

Improving Nurses' Organizational Commitment by Participating in their Performance Appraisal Process

- Short running title

Improving Organizational Commitment Using Performance Appraisal

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- **Author contributions**

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Criteria	Author Initials
Made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data;	FS, FA, SP, MZ, FM, VS
Involved in drafting the manuscript or revising it critically for important intellectual content;	FS, MZ, FM, VS
Given final approval of the version to be published. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content;	FS, FA, SP, MZ, FM
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Improving Nurses' Organizational Commitment by Participating in their Performance Appraisal Process

Abstract

Aims: To promote the nurses' organizational commitment by their participation in the improvement of the performance appraisal process.

Background: Organizational commitment is one of the factors that secures safe and high quality care of patients. It also enhances motivation among nurses, which affected by various factors such as performance appraisal.

Method: A participatory action research study was undertaken (March 2015 to February 2018) with 39 intensive critical care nurses and nurse managers in Social Security Hospital in Iran, using a complete enumeration sampling method. The data was collected using organizational commitment and job satisfaction questionnaires, focus groups, semi-structured interviews, and Delphi technique.

Results: Three major themes emerged including inappropriate performance appraisal system, inefficient instruments, and unskilled evaluators. There were significant differences between organizational commitment and job satisfaction with performance appraisal process before and after the change in appraisal process.

Conclusions: Nurses' involvement in revising and improving the process of their performance appraisal leads to higher commitment.

Implications for Nursing Management: Maintaining a committed nursing workforce is vital for high quality healthcare. Nurse Managers can improve the process of nurses' appraisal to make more motivation among them and prevent some problems such as job dissatisfaction.

Keywords

1 | INTRODUCTION

Background:

Organizational commitment is an important factor in the relationship between the staff and the organization (Hoeve, Brouwer, Roodbol, & Kunnen, 2018) and indicates the attitude or orientation toward the organization (Sepahvand, Atashzadeh-Shoorideh, Parvizy, & Zagheri-Tafreshi, 2017).

Strong commitment to the healthcare organization decreases staff turnover, increases recruitment and retention, improves job productivity, satisfaction, and the provision of high quality of care to clients (de Oliveira, Griep, Portela, & Rotenberg, 2017; Mohammadipour, Atashzadeh-Shoorideh, Parvizy, & Hosseini, 2017). On the contrary, nurses with a low organizational commitment manifest behaviours such as decreased motivation, and absenteeism which ultimately lead to decreased satisfaction of patients and decreased level of community health (Gholami et al., 2017; Kim, Geun, Choi, & Lee, 2017).

The organizational commitment of nurses is affected by regulations and working conditions. Organizational support, leadership style, cultural factors and interpersonal relationship were the positive factors on organizational commitment (Hoeve et al., 2018; Larber & Savis, 2014). Arslan Yurumezoglu and Kocaman (2011) highlighted the guiding principles for the development of organizational commitment in terms of manager–employee communication, leadership skills, respect–recognition, and relationship with colleagues, autonomy and empowerment, orientation and collaboration.

One of the key factors in the motivation and commitment of nurses is the way in which nurses' performance appraisal is carried out (Rubel & Kee, 2015). Performance appraisal (PA) is an important responsibility for nursing managers to ensure the provision of safe, high-quality care for the patients (Gunawan, Aungsuroch, & Fisher, 2019). In addition, performance appraisal is one of the most critical practices of human resource management. This is because of the appraisal process can either leave nurses' feeling that their work is appreciated or if carried out badly, which they are not recognized and valued. In addition the performance appraisal of nurses shapes their commitment and engagement towards the development of the organization in which they work (Kadiresan, Selamat, Selladurai, & Ramendran, 2017). Effective performance appraisal has been shown to increase employee satisfaction, positive attitudes toward the organization, and improved performance (Chen &

Yu, 2014; Getnet, Jebena, & Tsegaye, 2014). Considering the important role of organizational commitment in promoting quality of care, and given the importance of appraisal performance in achieving the goals of health care facilities, and its effect on motivation and occupational satisfaction, the need for carrying out a study focused on the impact of improved performance appraisal process on nurses' organizational commitment was felt more than ever.

Literature review:

The results of a qualitative study carried out by the present researcher, concerning organizational commitment indicated that dissatisfaction with annual performance appraisal was one of the causes of nurses' indifference towards their work environment (Sepahvand, Atashzadeh-Shoorideh, Parvizy, & Zagheri-Tafreshi, 2018). This finding is consistent with studies that demonstrated that performance appraisal had a significant positive impact on nurses' intrinsic motivation. If the nurses perceive that the performance appraisal is accurate, effective, and fair; they seem to be willing to contribute more effort towards the attainment of organizational goals (Aly & Moustafa, 2016; Nikpeyma, Abed Saeedi, Azargashasb, & Alavi-Majd, 2014).

