

## Assessment of Factors Affecting Performance of Nurses Working at Jimma University Specialized Hospital in Jimma Town, Oromia Region, South-West Ethiopia

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### Abstract

**Background:** Nurses performance remains long standing determinates of quality service rendered for patients admitted to hospitals. However, there is paucity of information on nurses' performance level in study area. Therefore, the objective of the study was to assess factors affecting performance of nurses working at Jimma University Specialized Hospital.

**Methods:** Institution based cross-sectional study was conducted on 239 nurses working in Jimma University specialized hospital from January 20-25, 2015. The study participants selected using simple random sampling method. The data was collected using structured self-administrated questionnaires and facilitated by trained masters nursing students. The data was entered into SPSS for windows version 20.0 and descriptive, Bi-variate and Multivariable logistic regression analyses were performed. Statistical level of significance declared at  $P < 0.05$ .

**Result:** More than half 53.1% of respondents were males and the mean age of 27 years. The qualification of respondents showed that 54.4% had diploma in nursing and about half 49.8% of them had less than two years work experience. Around one third 32.2% of the nurses rated their performance as poor performance. Perceived level of knowledge and skill [Adjusted Odds Ratio of 14.0 at 95% Confidence Interval (6.1, 30.9)] and feedback on performance appraisal [Adjusted Odds Ratio of 4.6 at 95% Confidence Interval (1.8, 11.2)] identified as factors affecting performance of nurses. Even though, lack of recognition, unsafe working environment and unsatisfactory remuneration & benefit had no statistically significant, nurses' rated them as factors hindering their performance.

**Conclusion:** Even though majority of nurses working in Jimma University Specialized Hospital rated their performance as good, there is still significant number of nurses who rated their performance below expected level. Perceived levels of knowledge & skill and feedbacks on performance appraisal were independent determinants of nurse's performance level. Thus efforts should be made by the hospital to keep nurses' up-to date through provision of in-service training on identified knowledge and skill gaps. In addition, the hospital should enhance provision of regular feedbacks on performance appraisal.

**Keywords:** Jimma town; Nurses; Performance; Performance measurement

### List of Abbreviations

AOR- Adjusted Odds Ratio; BSc- Bachelor in Science; CI- Confidence Interval; IRB- Institutional Review Board; JUSH- Jimma University Specialized Hospital; MDGs- Millennium Development Goals; SPSS- Statistical Package for the Social Science

### Background

Evidence revealed that competent, motivated and skilled health care providers are cornerstone for better performance of health care organizations [1,2]. The dearth of health care providers in health care system poses workload on providers and reduces individual's performances which in turn will be an obstacle for achieving local or international development goals [3-6].

Nurses constitute the largest human resource element in healthcare organizations and their performances have a direct effect on health care productivity [4]. Research report shows several factors affect the nurses' performance level. Job satisfaction, organizational commitment, level of education, experience, nurses' morale, work-related stress & burnout, support from co-workers, supportive supervision & feedback, training on clinical tools, recognition, job expectations, work environment, motivation, incentives, knowledge, skills, promotion, remuneration and competency level are among the numerous factors affecting nurses performance level [7-19].

The most recent information on nursing posts in country is that nurses make up the largest number of health workers in the public health sector. This means that the country relies heavily on nurses for service delivery; their performance is critical for the successful provision of health care. This study therefore, focuses on identifying factors that affect the performance of nurses in Jimma town. The factors affecting performance of nurses have not yet been examined in study area. So, there is need to seek evidence about performance of

nurses and it is necessary to improve the level of performance of first-line health workers or those who are continuously in contact with the clients, community and patients at different levels of health care system of study area. Therefore, the objectives of this study were assessing level of performance of nurses and identifying factors affecting nurses working at Jimma University Specialized teaching hospital in Jimma town.

## Methods and materials

The study was conducted in Jimma University Specialized Hospital (JUSH) from January 20-25, 2015 found in Jimma town at South-West of Ethiopia. Currently it is a teaching hospital with a total bed capacity around 560 with nearly 1500 hospital staffs. Among them 515 were nurses during study period. Institution based cross-sectional study design and simple random sampling was employed to select a total of 242 nurses. The sample frame was prepared according to their working unit. Nurses who had greater than or equal 6 months' work experience were included whereas those who were on leave and absent from work area during data collection period were excluded.

