

The effect of Organizational Diagnosis Training Session on Organizational Change Capacity among Nurses

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Abstract

Background: Organizational diagnosis is an administrative tool used to promote organizational improvement and change orderly gain desired sustainability. **Aim:** This study assess the effect of organizational diagnosis training session on organizational change capacity among nurses. **Design:** A quasi-experimental research design was utilized in this study. **Setting:** The current study was conducted at Badr University Hospital. **Subjects:** A convenience sample used to select studied no = 60, equal 28 Staff nurse, 21 head nurses, and 11 supervisors. **Tools of data collection:** Two tools were used: the 1st namely the self-administrative organizational diagnosis questionnaire, which consisted of (30) items that contained six dimensions; each dimension contained (5) items, and 2nd was the organizational change capacity questionnaire, which consisted of (36) items that contained six dimensions, each dimension contained (6) items. **Results:** Study results showed that (90%) of the studied nurses gained a high level of organizational diagnosis during the post-test phase and (86.7%) at follow-up test as linked with the pre-test (28.3%). As well, (91.7%) of the studied nurses gained a high level of organizational change during the post-test phase, shadowed by follow-up test (86.7%) as paralleled with the pre-test (23.3%). **Conclusion:** This study had a positive, large effect size on nurses' awareness regarding organizational change during pre, post & three-month follow-up. **Recommendations:** Conduct educational programs among nurses' organizational change and create systems for sharing learning across boundaries.

Keywords: Nurses' Awareness, Organizational Change Capacity, and Organizational Diagnosis.

Introduction

Organizational diagnosis, is outlined to designate the operating plans of the organization and allowable conditions for regulating the support plans to advance. Organizational diagnosis will feed into an operation plan to as one accompanying the institution that must authorize expected determined inside the organization will be judged (*Foundation Pierre Fabre, 2024*). The diagnosis process was containing the description of aims, partners, exercises, and timeframe to draw and resolve data (*Appelbaum, 2020*). Productive diagnosis ought to be a basic process on account of the fact that start to examine an institution and its constructions role (What it does and does not stop), change starts, as change progresses, so does the 'immediately' efficiency, and essentially the diagnosis process likewise needs to continue (*Rajak, 2023*).

The organizational diagnosis is principal in the recognition of the problems, troubles, and restraints that negatively intervene in the organization's influence, in addition to the attainable determinants that are at the base, admitting to suggest likely resolutions. "Chief with these challenges are demands raised efficiency and adeptness, established effects interpretation, raised demands for services and supports adequate accompanying minimizing available resources, and the need to devote effort to something constant character bettering to increase an organization's influence and adeptness" (Serpa *et al.*, 2020).

Weisbord Six-Box Model was diagnostic models. The model uses six categories, that is to say purposes, form, connections, rewards, guidance, and beneficial systems, to act organizational diagnosis. Differing outlooks maybe used while resolving organizations, contingent upon the reasoning's purpose and the professional backdrop of the analysts (Saleh, 2023). The Organizational diagnosis model passed down has happened favorably to analyze organization, all facets of organizational diagnosis secondhand, it plays a duty in reconstructing organization administration expected intelligent to evolve the potential of arrangement (Ihsani & Yogyakarta, 2020).

The organization's guidance had individual main steps in the diagnostic process search out recognize and concerned with manner of behaving believes have reached gain. Ambition and reward; (formal and informal) must be resolved. Moreover building is the strength to work to realize joined accomplishment of whole. The makeup is presented optically in the institution charts (Shaikh, 2022).

There was clear gap in literature about the concept of change which is very changeable experience, firms are repeatedly incited to create main adaptations, taking everything in mind: fluctuating prospect needs, mechanical advances, and competitive action (Anning-Dorson & Nyamekye, 2020). Additionally literatures and studies were not demonstrated the organizational change that forever happened, completed for nurses planned actions, and joined with the organizational aim. According to literature, nurses' organizational willingness for change is a complex, multi-level build that can change in point at the individual, group, whole, area, or organizational level. Organizational diagnosis too has an act in moving nurses at different level and organizations' compliance to change (Stobierski, 2023).

Organizational change is presented in conditions of two together process and content, accompanying a contrasting between variable and transformative factors. Transformational change happens in reaction to the outside surroundings and precisely leadership impressions, assignment, strategy, and culture of the organization. Likewise, variable factors (administration practices, buildings, structures, and work climate) are promptly overwhelmed. Both factors influence motivation impulses, which in proper sequence impacts individual and organizational performance (Errida & Lotfi, 2021).

Organizational change capacities (OCC) are deliberate general for all additional active efficiencies (Power) embedded in an institution, that show broad, vital administrative competencies that admit firms to suit legacy potential to warnings and new convenience expected intelligent to devise new proficiencies. OCC is exactly assumed as a "meta-efficiency" that allows arrangements to wait competing in a very tangible energy (Supriharyant & Sukoco, 2023).

