaction with co-workers was almost the same for nurses within both government hospitals

Table 15

t-Test for Differences in the Mean Scores of Each Satisfaction Item Scores of Registered Nurses Between Government and Private Hospitals

Satisfaction Index	Government		Private Hospitals		df	<u>t</u>	<u>P</u>
	Mean	<u>SD</u>	Mean	<u>SD</u>			
Satisfaction with Pay	11.8	4.8	13.3	3.8	301	-2.41	.016*
Co-workers	15.1	3.7	15.2	3.1	301	-.15	.880
Supervisors	14.2	4.8	15.1	3.7	301	-1.40	.164
Job Security	12.2	5.2	13.8	4.1	301	-2.39	.017*
Promotion	11.5	5.2	14.1	3.5	301	-3.73	.000*
Working Hours	11.9	5.2	13.1	4.5	301	-1.71	.089
Working Conditions	10.9	5.1	13.2	3.7	301	-3.39	.001*
Benefits	8.9	5.6	12.4	4.2	301	-4.67	.000*
Propensity to Leave	12.3	6.2	13.4	4.7	301	-1.31	.193

\* Significant at the .05 level.

and private hospitals. Large difference however, was found in nurses satisfaction with benefits between government hospitals and private hospitals. In sum, nurses were more satisfied in all satisfaction aspects within private hospitals than within government hospitals with the exception of one aspect. (propensity to leave being the exceptional satisfaction aspect).

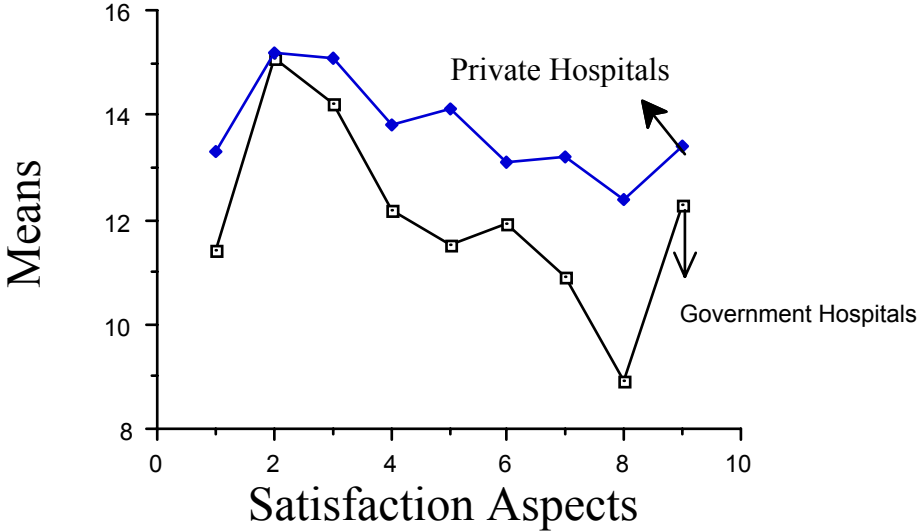


Figure 2: Note Satisfaction aspects were satisfaction with: .1 pay, 2. co-workers, 3. supervision, 4. job security, 5. promotion, 6. working hours, 7. working conditions, 8. benefits, and propensity to leave.

Q.4 Are there any differences between government and private hospitals on the total performance index scores and individual performance item scores for all registered nurses combined?

Overall Test

As can be observed from Table 16, the mean score for government hospitals was lower than the mean score for private hospitals for all registered nurses self-ratings on the total performance index scores. The mean difference between government hospitals and private hospitals in registered nurses’ self-ratings was found to be not significant at alpha level .05. The research hypothesis that there are no differences between government hospitals and private hospitals in registered nurses’ self-ratings was not rejected at alpha level .05. Therefore, the alternative hypothesis that there are differences between government and private hospitals in registered nurses self-ratings performance was retained.

Table 16

t-Test for Differences in the Mean Scores of the Nurses’ Self-Ratings Total

## Performance Index Scores Between Government and Private Hospitals

Type of Hospital	<u>N</u>	Mean	<u>SD</u>	<u>df</u>	<u>t</u>	<u>P</u>
Governmental Hospitals	238	17.0	1.6	301	-1.52	.128
Private Hospitals	65	17.4	1.6			

Individual Item Tests

As can be seen from Table 17, the mean score for government hospitals was lower than the mean score for private hospitals in the registered nurses' self-rating on each of the performance items with the exception of five items (skills in planning care, attendance and promptness, accepting responsibility for own behavior, willingness to perform duties, and personal appearance).

The mean differences between government hospitals and private hospitals were found to be not significant at alpha level .05 with the exception of three performance items (ability to organize and schedule work loads, dependability, and observance of rules and regulations). The research hypothesis that there are no differences between government hospitals and private hospitals for the rest of the performance items was not rejected at alpha level .05. Therefore, the alternative hypothesis associated with each each of the performance items was rejected (see Table 17).