On the other hand, forces that detract from nurses' satisfaction with performance appraisal process, were lack of time needed for supervisors to complete this process, inadequately structured appraisals and unfairness of PA, lack of feedback and neglecting the use of PA for training and development (Aly & Moustafa, 2016; Nikpeyma et al., 2014). However, there is a lack of research examining how to overcome or minimize these obstacles in practice.

It is vital for nurse managers make improvement on the performance appraisal, since it determines the employee's commitment (Aly & Moustafa, 2016). It is imperative to survey the problems present in the performance appraisal system, to provide strategies to overcome these obstacles, and to pave the way for nurse's contribution in modifying the situation. An improved system will ultimately result in nurses' increased commitment to the organizations in which they work. .

Until now, no interventional studies have focused on the impact of improved performance appraisal process on nurses' organizational commitment. Acknowledging that effective practice requires pluralism in research methodology, action research has been increasingly implemented in health care research (Casey, O' Leary, & Coghlan, 2018). The focus of this methodology will be on gaining an understanding of the process of change involved in introducing, developing, and sustaining the evidence-based intervention and examining the

impact of the intervention on nurses by using a broad range of quantitative and qualitative methods. In addition, this research style is described as development oriented, problem-focused, empowering, and educative. The tenets of participatory action research are to collaborate with practitioners, implement change and improve practice (Casey et al., 2018).

Given change is often resisted, it is necessary to use a method that has the least resistance and impact. Among these, one of the most effective and practical research methods that can meet the goal is participatory action research (Wiig et al., 2014).

Aims

The aims of the study were to describe the process of an action research project, considering staff's career goals and objectives, and to develop an improved performance appraisal process to increase nurses' organizational commitment and job satisfaction. The authors will exemplify in the methodology, the specific research focus was not predetermined, but was decided together with the nurses during the problem identification and planning phase.

2 | THE STUDY

2.1 | Method

The present study was carried out through action research. Action research means searching for practical solutions to existing problems, to make changes through collaborative efforts of participants and their close collaboration with the researcher. The participants of the action research, observe their own performance, review the problems present in their performance, and make the required corrections (McCormack & Titchen, 2014).

2.2 | Context, participants and participation

This research conducted in Social Security Hospital in Khoramabad, Lorestan Province, Iran. This hospital is affiliated with Social Security Organization, the largest insurance system in Iran, and admits patients covered by social security insurance.

Prior to the study, the routine process of performance appraisal was as follows: at the end of the year, the head nurse completed the performance appraisal form without informing the nurses of the process and without explaining its principles, purpose and consequences. Nurses were then informed of the results of the evaluation and set their own career goals. Performance reviews were not a two-way process.

According to Polit & Beck (2017), in order to be able to take part in action research sessions participants need to have experience of the situation, and a willingness to participate, or they need to be able to control the problem, or help to solve the problem financially. Based on literature review, working in ICU was a negative factor for organizational commitment (Israel, Kifle, Tigist, & Fantahun, 2017). Nurses working in intensive care unit were found to be dissatisfied with the performance appraisal process (Aly & Moustafa, 2016; Israel et al., 2017; Nikpeyma et al., 2014). So the participants of this study were the nurses employed at ICU, CCU and NICU wards and the nurse managers with responsibility for these units. They were selected for participation due to their willingness to do so and in terms of nurse management for the power these individuals had to make decisions and and solve problems.

Purposive sampling, and complete enumeration method was used to select the participants in the qualitative and quantitative sections of the study. The inclusion criteria were: willing to voluntarily participate, have a bachelor's degree in nursing, have at least one year of work

experience, formal employment, and have at least one experience of performance appraisal. Informed consent was obtained from each participant and they were told that they could discontinue their participation at any stage. The total number of participants in the study was 39.

The study was carried out for three years from March 2015 till February 2018. In this study, a four-step action research cycle with a variety of quantitative and qualitative stages was used as follows: exploratory phase (identification and definition of the problems), designing strategies (identify and prioritize strategies), implementation (operational strategies), and evaluation (review of administrative action results)(see figure 1).

2.3 | Data collection during the study

Phase 1. Identification

The following measures were taken to define and identify the problem:

2.3.1. A quantitative approach was used to measure the primary level of nurses' organizational commitment in ICU, CCU, NICUs and nurse managers in hospital nursing office (n=39) and General wards as the comparison group (n=52).

