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IMPACT OF NURSES' PERFORMANCE EVALUATION BY THE COMPILATION METHOD ON THEIR JOB SATISFACTION: RESULTS OF A PILOT STUDY

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Abstract:

Introduction: *performance evaluation is as one of the principal tasks of managers to achieve organizational goals and promote the quality of services. It can have an impact on job satisfaction. This study aimed to determine the impact of performance evaluation by compilation method on nurses' job satisfaction.*

Methods: *forty eight nurses working in hospitals in Ramhormoz were enrolled with census. In the first phase, their job satisfaction was measured using JDI questionnaire. Then, before the intervention, samples were taught about the new way of compilation performance evaluating was made by researcher during a workshop session, then using the compilation evaluation form, their evaluation was for two months. At the end of the evaluation and feedback to subjects, again their job satisfaction were measured and job satisfaction scores after the intervention than before the intervention were compared and evaluated. Data were analyzed using the software SPSS-22.*

Results: *The results of this study showed that the performance evaluation scores of subjects after intervention [researcher made compilation performance evaluation] compared to pre-intervention three dimensions work, colleagues and supervisors of JDI job satisfaction separately and as a whole increased and there are significant differences meaningful. The results showed that there are significant difference in the scores of size [P <0/001], supervisor [P <0/001], college [P = 0/002] and job satisfaction [P <0/001].*

Conclusions: *Using new evaluation methods for nurses according to the clinical situation not only will increase the job satisfaction but also will improve the quality of patient care.*

Its application for Nursing Management

Changes in the traditional evaluation systems and using new nurses' evaluation methods and involving all in the evaluation can increase the level of the quality of care services. The implementation of this new method promotes the sense of confidence and job satisfaction.

Keywords: *performance evaluation, nurse, job satisfaction.*

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INTRODUCTION:

In the service-health organizations nurses are the most important human capital so that they do80 % of health affairs and 50% of health services [1 ,2].In Iran, for years the nurses' performance evaluation has been done as an organizational responsibility and it has been investigated by nursing researchers due to its importance [3]. The results of studies indicate that nurses' performance evaluation is effective in empowering them and also is effective in job satisfaction, commitment, accountability, efficiency and quality of service [Qomri Nick Peyma Khamene]. So, careful design and implementation of appropriate performance evaluation system and providing appropriate feedback to managers at different organizational levels allows the existing conditions and the pursuit of objectives to be clear. Also, it identifies strengths and improvable points to correct existing deficiencies and plan for required measures. Therefore, nurses' performance evaluation is important. Noteworthy point is that the current system of performance evaluation for nurses has not the necessary objectivity and is general and non-technical so that it has low compliance with the reality of administrative system [4].

Today, the old methods of evaluation such as explanatory notes, the mandatory distribution, ratings and descriptive rating scale replaced by more accurate techniques such as behavior-based rating scale, behavior observation scale, and objective-based management. Researchers have reminded that the nursing staff performance evaluation methods and tools should evolve from ease to the complexity and accuracy. Because changing the evaluation method from traits to behavior, results in increased reliability and validity of the evaluation tool. [5 ,6]. Unfortunately, research results in Iran imply that most of the health organizations use traditional methods which have weak and marginal role in the assessment of their real professional ability. So, it has just spent money and wasted time and has had no effect on improving the quality of care, performance correction and job satisfaction of nurses [7].

It is clear that there is a direct relationship between the performance in work and job satisfaction. Completely satisfied employees tend to complain less and have better physical and mental health, their life span is more, they learn fast new tasks associated with the job and face with fewer occupational accidents [8]. Analyses of human resource management theories about job satisfaction shows that job satisfaction is a multidimensional concept and depends on many factors including the nature and conditions of the work, salary, opportunities for career advancement, supervision way, relationships with colleagues and ... [9].

It seems that clinical evaluation in Iran is still an unsolved problem and the lack of clear standards for evaluating which have the characteristics of being specific, achievable, measurable, appropriate, and scheduled has affected the evaluation process [5 ,10]. The conducted researches in the country shows that the quality of nursing care as undesirable and the performance evaluation is considered as one of the most important measures of nursing managers to improve the quality of nursing care. So, in the nurses' performance evaluation we should use methods- in accordance with existing facilities and conditions- to direct their performance and guide them to achieve caring standards and goals. Given all these factors, the aim of this study was to determine the effect of performance evaluation by compilation method on nurses' job satisfaction.