Data collection tools on performance of nurses were adapted and modified from validated questionnaire used other study [17-20]. The assessment tool is composed of questions to assess performance of nurse and factors affecting performance of nurses. Performance measurement tool contains nine items which are self-rating five point Likert scale (1= very poor, 2= poor, 3= good, 4= very good, 5= excellent). Data was collected by three trained data facilitators and they were facilitating the data using a structured self-administered English version questionnaire.

The completed questionnaires were checked for inconsistencies and missed values. Before data entry appropriate coding and editing was performed. After data entry, checking of already entered data was performed and the analysis was made using SPSS for windows version software package 20.0. Binary and Multivariable logistic regression tests were used to examine those factors affecting performance of nurse that was summarized and categorized from the questionnaires reported by nurses. Descriptive statistics also considered as per variables of interest. Statistical tests were performed at the level of significance of 5%. The results were summarized using tables and figures and presented with narrative descriptions.

Ethical clearance letter was obtained from institutional review board (IRB) of Jimma University College of Public Health and Medical Sciences. Study participants were briefed about the study and oral consent were obtained. Study participants were informed that they have a full right not to participate in the study, but they also informed that their participation in the study is very important. In addition, confidentiality of the information was assured and privacy of the study population was respected and kept as well. Moreover, to ensure confidentiality the name of respondents were not written on questionnaire.

## Result

### Socio-demographic characteristics

A total of 239 (98.8%) questionnaires were returned. More than half 53.1% of respondents were males and the mean age of respondents 27years. About 65% nurses were single and 43.1 % were followers of orthodox religion. The qualification of respondents showed that 54.4%

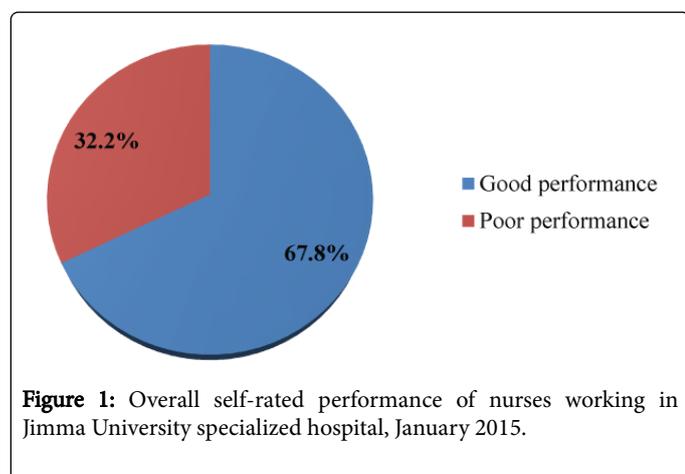
had diploma in nursing and about half 49.8% of them had less than two years work experience. Majority of nurses 57.7% earns monthly salary between 1201-2200 Ethiopian birr (Table 1).

Socio-demographic characteristics	Frequency	Percent
<b>Sex</b>		
Male	127	53.1
Female	112	46.9
<b>Age in years</b>		
21-30	207	86.6
31-40	14	5.9
41-50	14	5.9
>51	4	1.7
<b>Marital Status</b>		
Single	155	64.9
Married	81	33.9
Divorced	3	1.2
<b>Religion</b>		
Orthodox	103	43.1
Muslim	51	21.3
Protestant	75	31.4
Others (Catholic, Wake feta)	10	4.2
<b>Qualification</b>		
Diploma in Nursing	130	54.4
BSc in Nursing	109	45.6
<b>Work experience</b>		
<2 years	119	49.8
2-5 years	77	32.2
6-10 years	15	6.3
11-15 years	5	2.1
16-20 years	4	1.7
21 years and above	19	7.9
<b>Monthly individual income (Eth. birr)</b>		
<1200	19	7.9
1201-2200	138	57.7
>2201	82	34.4

**Table 1:** Socio-demographic characteristics of nurses working at Jimma University Specialized Hospital, January 2015 (n= 239)

### Performance of nurses

Self-rated performance assessment of nurses in JUSH calculated using total measures of performance measurement items such as attendance and punctuality, sick and emergency leave, improving personal skills, relationship with patients, quality of work, relationship with superior, relationship with colleagues, improving work methods and overall performance as compared to co-workers. Overall performance is rated at mean of 3.75, which indicate that good performance on the five point Likert scale used in this study. Self-rated performance was rated above highest quartile for most of items which measures performance of nurses. Overall self-rated performance showed that majority 162 (67.8%) of nurses working in Jimma University specialized hospital had good performance and 77 (32.3%) had poor performance (Figure 1).