Change Capacity (CC) allows organizations to implement large-scale changes outside imperiling regularly movements. Few practical evidences have been stated on the relevance of OCC in transformative changes. Preparedness is a main determinant to guarantee the members of the arrangement share the aim. OCC would determine the essential capabilities to complete it. The organizational change skills (requiring processes, adaptability, trend, guidance, education, and culture) keep supporting the construction of the shared theories and attitudes that the organization will be able to have or do implement the leadership (Mladenova, 2022).

Organizational willingness concentrate on the nurses' skill of the organizational climate, that point of change can be achieved by visualized in three features: enlightening, assurance, and ability

skill (*Errida & Lotfi, 2021*). The change administration process allows experts inside organizations to influence and scale the change administration actions that help affected persons and groups move through their changes. At the organizational level, change administration is guidance ability for permissive change inside an institution and likewise a strategic efficiency created to increase the change volume and openness of the organization (*Creasey, 2023*).

Nursing organizational change management makes two things more important and difficult: managing extraordinary projects with shifting interplays and creating organizations with a geographically dispersed organizational structure and multi-corrective type. Not every modification is bad. Change management has emerged as a key component in the push to wait for competitors in a world of constantly increasing global rivalry and consumer expectations (*Agama et al., 2023*).

Since attaining changes to boost organizational impact is often a component of organizational development and growth initiatives, organizational diagnosis and organizational changes are closely related. However, organizational progress is not always a part of organizational changes. It's critical to shift between change and change consideration, or, to put it another way, strategically align with the organization's objectives. The projected effort to increase organizational impact and nursing welfare by modifications to organizational procedures, compositions, and training can be characterized as organizational development (*BOŽIĆ, 2023*).

Significance of the study

Organizational diagnosis and understanding the causes of lack of organization change and development have become a management necessity in organizations. Weisbord Six-Box Model, in the mid-1970s, an organizational design consultant named Marvin Weisbord (1976) presented its six-box model as a diagnosis tool of organizational effectiveness. Weisbord identified six areas or very important parts (goals, structure, payments, mechanisms of coordination and control, relationships, and leadership). In this model, the organization includes the following four components: work (daily activities), staff (skills of people working in the organization), the official organization (structure and policies of the organization) and informal organization (unwritten activities such as values and norms) (*Herawati et al., 2023*).

Aim of the study

This study aimed to assess the effect of organizational diagnosis training session on organizational change capacity among nurses.

Research hypothesis: -

After developing and implementing organizational diagnosis training session among nurses will be enhancing of nurses' knowledge and awareness about organizational diagnosis and appositve effect on improving organizational change capacity among nurses at pre, post, and follow-up.

Subject and methods

Research design: Quasi experimental research design was utilized to conduct this study.

Setting: The study was directed at Badr University Hospital affiliated with Helwan University and localized the region of Badr City, Cairo, Egypt.

Sampling: A convenient sample of all available nurses (60 nurses) from both sex working in the critical care unit, Emergency room, and Inpatient Department accepted to participate in this study, available at the time of the study.

Tools for data collection:

Tool (I): self-administration organizational diagnosis questionnaire: It consists of two main parts

- Part (I): Personal Characteristics Sheet; collect data related to personnel characteristics data of the study subjects such as: (Age, gender, marital status, nursing education, job title, years of experience, work shift, place of birth and residence).
- Part (II): A structured self-administrative questionnaire; referred to the organizational diagnosis based on six box models for nurses constructed and adapted by the researcher based on **Mamillo (2017)** and was reviewed by 5 experts, and pilot tested. The questionnaire consisted of 30 items that contained six dimensions (purposes, structures, relationships, reward, helpful mechanisms, and leadership); each dimension contained 5 items; it's measured the knowledge, awareness for the nurses.

The scoring system:-

It used a 3-point Likert scale that nurses' responses as (1) disagree, (2) neutral, (3) agree. Organizational diagnosis questionnaire consisted of 6 dimension and (30 items) with a total score of (90). The total grades of items summed up, converted into a percentage score, and classified in to three levels as the following:-

- The low level is less than 60%.
- The moderate is equal or more than 60 % to less than 75%.
- The high level is equal or more than 75%.

Tool (II): The Organizational change capacity questionnaire (OCCQ); a structured self-administrative questionnaire was constructed and adapted by the researcher based on **Buono and Kerber (2009)** questionnaire, which was validated by 5 experts, and pilot tested. The questionnaire consisted of 36 items that contained six dimensions (Facilitative culture, supportive infrastructure, different change approaches, ongoing strategizing, sufficient resources, and willingness and ability to change); each dimension contained six items by using a three-point Likert scale from responses as (1) disagree, (2) neutral, and (3) agree. The respondents were asking to rate the degree that agrees with the statements regarding levels of knowledge and awareness about the organizational change capacity

The scoring system:-

It used a 3-point Likert scale that nurses' responses as (1) disagree, (2) neutral, (3) agree. Organizational change questionnaire consisted of 6 dimension and (36 items) with a total score of (108). The total grades of items summed up, converted into a percentage score, and classified in to three levels as the following:-

- The low level is less than 60%.
- The moderate is equal or more than 60 % to less than 75%.
- The high level is equal or more than 75%.