The data were gathered using demographic checklist and Allen-Mayer Organizational Questionnaire. This 24-item questionnaire evaluates the level of organizational commitment at three aspects: affective aspect (items 1-8), continuance aspect (items 9-16), and normative aspect (items 17-24) using a 5-point Likert scale. The internal consistency (α) of this tool was 0.87 and stability equaled $r = 0.93$ (Lotfi, Atashzadeh-Shoorideh, Mohtashami, & Nasiri, 2018). In the present study, intra-class correlation coefficient ($r=0.9$) was used to calculate the reliability of the instrument.

2.3.2. Using the descriptive qualitative research method, the problems relating to the appraisal of nurses' performance and their prioritization was determined. This method is useful for explaining the issues and problems that need to be addressed (Elo et al., 2014). The participants were selected through purposive sampling method with maximum variation sampling and consisted of both genders with various work experiences. The data were collected using individual semi-structured interviews and focus groups.

The participants of each session of focus groups were a combination of clinical nurses, head nurses, and Matron and supervisors. The number of sessions was determined based on the

data saturation. Eventually, four sessions were formed. At each session, 7-10 nurses participated. Each session ranged from 85 to 115 and lasted an average of 100 minutes.

The duration of individual interviews on experiences of PA was 30-65 minutes, and an average of 47 minutes. After completing 14 individual interviews, data saturation was achieved. Two other interviews were conducted to ensure no new themes were being missed, and a total of 16 interviews was conducted.

The first author was responsible for conducting focused group interviews using an interview guide prepared on the basis of the research goals. The discussion was initiated with general questions like: "How do you assess the present method of your performance appraisal?" As the interview progressed, several follow-up questions were asked, such as "can you make clarification please" or "what do you mean". A digital voice recorder was used to record the data from a group interview.

After transcribing the interview data verbatim, the data was analysed with conventional content analysis on the basis of the steps recommended by Graneheim & Lundman including transcription of the whole interview, determining unit analysis, determining meaning unit, simplification of meaning unit, determining the initial codes, classification of similar initial codes in more comprehensive categories. Finally, the latent or implicit meanings of these categories were formulated as a theme. To assess the trustworthiness and rigour of research data, the four criteria of Lincoln & Guba including transferability, dependability, confirmability, and credibility were applied (Elo et al., 2014).

The credibility of the data was investigated through prolonged engagement in data, member-checking, triangulation of data from interviews and focus groups, and peer debriefing. After transcription and coding of the data, two nurse managers expert in qualitative studies reviewed the interviews, codes, and the extracted themes and presented their viewpoints if necessary. To assure of dependability, all the phases and methodology used were explained extensively and all the interviews, codes, and the categories were extracted by two nurse academics that were familiar with qualitative research and were asked to confirm the analysis course. To establish confirmability, a detailed report of the process and procedures used in the study was prepared to be evaluated by two external evaluators. To verify transferability, a rich report of the data and a precise description of the study context were provided and sampling was done with the maximum variation method (in terms of age, gender, place of residence, etc.) to obtain a wide spectrum of experiences and outlooks to make the results as transferable as possible. All members of the research team were involved in data analysis.

2.3.3. The measurement of nurses' satisfaction with the status of performance appraisal was done using a quantitative approach. The data was collected with a 10-item researcher-made questionnaire which used reliable sources of nursing management and by the cooperation of head of Nursing Management Department at School of Nursing and Midwifery in Khoramabad, Lorestan Province, Iran, and the representative member of the Office of Quality Improvement of Hospital. This questionnaire investigated the status of performance appraisal from various aspects on the basis of scoring the questionnaire using a Likert scale. To establish the reliability of the instrument, internal consistency reliability coefficient ($\alpha = 0.94$) and test-retest reliability coefficient ($r = 0.96$) were calculated. Data collection in this phase, took place between April and October 2016.

Phase2. Action Plan

The findings of the qualitative research were evaluated and analysed, the results were formulated as a list of problems, and a modified Delphi technique (because the traditional round one, open-ended questionnaire, was replaced with this predefined list of problems) was implemented in three phases. This is an acceptable modification of the Delphi process (Keeney, Hasson, & McKenna, 2011). Data collection in this phase, took place between November and December 2017.

Round 1: A list of 15 problems was developed from the previous qualitative phase and a panel of 15 experts were asked to identify the strategies for these problems. Then the data was analysed in SPSS version 21 and descriptive statistics calculated for each problem and a list of strategies was then developed.

Round 2: In this round, participants were asked to rate each strategy identified in round one based on five criteria: operational capability, costs, time, human resource, and support by the senior manager. Consensus was defined as 80% agreement or higher.

Round 3: In the final round, participants were asked to prioritize the strategies that obtained consensus in the previous round.