Table 17

t-Test for Differences in the Mean Scores of Individual Performance Item Scores of Nurses' Self-Ratings Between Government and Private Hospitals

Performance Items	Government		Private Hospitals		df	t	P
	Mean	SD	Mean	SD			
#1 Technical competence	16.4	2.7	16.6	2.5	301	-.48	.631
#2 Ability to organize work loads	16.7	2.8	16.8	2.3	301	-.25	.008*
#3 Skills in planning nursing care	16.9	2.6	16.8	2.5	301	1.05	.297
#4 Acceptability of completed work	17.1	2.8	17.3	2.0	301	-1.8	.071
#5 Attendance and promptness	17.9	2.6	17.8	2.2	301	0.83	.410
#6 Observance of rest periods	16.5	4.0	18.2	3.2	301	-1.3	.185
#7 Amount of work performed	17.2	2.4	17.2	2.2	301	1.54	.125
#8 Completion of work on schedule	17.4	2.6	17.7	1.9	301	-1.5	.126
#9 Adaptability in emergencies	16.7	2.9	17.9	2.5	301	-.83	.374
#10 Quality of work	16.6	2.5	17.1	3.2	301	-.41	.684
#11 Dependability	15.2	4.1	16.5	3.0	301	-2.5	.012*
#12 Willingness to perform duties	17.3	3.1	16.6	2.3	301	1.68	.094
#13 Observance of rules	17.2	2.8	18.0	2.3	301	-2.0	.038*
#14 Effort applied	17.6	2.7	18.0	2.1	301	-.62	.535
#15 Accepting responsibility	17.9	2.7	17.8	2.2	301	0.60	.552
#16 Making a high impression	16.9	2.9	18.1	2.5	301	-.33	.743
#17 Personal appearance	17.6	2.5	16.8	2.0	301	.45	.655
#18 Skill in communications	17.1	2.7	17.8	2.1	301	-.56	.578

\* Significant at the .05 level

As can be seen from Figure 3, one can conclude that the ratings of registered nurses by all raters in private hospitals was greater than in government hospitals. Also, it appears clearly that all raters rated lowest the item on dependability (item # 11). Moreover, a large gap between private and government hospitals can be seen in some of the items as well as a convergence in some other items.

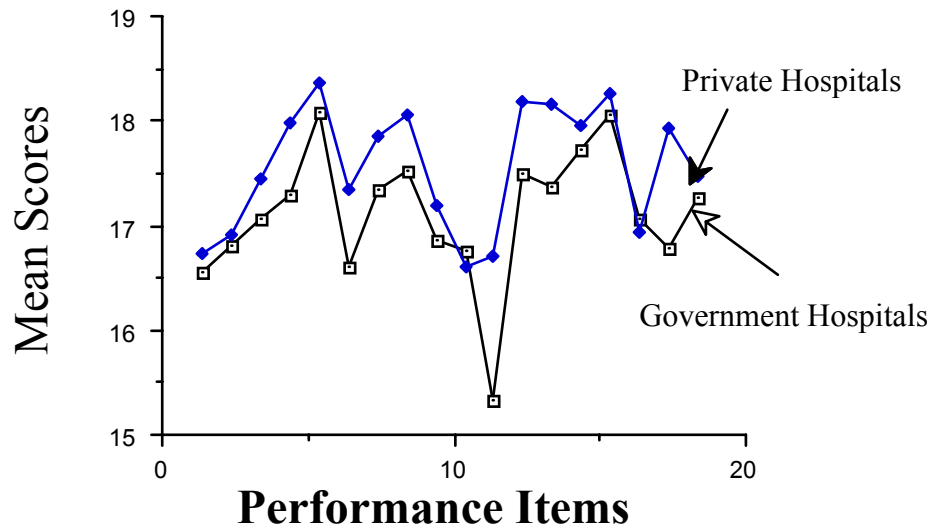


Figure 3. Mean Comparison Between Government and Private Hospitals in the Ratings of Registered Nurses Performance by All Nurses Combined.

#### Summary & conclusion

Findings of this study showed a positive relationship between nurses' performance and nurses satisfaction. Nurses' overall effectiveness was found to be correlated with nurses' overall satisfaction ( $r=.36$ ). Nurses' overall effectiveness was found to be correlated with nurses total satisfaction ( $r=.43$ ). Nurses' total performance and nurses' total satisfaction was found to be correlated ( $r=.29$ ). However, a weak relationship was found between nurses' total performance and nurses' satisfaction ( $r=.15$ ). Also a positive correlation was found between each performance aspect and each satisfaction aspect.

Nurses' overall effectiveness was found to be correlated with each satisfaction aspect (e.g., correlation between nurses' overall effectiveness and nurses' satisfaction with: pay  $r=.36$ , co-workers  $r=.22$ , supervisors  $r=.17$ , promotion  $r=.16$ , working conditions  $r=.07$ , job security  $r=.08$ , benefits  $r=.08$ , and working hours  $r=.02$ ).

There were significant differences between government hospitals and private hospitals in nurses' total satisfaction index scores ( $t=-.3.97$ ,  $p=.000$ ). Registered nurses were more satisfied in private hospitals than in government hospitals. These findings are consistent with other findings

(e.g., Blood, 1974; Borman, 1974; Harris & Schaubroeck, 1988; Porter & Lawler, 1965; Shore & Thornton, 1986; and Rosen, 1961).

In private hospitals more emphasis is placed on client satisfaction than in government hospitals. Private hospitals operate in uncertain environments, and they have to please their clients by providing good services. Registered nurses were more satisfied in private hospitals than in government hospitals. At the same time their propensity to leave was higher than in government hospitals, because most nurses working in private hospitals were foreigners and had to go back to their home country when their job contract expired.

Differences between nurses at the same level can be explained by differences in the type of hospital. The majority of private hospitals are relatively small hospitals in terms of number of beds, employees, medical staff, and registered nurses, whereas the majority of government hospitals are relatively larger than private hospitals in number of employees, medical staff, beds, and registered nurses.

In both government and private hospitals registered nurses rated their attendance and promptness the highest, followed by accepting responsibility for own behavior and personal appearance. Dependability and technical competence were rated the lowest by registered nurses.

It can be concluded that registered nurses emphasized two major parts in their performance: the first deals with patient services or attendance, and the second deals with the professional and organizational requirement (e.g., accepting responsibility). Registered nurses had to balance between pure organizational and services tasks, and they have to fulfill the expectations of two parties (supervisors and patients).

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