Validity and reliability:

Validity:

Validity of the tools was approved (face and content). The forms were interpreted into numbers and tested by a group of five experts specific to nursing administration from various four academies, that is to say; two professors from Ain sham University; Damanshour University (one professor); Cairo university (one professor), and Assiut University (one professor).

Reliability:

Cronbach's Alpha was used to determine the internal reliability of the tool. Reliability of the tools was tested to determine the extent to which the questionnaire items are related to each other and the result was (0.996 & 0.996) for Organizational diagnosis and Organizational change questionnaire, respectively.

Ethical and legal consideration:

The research authorization got from the Faculty of Nursing ethical committee of Helwan University before offset the training, an authorization got from the Manager of Badr Hospital connected with the University. Informed consent was given to each sharing subject superior to information accumulation; participant informed about the determination and wanted consequences of the study, and confident about harmless presence, participant's partnership was willing, and they had the right to be removed from the study at whatever time outside some reason. Participants still were confident that anonymity and confidentiality remained approved, as were the assembled information second-hand for the study purpose. Ethics, principles, civilization and trust were esteemed.

Pilot study

The pilot study was completed activity on (10%) of the total sample content (6 nurses) to test relevance and clearness of forms and occasion wanted to complete it. No adjustments existed finished so participant in the pilot study remained contained in the study sample.

Field work:**First Phase: Assessment:**

The researcher changed the tools for data accumulation, join the Director of Badr Hospital connected with university to clarify the purpose and course of the study, together all essential knowledge about nurses as (numbers, qualifications, areas, gender, age and years of experience occupied in the emergency room). Attended the pilot study on 10% of the total nurses (6), furthermore the researcher start to accumulate data from origin of September 2023 completely at beginning of October 2023 (one months), by utilizing the changed tools accompanying the study participants in the setting thought-out applicable work opportunity outside bothering the everyday work and subsequently demonstrating the purpose of the study.

Furthermore the researcher start to accumulate data from origin of October 2023 completely of December 2023 (3 months), by utilizing the advanced tools accompanying the participants in the study location advised applicable opportunity outside interfering day-to-day work and subsequently disclosing the study ruling class. The researcher scheduled the visits to the ward accompanying the preparation area as following; the researcher visited the hospital 3 opportunities per week eventually shift; each visit was categorized from 4-5 hours (from 9am to 2pm).

Fundamentally, the researcher started accompanying the knowledge about organizational diagnosis questionnaire (pre-test) to determine the information of nurses before achieving educational program. The time wanted to end this tool categorized between (10-15) minutes. **Secondly**, the researcher used the self- administrative questionnaire (pre-test) to determine the information about organizational change competency of nurses before achieving training session. The time wanted to complete this form categorized between (15-25) minutes. Total period wanted to complete two together forms was categorized middle from two points (25-40) record.

Second Phase: Designing

The researcher planned a training session and established an information assessment questionnaire concerning organizational diagnosis and organizational change ability for nurses. Established the pre-test results, the approximate aims of the knowledge assessment concerning organizational diagnosis preparation meeting search out enhance nurses information about organizational diagnosis and its consequence on information about organizational change capability. Knowledge estimate questionnaire concerning organizational diagnosis that training session was created expected constant with the nursing work force needs. This phase, begun initially in January 2024 completely ended in February 2024 (2 months).

The organizational diagnosis training session was transported by the researcher, who divided nurses into (6) groups; each group contained (10) acting as a nurse under the instruction and support of Badr Hospital connected with the university nursing manager considering the routine assigned work.

Third Phase: Implementation

Implementation of training sessions concerning nursing organizational diagnosis accepted eight weeks as follows: Nursing organizational diagnosis preparation gathering was captured in six sessions per week (two months) as follows: Each group from the six groups of nurses accepted (3 visits/week) to conduct the program content, two visits of them contained (2 sessions), that, accepted (6 hours) with 15 minutes for break time. Various educational procedures were conducting the preparation assembly such as lectures, group discussion, and intellect storming. Also media used as, capacity point, data show, whiteboard, and program booklet that was prepared by the researcher in Arabic and English language for nurses that aided ruling class to correct and stimulate training meeting contents taken all the while sessions. Last of each session, nurses were informed about the next meeting time.

Organizational diagnosis preparation session for nurses was held in the education room of Badr University Hospital as part of a 24-hour shift in organization with the Nursing Director and in accordance with the daily work schedule. Activities completed activity in the sessions demonstrated in (training session's framework).

Fourth Phase: Evaluation

Immediate evaluation: after the accomplishment of the training session, an information appraisal questionnaire was given (post-test) to participants to determine nurses' knowledge about nursing organizational diagnosis and organizational change competency. Immediate evaluation post training session afterwards, each group done.