Phase3. Implementation of Strategies

The issues determined in the second phase were scheduled as an operational program and the deadline of implementation and the executive(s) (with the participation of the nurses) were determined and the programs were carried out. This phase, took place between January 2017 and March 2018.

Phase 4. Evaluation

In this phase, the results of the strategies to improve PA were explored. This phase consisted of assessing the level of organizational commitment after interventions, assessing the level of nurses' satisfaction with the new performance appraisal method, and comparison of both measurements with their initial assessment in the first phase.

3.5 | Ethical Considerations

Ethical approval for the study was provided by the Ethics Committee of ... University of Medical Sciences.

2.6 | Data analysis

The qualitative data was analysed using conventional content analysis and inferential statistical tests used to examine differences in quantitative outcome measures collected during Phase 1 and Phase 4. The small samples did not allow for use of parametric tests. The data were analysed with SPSS21.

3 | RESULTS

Phase 1

The results of the data analysis of demographic questionnaires indicated that 48.8 percentage of the samples aged between 31 and 40 years. Also, 94.9% were female, 94.9% held a BSc degree, 48.7% had a work experience less than 10 years, and 79.5% worked in rotating work shifts. Moreover, 53.8% were formally employed, 86% worked in ICUs, and 64.1% were simple shift nurses without any official position. The X² test revealed the homogeneity of the two groups of study participants and general ward nurses (comparison group) in terms of age,

gender, marital status, employment status, job experience, education level, shift and overtime work.

Based on table 1, assessment of organizational commitment level in the first phase (before the change) indicated moderate organizational commitment of both participants and the comparison group. Besides, results showed high level of continuous commitment level compared to the other two aspects in both groups. The results of Mann-Whitney test at the first phase of the study showed no significant difference between the two groups of nurses, according to the total organizational commitment and its three dimensions.

Table 1: Status of organizational commitment of nurses before changing in the performance appraisal process at ICU, CCU, NICUs and General wards of the Social Security Hospital of Khoramabad

In the qualitative stage of identification phase, 285 codes were extracted and after reducing, and merging the similar codes at various stages, the total of 90 codes were obtained which yielded 18 subcategories, 6 categories, and 3 major themes including: inappropriate performance appraisal system, inefficient instrument, and unskilled evaluators. Table 2 shows the finding of qualitative phase.

Table 2: main themes and subcategories of challenges in performance appraisal of nurses in Social Security Hospital in Khorramabad

Inappropriate performance appraisal system: nurses discussed the properties of appraisal system as below:

"The system of performance appraisal of the whole country and, hence, Social Security Hospital is a very old and useless. It is not possible to evaluate nurses well, and certainly, no improvement can be made. If I encounter or discuss with a head-nurse, as it is only the opinion of this one person being considered, surely my evaluation result would not be very good. In fact, the evaluation is not fair, and the feedback of the evaluation is not given to us until it has been finalized and announced on a form and then we will sign it. "

(a nurse with 13 years of experience).

Inefficient instrument: Almost all nurses emphasized the need for a specific evaluation instrument and accurate scoring. They referred to, pre-determined scores, and the impact of

characteristics and relationships on evaluation in the absence of a specific instrument. One of them had an interesting analysis:

“If there is to be an advantage for evaluation, one of its benefits should be to encourage the nurse who works better and to motivate the weaker nurse. When we do not have any specific tools ... our scores are all in strict ranges and close to each other, what’s the difference between a person’s score and another ... well, both of them lose their motivation.”

Unskilled evaluators: From the perspective of nurses, the evaluator should have the qualifications, expertise and experience required. For example, they said that the evaluator should be aware of the work of the relevant ward so that they can evaluate them well. One of them said: *“Then there is another problem, which is ... For example ... the evaluator who’s his specialty is something else, and had worked in another department, this evaluator assesses my performance, which has no relation to his specialty and doesn’t even have any knowledge about evaluation . Then this is how the evaluation is wrong. I do not think it’s right...”*

The results of the primary measurement of nurses’ satisfaction with the status of performance appraisal showed in table 3. The results showed that, before the intervention, the lowest level of satisfaction was related to the level of knowledge of the evaluator of the performance appraisal system, and how the evaluation form was scored by the evaluators. The results also indicated that the highest scores were allocated to the dissatisfied and completely dissatisfied columns of the questionnaire.

Table 3: Absolute frequency and relative satisfaction of ICU, CCU and NICUs nurses with the (before change) status of performance appraisal at Social Security Hospital in Khoramabad.