**Figure 1:** Overall self-rated performance of nurses working in Jimma University specialized hospital, January 2015.

### Knowledge and skill

The majority of respondents perceived their knowledge and skill satisfactory as indicated in mean score of different items assessed their knowledge & skill. About 83% of respondents perceived that they had good interpersonal relationship skill with mean score of 4.15 followed by patient counseling skill (80.6%), implementing nursing care plans (79%) & health education (79%). The respondents rated themselves had poor knowledge & skill in providing in-service training with mean score of 2.72 & supervision of nursing students (3.59) (Table 2).

Knowledge and skill	Mean	Std. Deviation
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Planning of nurse care	3.9	0.902
Implement nursing care plans	3.95	0.899
Assessment of patient	3.94	0.948
Implementing of nursing performance standard	3.94	0.946
Health education	3.95	0.98
Clinical competency	3.94	0.875
Interpersonal relation	4.15	0.91
Patient counseling skills	4.03	0.902
Self-assessment with regard to outcome performance	3.85	0.936
Supervision of nursing students	3.59	1.148
In-service training	2.72	1.393
Management of time	3.85	0.966
Improvement of quality care	3.79	0.968
Maintaining facilities, equipment and supplies	3.42	1.145

**Table 2:** Mean score of self- rated knowledge and skill items by nurses working in Jimma University Specialized Hospital, January, 2015

### Performance appraisal and its utilization

Eighty eight (36.8%) of the nurses said that their performance were reviewed informally, but with regular review involving discussion about past performance and agree with future action, 74 (31%) of responded that a formal system of regular appraisal with review of past performance with setting of objectives and 49 (20.5%) reported that their performance reviewed informal with specific review when there is performance problem. However, 28(11.7%) were indicated their performance were not reviewed.

More than one fourth 63 (26.4%) respondents said the results of performance appraisal were not used. While 63 (26.4%) and 53 (22.2%) were said they used for rotation and training respectively (Figure 2).

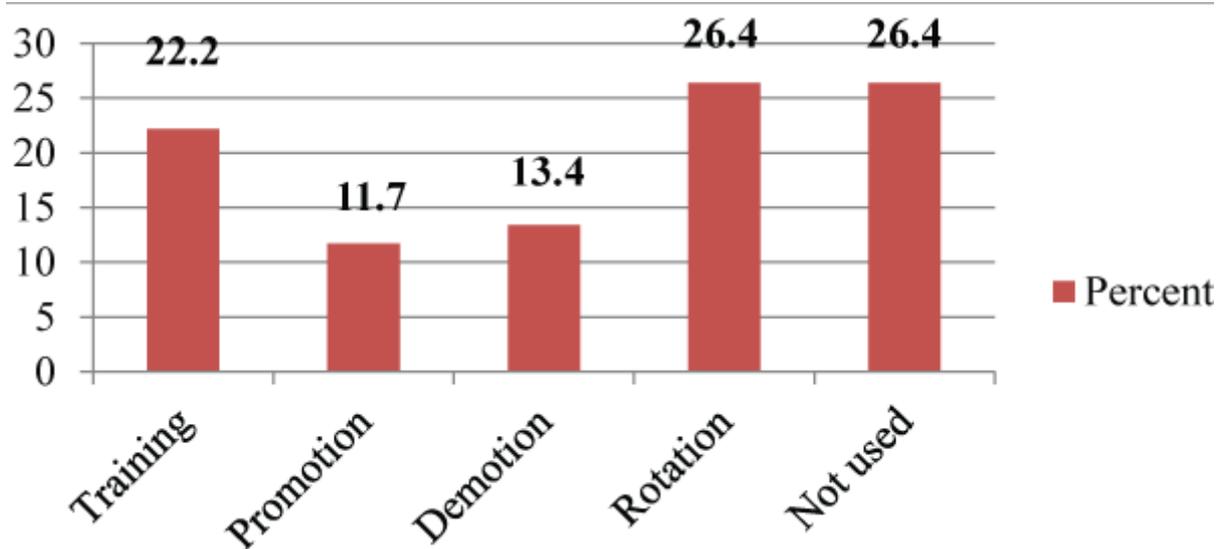


Figure 2: Utilization of the results of performance appraisal by Jimma University Specialized Hospital, January, 2015

### Performance management system

The mean score of different items assessed performance appraisal and utilization showed that majority of respondents were not satisfied with performance appraisal system and its utilization. Majority of respondents were uncertain with performance standards expected from staff are clear and understood by all members and Objectives to be achieved are known by individuals with mean score of 3.28 & 3.21 respectively. While 56 % of them disagreed with staffs are given opportunity to make comment on the result of their performance with mean score of 2.80 (Table 3).