The Method, Process and Sample

This is a quasi-experimental and an applied study. It conducted in hospitals of Mader and Imam Khomeini in Rāmhormoz [due to the same nursing management method, the physical structure, average number of patients, patient type, number of nurses and education level]. The study population consisted of 48 nurses. It was conducted by using one-group census method in two stage before and after the intervention in 2016.

First, based on common practice, nurses' performance and their responsibilities were assessed. Next, it was explained to people who have the conditions and criteria to enter the study the objectives and how to fill out evaluation forms and the process of compilation evaluation in two briefings for two hours. The evaluation was conducted by head nurses and supervisors in two months. The scores of sample units [nurse] provided to them and feedbacks recorded. After the intervention their job satisfaction was evaluated again by JDI standard forms in three aforementioned dimensions and data were analyzed.

RESEARCH TOOLS:

Researcher-made combined Questionnaire:

The questionnaire is of two standardized forms DOPS and 360 degrees. It has 16 items in five management indexes in the levels of skill, knowledge, management, initiative, creativity and communication. It has also 12 items for criteria desired by colleagues and 8 items for patients or their companions' assessment. Each item has a range of scores from 1 to 10. In total, the lowest score and the highest score are 72 and 360 which was filled by head nurse or supervisors for every sample unit

[nurse]. Reliability and validity of standard test of DOPS and 360 degrees have been confirmed frequently in Iran and abroad. According to the study results, DOPS method for objective evaluation of performance skills of nurses is valid and reliable. Reliability of DOPS test by Cronbach's alpha coefficient was 0/94. The lowest and highest correlation coefficient in the inter-rater reliability were 0/42 and 0/84 respectively which was significant in all cases [p = 0/001].
360-degree assessment questionnaire has also been applied by experts in many studies. Validity of the questionnaire was confirmed between 75% and 100%. To assess the reliability of the 360 ° questionnaire, Cronbach's alpha method applied for each of the performance evaluation variables based on 360 degree feedback and employee satisfaction was calculated and confirmed respectively as [α = / 9394], [α = / 8786] and [α = / 9258] [10-13].

Researcher-made evaluation form included two forms of new evaluation of DOPS and 360 which its validity was confirmed by professors of statistics and faculty members of university of Jondi Shapour in Ahvaz and its reliability calculated as 0/971 by using Cronbach's alpha.

Job Descriptive Index [JDI]:
JDI which also called the Job Satisfaction Scale is originally a job description index that is also used to measure job satisfaction. This questionnaire was made by Smith, Kendall and Hiolyn in 1969 and it is used in more than 1,000 institutions and prominent companies. JDI measures six aspects of work and job satisfaction: the nature of work, supervision, promotion, salary, co-workers and working conditions [14]. In this study, only three aspects of nature of work, supervisors and colleagues were evaluated and other aspects were not investigated due to financial and time constraints. Its validity was confirmed by faculty members of Ahvaz Medical University. Its reliability using Cronbach's alpha was equal to 0/866, 0/85 and 0/919 in the aspects of work, supervisor and colleague respectively.

Data analysis method
To analyze the data, software SPSS22 and descriptive statistics methods such as mean, standard deviation, frequency and percentage were used. Also, for inferential statistics paired t-test analysis was used to compare pre-test and post-test scores.

All ethical considerations observed according to the Helsinki treaties.

RESULTS:

In this study, 48 nurses participated. The sample includes 4 men [8/3%] and 44 women [91/7%]. In terms of education level, 95/8% had a bachelor's degree and 4/2 percent had a master degree. 7 nurses [14.5%] had a work experience under 5 years, 20 [41/7 percent] had the experience between 5-10 years, 15 [31.3%] between 10- 15 years and 6 [12.5%] over 15 years.

Paired t-test was used to compare the pre-test and post-test scores of sample group in the variable of work. The results are in Table 1.

As can be seen in the table above, paired t test results showed that the pre-test score was 34/58 and it increased to 38/97 in post-test. This increase is statistically significant [P <0/001].

Paired t-test was also used to compare the scores of pre-test and post-test in the variable of supervisor. The results can be seen in Table 2.