Phase 2: At this stage, the strategies were determined on the basis of participants’ opinions as the following:

1. Selecting the new performance appraisal method (360° method).
2. Educating the participants in the method of performance appraisal selected by themselves.
3. Develop a performance appraisal instrument on the basis of job description and responsibilities by the researcher and nurse managers.
4. Implementation of the 360° method of performance appraisal with new instrument.
5. Registering the positive and negative points of each participant in daily events performance forms.

6. Changing the evaluation intervals (quarterly instead of annually evaluation).

Phase3: To select the performance appraisal system, first all the nurses' performance appraisal methods, and the advantages and disadvantages of each method were explained to the participants in the two orientation sessions. The names of assessment methods were recorded in a table and scored on the basis of the participants' opinions. Then, the 360° method was selected as the best assessment method on the basis of the highest obtained score.

-This method was taught to participants in two educational workshops. All the participants were asked to study this performance appraisal system before attending the educational workshops and then the required instructions were provided. A pre-test and a post-test were administered and the items that obtained the lowest points were taught again on the basis of post-test results. An attempt was made to clarify the ambiguous issues on the performance appraisal system. To do so, a meeting was held with the head manager of the hospital, educational supervisor, clinical supervisor, head nurses, and clinical nurses which was coordinated by the nurse manager. The total framework of 360° performance appraisal system, the scoring procedure, and method of estimating the total score were explained. The researcher provided some opportunity for the participants to pose their questions and the required answers were given. This session lasted about 3 hours.

-The investigation and identification of problems and barriers hindering the implementation of the new PA method were done immediately as a pilot study on one nurse in each ward one day after the educational session. Then, the second educational session was held to remove the obstacles and ambiguities in the path of this method of evaluation. Again, the nurse managers and a group of clinical nurses attended this 1-hour session wherein the ambiguities were clarified by the researchers and the head nurses. Subsequently, two participants were assessed in each ward using the 360° method of evaluation and the need for no other educational session was felt by the participants.

-With regard to the evaluation instrument to be used, considering the recommendations by the participants, a performance appraisal form based on the most up-to-date duties list given by the Ministry of Health, Treatment, and Medical Education was prepared by the researcher and hospital nurse managers. The new performance appraisal form consists of 30 items. The validity of this instrument was evaluated using the face, content and construct validity. The face validity was confirmed by 15 nursing professionals. The Content Validity Ratio (CVR) was reported 0.78. The Construct validity using exploratory factor analysis showed 3 aspects.

The reliability of this instrument was measured by test-retest ($r=0.88$, $ICC=0.94$) and internal consistency ($\alpha=0.91$). Nurses believed that this form of PA does not have any deficiencies observed in other forms as it is specified for each occupational level and evaluates various skills on the basis of list of duties.

- Also a checklist was developed to record the daily events of performance for each nurse to objectify the clinical performance appraisal and to be used in the scoring at the end of the course with the participation and opinions of the nurses.

-Regarding the evaluation time intervals, it was decided on the basis of the participants' opinions that this evaluation be conducted at 3-month intervals (quarterly) instead of 12-month intervals. Then, the total score of evaluation was estimated by the use of the mean of these scores.

At the end of this phase, two performance appraisals were carried out by the new method at the end of the spring and summer of 2018, and then the final stage data was collected.

Phase 4: The results as shown in table 3 demonstrated that, the highest percentage of satisfaction is related to item 2 appropriateness with job descriptions (79%).

Table 4: Absolute frequency and relative satisfaction of ICU, CCU and NICUs nurses with the (after change) status of performance appraisal at Social Security Hospital in Khoramabad.

As shown in table 5, our results demonstrated that rate of the nurses' satisfaction with performance appraisal system was significantly increased after implementation of the new assessment method ($P<0.005$).

Table 5: Comparison between means satisfaction of ICU, CCU and NICUs nurses before & after changing in the performance appraisal process

Based on table 6, statistically significant difference between the organizational commitment of ICU, CCU and NICUs nurses and nurses in general wards in the first and fourth phases. In addition, results of this phase, showed a high level of normative commitment than the other two dimensions

Table 6: Comparison between mean organizational commitment of nurses after implementation of the new performance appraisal method at ICU, CCU and NICUs and General wards of the Social Security Hospital of Khoramabad

After the implementation of the change, the average of organizational commitment of ICU, CCU and NICUs nurses showed a significant increase while there was no statistically significant difference between the organizational commitment of nurses in general wards ($p=0.43$) (table 7).

Table 7: Comparison between organizational commitment of before and after changing in the performance appraisal process at ICU, CCU, NICUs wards of the Social Security Hospital of Khoramabad

4 | DISCUSSION

Nurses' commitment to the improvement of their organization is essential for the realization of efficient care. One of the factors affecting the commitment of nurses of all ranks is performance appraisal, which is one of the main concerns of managers and nurses. The aim of this action research was to develop an improved performance appraisal process to increase nurses' organizational commitment.