Follow-up post-program: reassessment was finished afterwards, three months post-attending the training session. The unchanging tools that were used in the next evaluation post-program were likely for the nurses. Follow-up evaluation post-training session was begun in April 2024 and concluded in May 2024 (two months).

Statistical analysis

Data admission and exploration were completed using SPSS statistical package version 26. Categorical variables were articulated as number and percentage while incessant variables were conveyed as (mean \pm SD). Chi-Square (χ^2) tested the association between row and column variable of qualitative data. ANOVA test associate the mean of typically disseminated quantitative variables. While T independent test associate the mean of typically disseminated quantitative variables in two groups. As well, Pearson correlation measured correlation between quantitative variables.

For all tests, a two-tailed p-value ≤ 0.05 was considered statistically significant, P-value ≤ 0.01 was considered highly statistically significant, while, p-value > 0.05 was considered not significant. Eta square (η^2) measured the effect size (The referential framework for identifying the effect size for ANOVA-test value) (*Knudsen & Thurah, 2023*).

Results

Table (1): Frequency distribution of personal characteristics among the studied nurses (n=60)

Personal characteristics		No	%
▪ Age (in years)	< 20	11	18.3
	20- < 30	30	50.0
	30- < 40	14	23.3
	40- < 50	5	8.3
	$\bar{x} \pm SD$	28.58 \pm 7.66	
▪ Gender	Male	48	80
	Female	12	20
▪ Marital status	Single	49	81.7
	Married	9	15.0
	Divorced	1	1.7
	Widow	1	1.7
▪ Place of birth	Rural	47	78.3
	Urban	13	21.7
▪ Place of residence	Rural	46	76.7
	Urban	14	23.3
▪ Education	Nursing Diploma degree	22	36.7
	Technical institute	26	43.3
	Bachelor's degree	12	20.0
▪ Job title	Staff nurse	28	46.7
	Head nurse	21	35.0
	Supervisor	11	18.3
▪ Year of experience	1 < 5 years	11	18.3
	5 years < 10 years	29	48.3
	≥ 10 years	20	33.3
	$\bar{x} \pm SD$	11.13 \pm 5.77	
Department	Critical Care Unit.	8	13.3
	Emergency room.	15	25.0
	Inpatient Department	37	61.7
Work shift	Full time	60	100.0

Table (1) showed that (50%) of the age of the studied nurses were ranged from 20- < 30 years old, with a mean age of **28.58 \pm 7.66**. Considering marital status, (**81.7%**) were single. Additionally, (**43.3%, 46.7% & 48.3%**) of the studied nurses holding a technical certificate, staff nurse and had experience lasting from 5 years < 10 years with a total mean of **11.13 \pm 5.77**. Finally, (**100% & 61.7%**) of nurses were working full time at in-patient department, separately. Furthermore, (**80 %**)

of the studied nurses were male, while only (20%) of nurses were a female. Also, (78.3% & 76.7 %) of the studied nurses were from rural area at place of birth and place of residence, respectively.

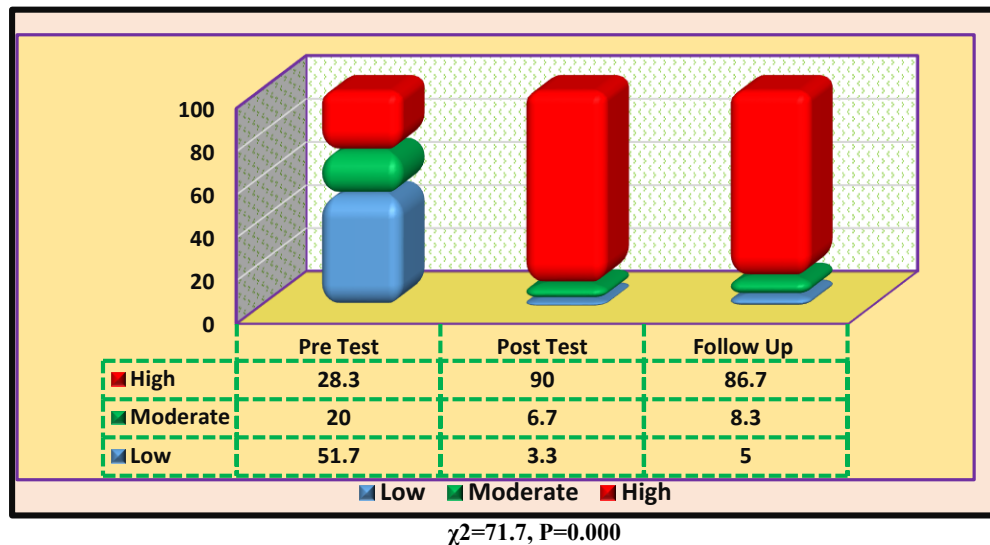


Figure (1): Percentage distribution of level of organizational diagnosis during pre, post & three months follow up among the studied nurses (n=60)

Fig (1) clarifies level of organizational diagnosis during pre, post & three months follow up among the studied nurses. It illustrates that more than four-fifths (90%) of the studied nurses gained a high level of organizational diagnosis during the post-test phase, followed by the phase of follow-up test (86.7%) as compared with the phase of the pre-test (28.3%). In addition to presence of difference between at $\chi^2=71.7$, $P=0.000$.