Performance appraisal and utilization	Mean	Std. Deviation
Objectives to be achieved are known by individuals to be assessed	3.21	1.155
Performance standards expected from staff are clear and understand by all	3.28	1.217
Regular constructive feedback on performance appraisal result	3.02	1.154
Feedback how staff is performing is provided through the year	2.99	1.147
Prompt action is taken when performance fall below accepted standards	3.02	1.15
My manager supervision inspire me to do my best	2.81	1.323
Staff are given opportunity to make comment on the result of their performance	2.8	1.348

Table 3: Performance appraisal and utilization system by Jimma University Specialized Hospital, January 2015

### Remuneration, benefit and recognition

Nurses working in Jimma university teaching specialized hospital were not satisfied with their remuneration and benefit & recognition they received from institution. Majority of them were disagreed that remuneration was competitive with other similar organizations and remuneration given according to their responsibility with mean score of 2.06 and 2.10 respectively. Similarly, majority of them were dissatisfied with their fringe benefit and disagreed with that hard working nurses were recognized with mean score 2.18 and 2.44 (Table 4).

Remuneration, benefit and recognition	Mean	Std. Deviation
Remuneration is competitive compare to other similar organizations	2.06	1.26
Remuneration is according to experience	2.31	1.206
Remuneration is according to job responsibility	2.1	1.178
Fringe benefit are known to you	2.18	1.121
Opportunity exist for carrier advancement	2.24	1.156
Hard working nurses are recognized	2.44	1.364

Table 4: Remuneration, benefit and recognition of nurses working in Jimma University Specialized Hospital, January, 2015

### Staffing and work schedule

Majority of study participants 54.8% were disagreed with fairness of work schedule with mean score of 2.74 and Most of them were disagreed that to had opportunity to make inputs into staffing policies and procedures with mean score of 2.52. About 58.6% and 56.2% respondents were uncertain that sufficient staffs were allocated to cover the current workload and existence of opportunity for a flexible work scheduling with mean score of 2.93 and 2.81 respectively (Table 5).

Staffing and work schedule	Mean	Std. Deviation
Opportunity exist to make inputs into staffing policies & procedures	2.52	1.26
Opportunity existing for a flexible work schedule	2.81	1.245
The overall work schedule is fair	2.74	1.291
Over time work is acceptable	2.66	1.344
There is good balance between people who supervise work and people who do their work	2.61	1.255
Allocated staff in my unit is sufficient to cover the current work load	2.93	1.285

Care and support of staff in the form of counseling at the work place are available	2.79	1.27
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**Table 5:** Staffing and work schedule system of Jimma University Specialized Hospital, January, 2015

### Staff development

Majority of respondents 53.6% disagreed with availability of opportunity for continuing education with mean score of 2.68. Similarly, respondents disagreed with availability of job specific refresher courses and existence of nurse's participation in identifying their staff development needs with mean score 2.26 and 2.60 respectively (Table 6).

Staff development	Mean	Std. Deviation
Opportunity for advancing in the organization exist	2.51	1.263
Good opportunity for continuing education are available	2.68	1.3
The necessary training is given to ensure job effectiveness	2.3	1.299
Job specific refresher courses are available	2.26	1.31
In-service training adequately address the skill gap	2.36	1.317
Incompetent nurses are identified and provided with necessary support	2.31	1.215
Good leadership/management training available	2.36	1.302
Nurses participate in identify their staff development needs	2.6	1.337

**Table 6:** Nurses perception concerning staff development strategies of Jimma University Specialized Hospital, January, 2015

### Work space and environment

Nurses working in Jimma University teaching specialized hospital dissatisfied with work space and environment. Respondents were disagreed with availability of necessary instrument, material and supplements, infection control strategy guideline and work environment is safe and free from environment hazards with mean score of 2.33, 2.54, 2.44 and 2.26 respectively (Table 7).