The findings of the qualitative section of this study (table 2) entailed interrelated concepts that reveal nurses' real perception of the problems in performance appraisal. An analysis of the participants' experiences showed that they had perceived these problems along three themes: assessment method, instrument, and skills of the evaluator.

A recent study undertaken by Nikpeyma et al (2015), clinical nurses working across all of the hospital units expressed that the appraisal tools are not suitable for performance evaluation and cannot accurately differentiate between nurses in various levels. Rubel & Kee (2015) state in their study that, from nurses' perspective, an appropriate performance appraisal is one which uses an instrument suitable for the centers' expectations of them and which uses a comprehensive method. Bal & Bozkurt (2014) report that conducting the performance appraisal by expert individuals with the required capacity for and awareness of assessment would lead to beneficial consequences for both the individual and the organization.

Obviously, the nurse manager ought to familiarize the nurses with the evaluation instrument items and their expected behaviours. On the other hand, the use of traditional obsolete

methods such as the use of one evaluator or a checklist without modification in performance appraisal would not be adequate for responding to the expectations and wishes of the nurses. Since from their perspective, the results obtained in this way would be a unilateral subjective assessment without any proper feedback exerting negative effects on nurses' perception of managers, and the profession and finally resulting in reduced motivation and increased intent to leave.

Hence, the application of a comprehensive method with the participation of tactful evaluators familiar with performance appraisal methods can predispose to the objectivity of the appraisal and removal of evaluation errors.

Our findings further revealed that the level of nurses' satisfaction with the performance appraisal system, improved significantly after implementation of the 360° method, developing an instrument based on duties list and responsibilities, and the implementation method. Indeed, if nurses were allowed to participate in the performance appraisal program from A to Z, they would feel more responsible towards the organizational goals and try to improve future performance. As a result, they will struggle to increase their work commitment and compensate their performance weaknesses. Bal & Bozkurt (2014) also suggest in their study that proper performance appraisal would increase personnel's motivation to struggle more enthusiastically to achieve organizational goals. Champion et al. (2015) also postulated that the use of the 360° assessment method could positively affect management, increasing satisfaction and motivation in managers. Also, participating in performance appraisal can improved perceived fairness which a highly influential factor is on organisational commitment (Dauda, 2018). Performance appraisal acts as a fulcrum in continuous communication and satisfaction of employees. These can affect on employees in various ways; leading to diverse reactions and behavioral outcomes (Ahuja, Padhy, & Srivastava, 2018).

Our findings suggest that the nurses' organizational commitment was at a moderate level before implementing changes and the continuous commitment points were higher than the normative commitment points (table 1). Those individuals with this type of commitment because of the high costs of leaving stay in the organization. In other words, nurses have no inclination for staying in the organization; yet, all have almost the same attitude towards the costs of leaving, so that they are obliged to stay. The results of the study by de Oliveira, et al. (2017) and Nantsupawat, Kunaviktikul, Nantsupawat, & Wichaikhum, (2017) also showed

that many nurses dispensed their decision for organization leave due to be informed of problems with leaving the hospital.

After implementation of change, results indicated a high mean of organizational commitment and higher mean of normative commitment compared to two other aspects (table 6 and 7). Considering the lack of any change in conditions of work environment, and hospital management style during the study, it could be asserted that promotion of organizational commitment from a moderate level to a high level is the result of nurses' participation in exerting changes and their own decision-making about the status of their performance appraisal. Rubel & Kee (2015) and Kadiresan et al. (2017) also reported in their study that the method of implementing the performance appraisal and managing the human resource in any organization could affect organizational commitment level, and consequently influencing the intention to leave by the personnel. On the other hand, an increased score of normative commitment in this study approves this assertion. Normative commitment is an ethical bilateral commitment, which increases confidence in the organization (Larber & Savis, 2014). It serves as an important factor in provoking individuals' participation and improving job satisfaction (Kheirkhah, Seyedaliakbar, & Fathi, 2014) with an inverse relation with an inclination for work leave (Sepahvand et al., 2017; Tabancal & Korumaz, 2015).

Finally, the total results, demonstrated the effect of the changes exerted by nurses' contribution on their performance appraisal improved organizational commitment.

CONCLUSION

Our findings suggested that performance appraisal is among the important factors influencing the nurses' organizational commitment.