Table (2): Comparison between mean score of organizational diagnosis during pre, post & three months follow up among the studied nurses (n=60)

Items		Pre	Post	3 months follow up	F Test	P- Value
		$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$		
Purpose	Low	5.30±0.8	6.0±1.41	5.75±1.5	63.6	0.000 ***
	Moderate	10.13±0.5	10.0±0.81	10.20±0.4		
	High	14.71±0.6	14.89±0.5	14.90±0.5		
	Total	8.78±3.9	14.27±2.0	13.90±2.62		
Structure	Low	5.34±0.81	6.67± 1.5	6.25±1.5	54.7	0.000 ***
	Moderate	9.92±0.2	10.50±0.57	10.5±0.5		
	High	14.56±0.8	14.96± 0.27	14.98±0.1		
	Total	9.10±4.0	14.25±2.1	13.95±2.5		
Relationship	Low	5.70±1.2	6.50±2.1	5.67±1.1	83.8	0.000 ***
	Moderate	10.27±0.79	10.25±0.5	10.17±0.7		
	High	14.25±1.2	14.96±0.2	14.94±0.3		
	Total	855±3.6	14.37±1.9	14.0±2.4		
Reward	Low	5.43±1.0	6.0±1.4	6.0±1.0	71.2	0.000 ***
	Moderate	10.06±0.57	9.67±0.57	9.80±0.44		
	High	14.57±1.1	14.93±0.42	14.92±0.43		

	Total	8.80±3.87	14.37±2.0	14.05±2.3		
Helpful mechanism	Low	5.56±1.0	7.0±1.0	6.0±1.0	71.7	0.000 ***
	Moderate	9.82±0.6	10.67±0.5	10.0±0.7		
	High	14.18±0.9	14.96±0.2	14.90±0.4		
	Total	8.78±3.8	14.35 ±1.9	14.05±2.3		
Leadership	Low	5.32±0.83	6.50±0.7	6.0±1.4	78.2	0.000 ***
	Moderate	10.0±0.57	10.25±0.5	10.0±0.63		
	High	14.19±1.1	14.98±0.13	14.88±0.4		
	Total	8.70±3.9	14.38±1.9	14.10±2.1		
Total	Low	32.94±6.3	37.50±7.7	35.33±6.1	70.9	0.000**
	Moderate	59.25±2.7	60.50±5.3	59.40±3.2		
	High	84.18±7.5	89.67±1.7	89.23±3.1		
	Total	52.72±23.1	85.98±11.8	84.05±14.3		

*Significant $p \leq 0.05$

**Highly significant $p \leq 0.01$

F: ANOVA Test

Table (2) clarifies comparison between mean score of organizational diagnosis during pre, post & three months follow up among the studied nurses. It denotes, during the post-test phase, the studied nurses perceived higher mean score (**85.98±11.8**) of organizational diagnosis, followed by the phase of follow-up test (**84.05±14.3**) as compared with the phase of pre-test **52.72±23.1** (Total score=90). Moreover, there was a highly statistically significant difference between total mean score of organizational diagnosis during pre, post & three months follow up among the studied nurses at $P = 0.000$.