As can be seen in the table above, paired t test results showed that the pre-test score was 27/33 and it increased to 32/37 in post-test. This increase is statistically significant [P <0/001].

The third hypothesis is to compare the scores before and after intervention in the variable of colleague. This also was performed by paired t-test. The results are in Table

The results in the table above show that the mean scores of the variable of colleague increased from 32/54 to 37/52. This increase is significant [P = 0/002].

Finally, in the last part of this study, the total scores of job satisfaction in the pre-test and post-test were compared by paired t-test. The results can be seen in Table 4.

According to the results obtained in the above table, the total mean scores of job satisfaction increased from 94/62 in pre-test to 108/41 in post-test. This increase was statistically significant [P <0/001].

Table 1: Comparing the mean scores of job satisfaction in the work before and after the intervention in the sample

P. value	Standard deviation	Mean	Number	Stage
P<0/001	7.94	34.58	48	**Before intervention**
	5.63	38.97	48	**After intervention**

Table 2: Comparing the mean scores of job satisfaction in the variable of supervisor before and after the intervention in the sample

P. value	Standard deviation	Mean	Number	Stage
P<0/001	7.49	27.33	48	**Before intervention**
	6.29	32.37	48	**After intervention**

Table 3: Comparing the mean scores of job satisfaction in the variable of colleague before and after the intervention in the sample

P. value	Standard deviation	Mean	Number	Stage
P=0/002	8.43	32.54	48	**Before intervention**
	8.76	37.52	48	**After intervention**

Table 4: Comparing the total mean scores of job satisfaction before and after the intervention.

P. value	Standard deviation	Mean	Number	Stage
P<0/001	18.19	94.62	48	**Before intervention**
	14.63	108.41	48	**After intervention**

DISCUSSION:

This study aimed to investigate the effectiveness of performance evaluation by compilation method on nurses' job satisfaction. To do this, scores of nurses' job satisfaction was measured before and after the intervention and compared by using paired t test.

In the aspect of work, there was a significant deference before and after the intervention in statistical standards using paired t-test. This means that the intervention has changed the aspect of work and it shows that the intervention is effective. Habibi et al [92-1391] in their study showed that the results of DOPS and traditional methods are different and this indicates that their intervention and changing the evaluation method have made the differences. These differences have increased the clinical skills of the studied population [15]. Therefore, it is consistent with this study. Pishkar Monfared et al [1390] in their study entitled "An assessment of traditional and objective structured practical evaluation methods on satisfaction of nursing students in Zahedan Faculty of Nursing and Midwifery: A comparing" showed that their intervention has improved the nurse satisfaction from evaluation methods and this is consistent with the research [16]. In these studies, other evaluation methods have been used. Jamal et al [2016] conducted a research on job satisfaction of nurses working in deprived areas in Jordan. In the study, researchers examined the nurses in the normal conditions. Then, with the intervention and the distribution of questionnaires, they made a change in job satisfaction of nurses and their living conditions. This reflects that Diana et al intervention has led to a change in scores comparing before the intervention. It indicates an increase in the scores which shows the effectiveness of the intervention. So, it is consistent with this study [17].

In the aspect of supervisor, there was a significant difference in statistical indexes before and after the intervention using paired t-test. This means that intervention has changed the aspect of supervisor and

it shows that the intervention is effective. Christian Vandenberg and colleagues conducted a study in 2015 entitled "Evaluation of perceived support from supervisors and managers, job satisfaction and burnout". This indicated that working relationship and the support of supervisors to the nurses have a crucial role in their satisfaction with their job and working environment. It also has some influences in their job burnout. In this study, the researchers using intervention and the creation of models between nurses and their supervisors showed that it is possible to make better the relationship between the two groups and ultimately increase their job satisfaction which is consistent with this study in this respect. Mohammad Hussain Safi, Farima Mohammadi and Shahnam Arshi conducted a research in 2014 entitled The Relationship between perceived organizational justice and organizational commitment and job satisfaction in the staff of health centers and hospitals. It shows that the organizational justice has effects on managers and supervisors' behavior with their staff and dealing with them fairly and etc. it also indicated that organizational justice has some influence on the job satisfaction of the workplace. The results showed low job satisfaction before the intervention and its increase after the intervention. Reviewing and reforming the organizational justice and changing its pattern have improved the output results. According to the above, the research is consistent with this study [18].