Work space and environment	Mean	Std. Deviation
Work environment is safe and free from environment hazards	2.26	1.24
Good working play layout	2.49	1.148
Comfortable temperature	2.47	1.226
Necessary instrument are available	2.33	1.178
Instrument in working condition	2.45	1.169
Material and supplements are available	2.54	1.212
Hand solution for protection of staff and patient are available like glove, antiseptic etc.	2.5	1.256
Infection control strategy guideline available	2.44	1.275

**Table 7:** Nurses perception regarding work space and environment of Jimma University Specialized Hospital, January, 2015

### Factors affecting performance of nurses

With the control of sociodemographic and other related variables, feedback on performance appraisal and self-rated knowledge and skill are independent predictors of nurses' performance. Nurses who perceive feedback on performance appraisal were almost five times more likely to have good performance with AOR of 4.6 at 95%CI [1.8, 11. 2). Nurses who had good self-rated knowledge and skill were fourteen times more likely to have good performance as compared to poor self-rated knowledge and skill with AOR of 14.0 at 95%CI [6.1, 30.9].(Table 8)

Predicting Variable	P- Value	AOR (95% CI)
<b>Knowledge and skill</b>		
Poor knowledge and skill	0.001	1
Good knowledge and skill		14.020 (6.351, 30.947)
<b>Performance management system</b>		
Poor feedback on performance appraisal	0	1
Good feedback on performance appraisal		4.551 (1.848, 11. 210)

**Table 8:** Adjusted logistic regression model showing predictors of performance nurses among nurses working in JUSH, January 2015.

## Discussion

Nurses' performance level is cornerstone for better productivity of health care organizations. Less performing nurses reduces hospital productivity and a reason for poor hospitalized patient health outcomes. This study assessed nurses' performance level and identified factors affecting the performance of nurses.

In overall, 67.8% of nurses had good performance level. This indicates almost one-third of nurses are not performing at their best level which might contribute to long hospital stay, increased risk of nosocomial infection, increased health care cost and poor patient care outcomes. A similar finding was reported in Saudi Arabia [18].

More specifically areas rated at lower level by nurses' among performance measures were feedbacks to performance appraisal, remuneration, benefit and recognition, staffing and scheduling, staff development and workplace environment. These are areas where the hospital managers and nursing administrators should give emphases in order to get benefit out of nurse's best effort.

The majority of respondents rated their knowledge and skill as satisfactory. Interpersonal relationship, patient counseling skill and implementing nursing care plan rated at highest score. On another hand, some of nurses were rated below average in the area in-service training, maintaining facilities, equipment & supplies and supervising nursing students. This similar with studies conducted in Namibia [19]. From this it can be generalized that not all nurses had required knowledge and skill to provide effective nursing care and coaching nursing students. This might be lack of motivation from nurses to involve themselves in such activities.

Around ninety percent of nurses working in Jimma University Specialized Hospital reported that their performances were reviewed regularly in formal and informal system. While more than one fourth of them indicated that the results of performance appraisal were not used. This is consistency with study conducted in Namibia [19]. From this it can be concluded that there is good performance review system in the hospital. However, majority of study participants were not satisfied with utilization of result of performance appraisal. For instance, most of them responded that staffs were not given opportunity to make comment on the result of their performance and lack of feedback on results of performance appraisal. This might leads to nurses to continue their bad exercise which had negative effect on the patient care outcome. On other hand, study conducted in Armenia [16] showed that ninety five percent of nurses and midwives stated they received feedback about their job performance. The variation between this study and current study might be difference between organization systems.

Only ten percent nurses working in Jimma University Specialized Hospital were satisfied with their remuneration, benefit & recognition they received from institution. Majority of them were rejected their remuneration are in according to their experience. Additionally, most of the respondents dissatisfied with their fringe benefit and disagreed with those hard working nurses were recognized. Similarly, more than half of study participants were stressed that there is problem with fairness of work schedule and they had no opportunity to make inputs into staffing policies and procedures. Moreover, they reported that sufficient staffs were not allocated to cover the current workload and lack of opportunity for a flexible work scheduling. This might be diminishing the motivation and ambitions of nurses towards their job. This is consistency with study conducted in Namibia [19].

Concerning staff development, more than half of nurses rejected the availability of opportunity for continuing education, availability of job specific refresher courses and nurse's participation in identifying their staff development needs. Nurses were dissatisfied with work space and environment. They were reported that lack of necessary instruments, materials & supplements and infection control strategy guidelines. They also indicated that work environment is not safe and free from environmental hazards.

The significant predictors of performance of nurses in this study were perceived feedback on performance appraisal and knowledge and skill. Knowledge and skill had positive relationship with performance. Those have good knowledge and skill fourteen times more likely had good performance. This is consistency with study conducted in Armenia [16] and Namibia [19]. This might be those nurses had the required knowledge and skills, provide effective nursing care and exercising every activity confidently. Those nurses had perceived feedback on performance appraisal almost five times more likely had good performance. This might be frequent feedback they received from their superiors help and shape them to perform their activity in proper and confident manner.