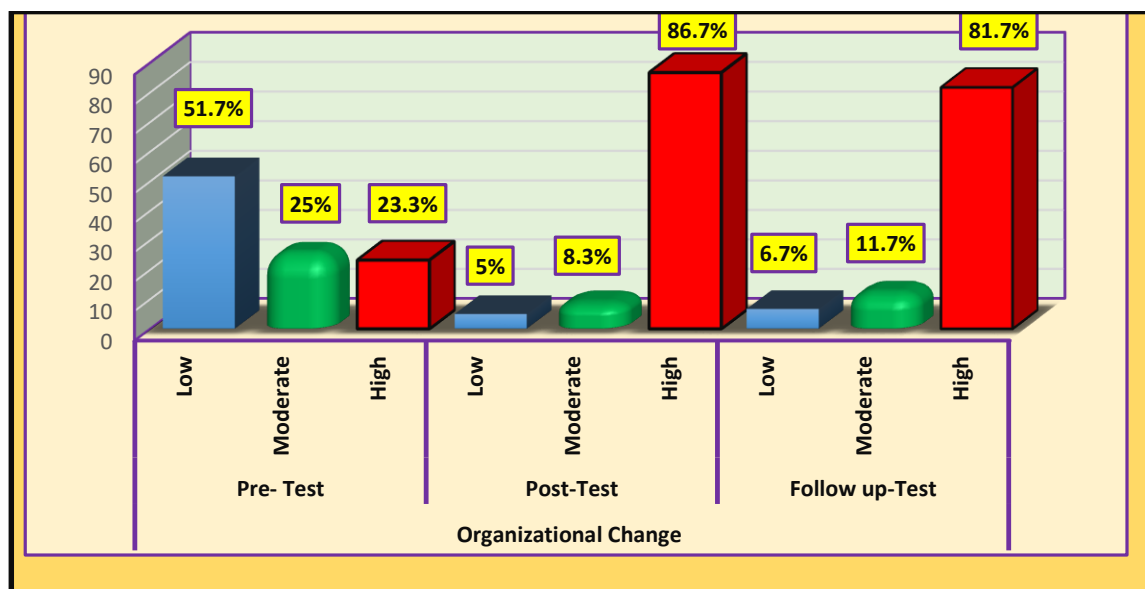

 $\chi^2=69.3, P=0.000$

Figure (2): Percentage distribution of organizational change during pre, post & three months follow up among the studied nurses (n=60)

Figure (2): clarifies level of organizational change during pre, post & three months follow up among the studied nurses. It illustrates that more than four-fifths (91.7%) of the studied nurses gained a high level of organizational diagnosis during the post-test phase, followed by the phase of follow-up test (86.7%) as compared with the phase of the pre-test (23.3%). In addition to presence of difference between at $\chi^2=69.3, P=0.000$.

Table (3): Comparison between mean score of organizational change during pre, post & three months follow up among the studied nurses (n=60)

Items		Pre	Post	3 months follow up	F Test	P-Value
		$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$		
Facilitative culture	Low	6.72 \pm 1.3	8.0 \pm 1.4	7.0 \pm 1.4	58.3	0.000***
	Moderate	12.14 \pm 0.5	11.83 \pm 0.4	12.0 \pm 0.5		
	High	17.64 \pm 0.4	17.85 \pm 0.6	17.90 \pm 0.3		
	Total	10.53 \pm 4.6	16.92 \pm 2.5	16.38 \pm 3.2		
Supportive infrastructure	Low	6.57 \pm 1.2	9.0 \pm 1.7	6.75 \pm 1.5	51.5	0.000***
	Moderate	11.73 \pm 0.4	12.0 \pm 0.0	12.22 \pm 0.4		
	High	17.06 \pm 1.6	17.83 \pm 0.7	17.89 \pm 0.42		
	Total	10.83 \pm 4.6	16.90 \pm 2.5	16.30 \pm 3.3		
Different change approaches	Low	6.61 \pm 1.2	8.50 \pm 2.1	7.25 \pm 1.8	57.6	0.000***
	Moderate	12.27 \pm 0.59	12.12 \pm 0.6	12.17 \pm 0.4		
	High	17.93 \pm 0.26	17.94 \pm 0.2	17.80 \pm 0.6		
	Total	10.67 \pm 4.7	16.95 \pm 2.4	16.53 \pm 3.1		
Ongoing Strategizing	Low	6.78 \pm 1.3	8.33 \pm 1.5	7.40 \pm 1.6	52.2	0.000***
	Moderate	12.29 \pm 0.46	12.0 \pm 0.0	11.86 \pm 0.3		
	High	17.86 \pm 0.36	17.83 \pm 0.7	17.90 \pm 0.5		
	Total	10.65 \pm 4.7	16.87 \pm 2.6	16.32 \pm 3.3		
Sufficient Resources	Low	6.28 \pm 0.88	7.50 \pm 2.1	7.20 \pm 1.7	52.2	0.000***
	Moderate	11.86 \pm 0.53	12.0 \pm 0.6	12.17 \pm 0.4		
	High	17.29 \pm 1.57	17.00 \pm 0.5	17.90 \pm 0.46		
	Total	10.70 \pm 4.8	16.97 \pm 2.5	16.43 \pm 3.3		
Willing and ability to change	Low	6.40 \pm 1.0	8.50 \pm 2.1	7.25 \pm 1.8	55.5	0.000***
	Moderate	12.0 \pm 0.6	12.60 \pm 0.8	12.00 \pm 0.63		
	High	17.33 \pm 1.4	17.85 \pm 0.6	17.84 \pm 0.65		
	Total	10.80 \pm 4.9	17.10 \pm 2.2	16.55 \pm 3.1		
Total	Low	40.03 \pm 8.0	53.67 \pm 11.6	41.50 \pm 8.5	55.5	0.000**
	Moderate	74.0 \pm 3.8	73.20 \pm 1.6	72.14 \pm 3.5		
	High	107.1 \pm 1.6	107.1 \pm 3.5	106.7 \pm 4.1		
	Total	64.18 \pm 28.3	101.67 \pm 15.1	98.52 \pm 19.5		

*Significant $p \leq 0.05$

**Highly significant $p \leq 0.01$

F: ANOVA Test

Table (3) clarifies comparison between mean score of **organizational change** during pre, post & three months follow up among the studied nurses. It denotes, during the post-test phase, the studied nurses perceived higher mean score (**101.67 \pm 15.1**) of **organizational change**, followed by the phase of follow-up test (**98.52 \pm 19.5**) as compared with the phase of pre-test (**64.18 \pm 28.3**) (Total score=108). Moreover, there was a highly statistically significant difference between total mean score of **organizational change** during pre, post & three months follow up among the studied nurses at $P = 0.000$.