In the aspect of colleague, there was a significant difference between statistical standards before and after the intervention using paired t-test which shows that the intervention was effective. A study conducted in 2016 entitled registering nurses' quality of work life in Canada and the United States; a comprehensive literature review conducted by Behdin Noruzi et al on articles published from 2004 to 2014. Given the changes in the sampling or the evaluation methods in hospitals in Canada and America, making changes to improve the work life of nurses and their working relationship with each other, the amount of their collaboration in difficult and critical conditions are significantly effective on their working conditions and job satisfaction. This study has achieved these results by investigating several articles in the areas of job satisfaction of nurses. These results are consistent with this study. A general and broad study was done by Nicole Berube et al. in 2016 entitled Validation Evidence for the Work Domain Satisfaction Scale. The study results suggest that working relationship between nurses and their relationship with their managers and the controllers have a huge impact on job satisfaction. The results suggest that improving working relationships in hospitals and health centers have a high impact on services, job burnout and job satisfaction of people. According to the results of their research, they have made suggestions. Based on the above, results are consistent with this research.

Finally, there was a significant difference in the total mean scores of job satisfaction in statistical criteria before and after intervention using paired t-test which shows that the intervention was effective. Pishkar Monfared et al [1390] in their study showed that the scores before and after the intervention have positive changes which is consistent with this study [16]. Hengame Habibi et al [1391-1392] in their study showed that the scores are significantly different compared to the previous researches. So, it is consistent with this study [15].

In explaining the results obtained in this study, some notes can be pointed out. Identifying the appropriate methods to increase job satisfaction and their application by managers is critical. Performance evaluation is one of the principal tasks of managers to achieve organizational goals and to improve quality of services and is one of the ways to achieve job satisfaction [10]. The results of our study showed that changing the way of evaluation, nurses' job satisfaction increased. One of the best methods of evaluation according to this study and other studies mentioned is new evaluation methods such as DOPS is 360 degrees that its application to enhance their job satisfaction in personnel evaluation is recommended.

Lack of proper implementation of the evaluation cycle, lack of working standards, not being close to reality the employee performance evaluation and not performing the feedback process can be seen through investigating the personnel evaluation system of the state [5]. In this study, we studied feedback from nurses after the evaluation and observed that by changing the evaluation method, job satisfaction increased. A study conducted by Mirza Beigi et al. indicates that the dissatisfaction with the current evaluation system and promotions is 67/66%. He says about Iran's performance evaluation: given the indifferent attitude toward this management practices in all organizations, especially in public institutions, not only did it fail, but it has actually been criticized by employees and even managers for various reasons [1]. So, we studied the job satisfaction of nurses by changing the method and using new methods of evaluation and this associated with nurses' increased satisfaction. In this regard, Timrek wrote: the final outcome of the performance evaluation system should promote the quality of cares and protect patients so that we ensure the existence of efficient workers who perform their duty on the basis of

professional standards, nursing rules and based on the interest in serving the organization [19] . In this study, we examined the effect of evaluation method on job satisfaction and observed that using a new method for evaluation increased the job satisfaction.

Habibi says: practical evaluation system with objective structure is a good alternative to the current traditional method due to being more objective. This method of evaluation is based on skill levels and the ability to perform practical skills. He stressed that the use of modern evaluation methods is more effective than the traditional method on enhancing the skills of other employees. It should be used most to achieve the ultimate objective which is to educate and retain qualified nurses and ensure high levels of patient care [15]that is consistent with the results of this research.

CONCLUSION:

The results of the present study showed that the change in evaluation methods and the use of modern evaluation methods increased the satisfaction level of nurses. So, we can conclude that the changes in the traditional evaluation systems and using new methods of evaluation in health care systems not only the job satisfaction increases, but also it can improve the quality of care services.

The strengths and weaknesses of the study

The limitations of this study include small sample size, lack of control group and not considering all items of job satisfaction questionnaire. It was due to low personnel and financial constraints. Designing the modern evaluation form can be pointed out as one of the strengths of this study.

CONFLICT OF INTEREST:

The authors had not any financial or personal relationships with other people or organizations during the study. So there was no conflict of interests in this article.

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