## Conclusion

Even though majority of nurses rated their performance as good, there is still significant number of nurses who rated their performance below expected level. In this study, perceived knowledge and skill and feedback on performance appraisal had strong relation with performance of nurses. Jimma university specialized hospital had deficiency in utilization of performance appraisal system, recognizing hardworking nurses and creating safe working environment. Therefore, this study implies that effort should be made in developing courses address the knowledge and skill gap of nurses and developing mechanisms for appropriate utilization of performance appraisal result, recognizing and encouraging hardworking nurses and maintaining conducive work environment.

## Limitations

The limitations of this study ask the respondents to determine their perceived knowledge and skill and measuring performance by self-report are not best method gather information. The study did not include the primary health settings and private clinics. Due to this reason comparison between public and private clinic was not performed. Therefore, for future study research should consider better way to measure these areas.

## Competing interests

Authors declare that there is no competing interest

## Authors' Contributions

TT: contributed in proposal development and data analysis and wrote first draft of result. AA designed the study starting from title selection, prepared methodology part and designed the framework. FB approved the proposal and result with some revisions, participated in data analysis and interpretation. GN had involved in drafting the manuscript and revising it critically. SB involved in editing part of the paper and contributed to analysis, interpretation and conclusion. All authors read and approved the final manuscript.

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## References:

1. WHO. Viewed 16 December 2012.
2. Bennett S, & Franco L.M. Public sector health worker motivation and health sector reform: A conceptual framework, Major Applied Research 5, Technical Paper 1. Maryland, Partnerships for Health Reform Project, Abt Associates Inc.1999.
3. WHO. Human resource for health: Accelerating implementation of the regional strategy. Report of the regional director. AFR/RC52/13. Brazzaville: WHO regional office for Africa.2002.
4. Samuel, G. Human Resource Development for Health in Ethiopia: Challenges of Achieving the Millennium development Goals. *Ethiopia Journal of Health of development*. 2007; 21 (3): 216-229.
5. WHO. High-level forum on the health MDGs. 2004.
6. High Level Forum on Health MDGs. Report: addressing Africa's health workforce crisis: an avenue for action, WHO, Geneva.2004.
7. Gauci Borda R, Norman IJ (1997) Factors influencing turnover and absence of nurses: a research review. *Int J Nurs Stud* 34: 385-394.
8. Yang KP, Huang CK (2005) The effects of staff nurses' morale on patient satisfaction. *J Nurs Res* 13: 141-152.
9. Parker PA, Kulik JA (1995) Burnout, self- and supervisor-rated job performance, and absenteeism among nurses. *J Behav Med* 18: 581-599.
10. AbuAlRub RF (2004) Job stress, job performance, and social support among hospital nurses. *J Nurs Scholarsh* 36: 73-78.
11. Siu OL (2002) Predictors of job satisfaction and absenteeism in two samples of Hong Kong nurses. *J Adv Nurs* 40: 218-229.
12. Drach-Zahavy A (2004) Primary nurses' performance: role of supportive management. *J Adv Nurs* 45: 7-16.
13. Judge TA, Thoresen CJ, Bono JE, Patton GK (2001) The job satisfaction-job performance relationship: a qualitative and quantitative review. *Psychol Bull* 127: 376-407.
14. Mrayyan MT (2006) Jordanian nurses' job satisfaction, patients' satisfaction and quality of nursing care. *Int Nurs Rev* 53: 224-230.
15. Hall, D.S. The relationship between supervisor support and registered nurse outcomes in nursing care units. *Nursing Administration Quarterly*. 2007; 31(1),68-80.
16. Fort AL, Voltero L (2004) Factors affecting the performance of maternal health care providers in Armenia. *Hum Resour Health* 2: 8.
17. Tzeng HM (2004) Nurses' self-assessment of their nursing competencies, job demands and job performance in the Taiwan hospital system. *Int J Nurs Stud* 41: 487-496.
18. Al-Ahmadi H (2009) Factors affecting performance of hospital nurses in Riyadh Region, Saudi Arabia. *Int J Health Care Qual Assur* 22: 40-54.
19. Awases, M.H.,Bezuidenhout, M.C. &Roos, J.H. Factors affecting the performance of professional nurses in Namibia, *Curations* 36: 108.
20. Al-Badayneh, D. and Subhash, S (1993) An analysis of performance and satisfaction relationship among nurses in Jordanian hospitals. *Abhath AL-Yarmok Journal* 9: 29-66.