Table (4): Effect size and η^2 of enhancing awareness about organizational diagnosis on organizational change during pre, post & three months follow up among the studied nurses (n=60)

Interval	Mean	SD	F Test	P value	η	η^2	Effect size
Pre-test	64.18	28.38	55.0	0.000***	0.619	0.383***	Large effect
Post-test	101.66	15.10					
Follow up	98.51	19.50					
Total	88.12	27.49					

*Significant $p \leq 0.05$

**Highly significant $p \leq 0.01$

F: ANOVA Test

* Small effect size = 0.01 to < 0.06

**Medium effect size = 0.06 to < 0.14

***Large effect size ≥ 0.14

Table (4): clarifies Effect size and η^2 of enhancing awareness about organizational diagnosis on organizational change during pre, post & three months follow up among the studied nurses. It calcifies that enhancing awareness about organizational diagnosis had positive large effect size on nurses' awareness regarding organizational change during pre, post & three months follow up at $\eta^2 = 0.383$. As when Eta-square value = 0.01 to < 0.06, the effect is considered weak, when it = 0.06 to < 0.14, the effect is considered medium and when it ≥ 0.14 the effect is large. Therefore, this provides enough evidence to support research hypothesis.

Discussion

The organizational diagnosis process serves as a valuable knowledge-gathering tool, with its primary significance being the awareness and effort it generates. The key steps in the diagnostic phase include orientation, goal setting, data collection, analysis and interpretation, feedback, action planning, implementation, monitoring and measurement, and evaluation (Rajak, 2023).

Concerning the personal characteristics of the studied nurses, as regard the age, gender, work shift, and year of experience; the study results show that half and less than one-quarter of the nurses' ages ranged from twenty to less than thirty and from thirty to less than forty years old, respectively, with a mean age of 28.58 ± 7.66 . Also, less than four-fifths of them were male. While all the studied nurses had full time shift work, less than half of nurses' years of experience ranged from fifth to less than tenth years with a mean of 11.13 ± 5.77 . From researcher point of view, the opening of special nursing schools for males and the nature of the hard work that requires physical strength and the need to work full time with night duties.

This result was consistent with the study done by Adebayo et al. (2021) entitled "An organizational diagnostic model for sustainable organizational performance", who reported that less than two-fifths and more than three-quarters of the nurses' ages were from eighteen to thirtieth and from thirty-one to forty-years old, with a mean age of 29.35 ± 8.5 . Also, four-fifth of them were male. Also, less than half of the studied nurses' years of experience ranged from fifth to less than tenth years) with a mean of 10.13 ± 5.33 and all of them working full time.

In the same line, the study done by El said et al. (2023) entitled "Nurses' perception toward organizational change and its relation to work motivation" described that most of nurses were female and more than three-fifths of the nurses' age was less than thirty-five years old, with a mean age of 34.90 ± 7.26 . While all the studied nurses had full time shift work, less than two-fifths of them had less than ten years of experience, with a mean of 10.81 ± 7.49 .

As well, the study applied by Elsheshtawy et al. (2024), entitled "Factors associated with nurses' readiness for organizational change and its relation to innovative work behaviours", found that the majority of nurses were female with an age less than thirty-five by mean 29.35 ± 6.44 . Also, less than half of nurses' years of experience ranged from five to ten years with a mean of 9.05 ± 7.14 and all of them working full time.

In relation to the studied nurses' marital status, educational level, job title, and department, the study results clarified that more than four-fifths of the studied nurses were single, with less than half of them having technical institutes and working as staff nurses. Additionally, more than three-fifths of nurses were distributed in different inpatient departments, and one-quarter were working in the emergency room.

From the researcher's point of view, most nurses who had a bachelor's degree or got enough experience prefer to work in a private hospital or travel for financial reasons. Hospitals need only a limited number of nurses with high job titles due to limited positions. As well, most hospitals need only a limited number of nurses to work in critical and emergency units, and the rest of the nurses are distributed in other hospital inpatient departments.

On the other hand, the results done by **Adebayo et al. (2021)**, found that less than two-fifths of the studied nurses were married, less than half of them had bachelor degrees, and nurses were working as a head nurse and assistant head nurse distributed in different departments. As well, **El said et al. (2023)** reported that four-fifths of nurses were married, less than three-fifths of them had bachelor degrees, and two-thirds were working as staff nurses, and one-quarter was working as a head nurse distributed in different departments.

In relation to the percentage distribution and mean score of organizational diagnosis throughout program phases among the studied nurses; the result of the study illustrates that most of the studied nurses gained a high level of organizational diagnosis during the post-test phase, which decreased to the majority of them at the follow-up phase compared with more than one-quarter of them at the pre-test phase. As well, nurses perceived a higher mean score regarding purpose, structure, relationship, reward, helpful mechanism, and leadership at post-program implementation compared to pre-program implementation, with a highly statistically significant difference between the total mean score of organizational diagnosis subtitles throughout program implementation phases.