The findings of this study can certainly be used to increase the knowledge and awareness of nurse managers in relation to the significance of nurses' performance appraisal with their own participation to promote their organizational commitment. In this way, a closer attention must be given to the position of this process in the nursing profession, ultimately lead to increased quality of care. This would certainly be realized if the nurse managers provide the suitable context, such as efficient method, instrument, and human resource for performance appraisal. Organizational commitment may be promoted if list of duties announced to nurses at the beginning of the work; the assessment method modified, and if conducted at intervals

approved by nurses. Thus, investigating the effect of changes in other variables on organizational commitment by the contribution of the nurses themselves is recommended.

Limitations

As with most qualitative research, the study undertaken in one CCU, ICU, and NICU in Iran and therefore the findings may not be directly generalizable to other critical care units. Therefore, it is suggested that future studies explore the effects of performance appraisal on organizational commitment in other related wards and other healthcare centers using larger sample volumes.

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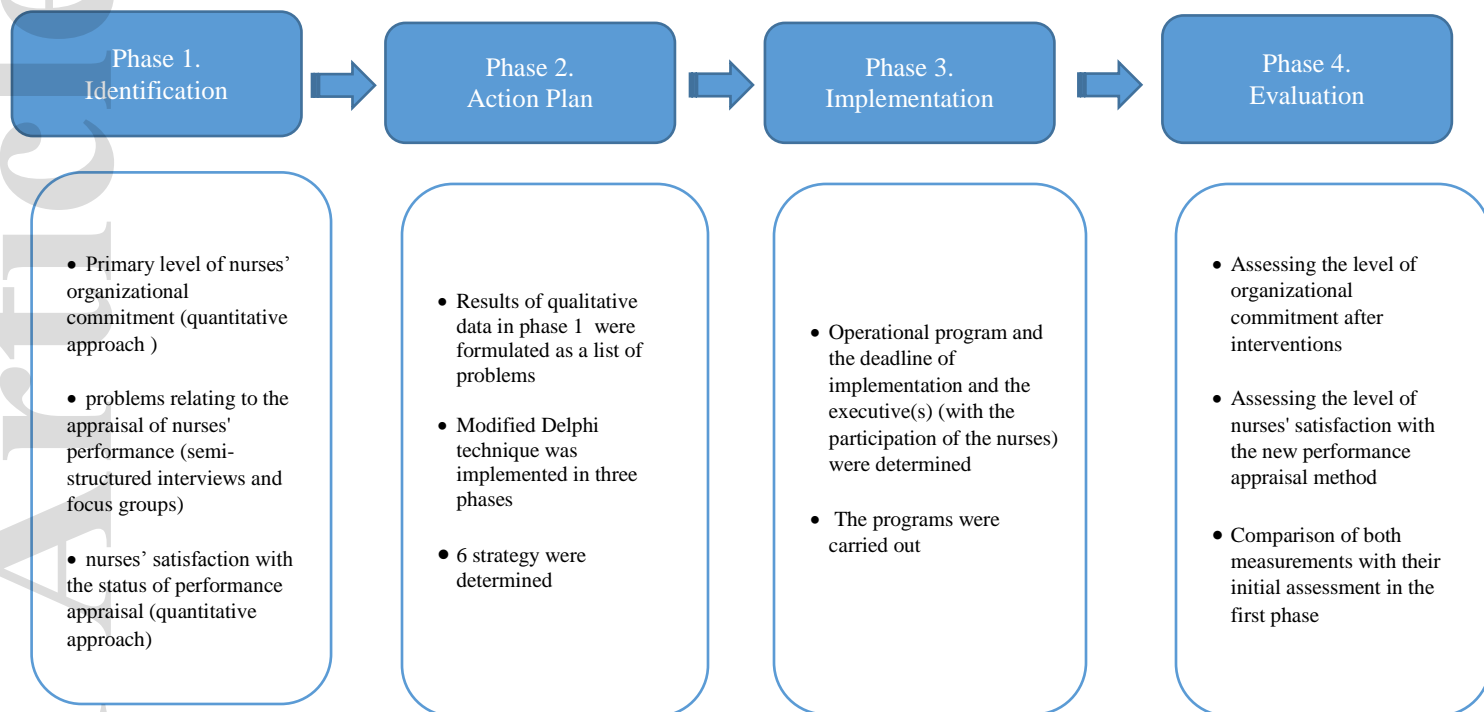


Figure 1 Overview of the action research process, data collection and analysis

Table 1: Status of organizational commitment of nurses before changing in the performance appraisal process at ICU, CCU, NICUs and General wards of the Social Security Hospital of Khoramabad

Before intervention	Affective		Continuous		Normative		Total commitment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Participant groups	21.07	6.39	22.33	5.53	19.16	7.03	62.56	14.35
Comparison groups	20.88	6.18	21.28	5.73	19.03	7.15	61.19	16.07
Man-Whitney test (between groups)	p=0.31		p=0.28		p=0.12		p=0.23	

Table 2: Main themes and subcategories of challenges in performance appraisal of nurses in Social Security Hospital in Khorramabad

Themes	Categories
Inappropriate performance appraisal system	Lack of collective wisdom
	Risk of authoritative influences
Inefficient instrument	Ambiguous items
	Non-compliance of items with job description
Unskilled evaluator	Lack of awareness of the evaluator
	The trivialization by the evaluator

Table 3: Absolute frequency and relative satisfaction of ICU, CCU and NICUs nurses with the (before change) status of performance appraisal at Social Security Hospital in Khoramabad.

Variable Satisfaction level	Completely satisfied=4		Satisfied=3		Relatively satisfied=2		Dissatisfied=1		Completely dissatisfied=0	
	No.	percent	No	Percent	No.	percent	No.	Percent	No.	Percent
Clarity of assessment form items	6	15	4	9	6	15	14	37	9	24
The proportion of the items with job description	3	6	7	18	9	24	11	28	9	24
The rating method of items	4	9	9	24	8	22	13	33	5	12
Ability to identify strengths and weakness in members of staff	1	3	6	15	5	12	20	52	7	18
Intervals between performance appraisals	4	9	6	15	4	9	24	61	2	6
Evaluator's awareness of assessment method	3	9	3	9	12	30	9	22	12	30
Tactfulness and ability of the Evaluator in assessment	2	6	6	15	11	27	14	37	6	15
Scoring method of assessment form used by the Evaluator	5	12	7	18	8	22	7	18	12	30
Participants' familiarity	2	6	4	9	9	24	17	43	7	18

with the assessment method										
Provision of assessment feedback to participants	5	15	7	18	11	27	9	22	7	18

Table 4: Absolute frequency and relative satisfaction of ICU, CCU and NICUs nurses with the (after change) status of performance appraisal at Social Security Hospital in Khoramabad.

Variable Satisfaction level	Completely satisfied=4		Satisfied=3		Relatively satisfied=2		Dissatisfied=1		Completely dissatisfied=0	
	No.	percent	No.	percent	No.	percent	No.	Percent	No.	Percent
Clarity of assessment form items	12	30	13	34	7	18	7	18	0	0
The proportion of the items with job description	24	61	7	18	6	15	1	3	1	3
The rating method of items	13	33	7	45	5	12	4	10	0	0
Ability to identify strengths and weakness in members of staff	11	28	13	33	7	18	3	9	5	12
Intervals between performance appraisals	13	33	13	33	7	18	6	16	0	0
Evaluator's awareness of assessment method	16	42	8	22	7	18	4	9	4	9
Tactfulness and ability of the Evaluator in assessment	11	28	17	45	7	18	3	6	1	3
Scoring method of	13	33	11	28	7	18	6	15	3	6

assessment form used by the Evaluator										
Participants' familiarity with the assessment method	9	24	14	37	7	18	6	15	3	6
Provision of assessment feedback to participants	9	24	12	30	8	22	7	18	3	6

Table 5: Comparison between means satisfaction of ICU, CCU and NICUs nurses before & after changing in the performance appraisal process at Social Security Hospital in Khoramabad

Variable		P value
Clarity of assessment form items	13.70	0.004
The proportion of the items with job description	18.19	0.001
The rating method of items	24.43	0.003
Ability to identify strengths and weakness in members of staff	49.43	0.000
Intervals between performance appraisals	49.40	0.000
Evaluator's awareness of assessment method	61.57	0.000
Tactfulness and ability of the Evaluator in assessment	33.43	0.000
Scoring method of assessment form used by the Evaluator	43.27	0.000
Participants' familiarity with the assessment method	6.87	0.02
Provision of assessment feedback to participants	4.35	0.031

Table 6: Comparison between mean organizational commitment of nurses after implementation of the new performance appraisal method at ICU, CCU and NICUs and General wards of the Social Security Hospital of Khoramabad

After intervention	Emotional		Continuous		Normative		Total commitment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Participant groups	23.07	7.11	23.14	6.58	24.85	6.03	71.06	14.98
Comparison groups	20.01	6.03	21.43	5.32	19.68	7.23	61.12	16.23
Man-Whitney test (between groups)	p < 0.01		p < 0.02		p < 0.01		p < 0.001	

Variable Test	Emotional	Continuous	Normative	Total organizational commitment
Wilcoxon	3.93	5.63	4.96	6.83
p value	0.03	0.01	0.001	0.001

Table 7: Comparison between organizational commitment of before and after changing in the performance appraisal process at ICU, CCU, NICUs wards of the Social Security Hospital of Khoramabad