From the researcher's point of view, it's essential for the working staff to be involved in the main organizational diagnosis process of deciding in what way or manner an organization acts its functions, by verdict appropriate news, resolving it, and making decisions and pieces of advice for organizational growth with considering the reward and job development as a motivation for staff.

As well, the result reinforced by the study completed by **Parker and Knight (2024)**, entitled "The SMART model of work design," and donated throughout the phases of coaching skills intervention program implementation that the studied group gets a higher score regarding organizational diagnosis throughout getting a higher score regarding using the organization helpful mechanisms to face experiment appraisals, work engagement, structure consequence; contentment of relatedness purposes and goals, organization's planning for staff growth and development, supervisor co-worker support, managerial relationship and control, which resulted in augment well-being and finest working in organizations.

In the same line, the result of the study done by **Ahn and Kwon (2018)** entitled "Effect of organizational diagnosis, job satisfaction, organizational commitment of a single-grade Korean medicine hospital using a six-box model" exposed a high improvement in the level of studied staff awareness and performance throughout program implementation phases regarding the organizational diagnosis, the manner of decisive how an organization achieves its goals and functions, helpful structure and working mechanism, making good authorities and recommendations for rewards related to organizational development with a highly statistically significant difference between program implementation phases.

Concerning the percentage distribution and mean score of organizational change throughout program phases among the studied nurses, the result illustrates that most of the nurses gained a high level of organizational change at post-test, which decreased to the majority of nurses at the follow-up

phase compared with less than one-quarter of nurses at the pre-test phase. As well, nurses perceived a higher mean score regarding organizational change subtitles at post-program implementation phases.

From the researcher's point of view, it's essential for the working staff to effectively share in the organizational different change approaches, ongoing strategizing, with a predominant obligation to organizational purposes and growth especially with supportive infrastructure and sufficient resources in order to improve well-being, performance, quality, and enable organizational and individual change.

This results reinforced by the study finished by **Diab and Eldeeb (2020)**, entitled "Effect of organizational support and knowledge sharing on nurses' innovative behaviour" and found that hospital administrator and nursing managers have to emphasis on achieving organizational change through the constant appraisal of organizational provision and continuing manoeuvring, knowledge-sharing behaviour by promoting, paying good performance, reassuring competitive spirit among nurses, rewarding paying consideration to staff satisfaction, facilitate resources with using deferent approaches and encouraging nurses' improvement by reassuring trying exhausting new ideas, practice, and a novel style of achievement things and membership the information with the co-workers and directors at work.

On the other hand, the study done by **Pomare et al. (2019)**, entitled "Organizational change in hospitals" and found that staff communicated uneasiness and had negative prospects regarding the organizational change. Concerns included insufficient staffing and the impending partnership analysis due to the new arrangement of workspaces. These doubts were composited by present involvements of sensation unacquainted about the change, as well as approaches of actuality exhausted and understaffed in the repetitively changing hospital surroundings.

In relation to the effect of enhancing nurses' awareness about organizational diagnosis and correlational findings between variables under the study; the result of the study clarifies the effect size and η^2 of enhancing awareness about organizational diagnosis on organizational change throughout program phases among the studied nurses. It calcifies that enhancing awareness about organizational diagnosis had a positive, large effect size on nurses' awareness regarding organizational change throughout program phases.

This result is supported by **Diab and Eldeeb (2020)**, who reported that there was a statistically significant positive correlation between organizational diagnosis dimension, organizational change, and all domains of knowledge sharing behaviour and all domains of innovative behaviour. Finally, there was a highly statistically significant positive correlation between total scores of organizational diagnosis dimension, organizational change, and knowledge sharing behaviour and innovative behaviour among nurses, and organizational support and knowledge sharing had a statistically significant effect on the innovative behaviour of studied nurses.

As well, the study was performed by **Jung et al. (2020)**, entitled "Empowering leadership, risk-taking behaviour, and employees' commitment to organizational change: The mediated moderating role of task complexity" and verified the positive effect of empowering leadership and organizational diagnosis dimensions on commitment to organizational change dimension with a difference in the relationship between risk-taking behaviour and commitment to organizational change depending on the degree of task complexity.

Likewise, the study finished by **Rofiq et al. (2023)**, entitled "Pengaruh organizational culture terhadap employee commitment, organizational innovation and organizational effectiveness," and illustrated that the majority of the studied sample got a high positive response throughout the in-service training program with a high positive effect on the organizational changing culture, which mainly affected the supervisor and staff relationship, facilitated work-related problem conversations, overcome job conflicts, and resulted in improving job relationships and performance properly.

And also, the result of the study done by **Ahn and Kwon (2018)** entitled "Effect of organizational diagnosis, job satisfaction, organizational commitment of a single-grade Korean medicine hospital

using a six-box model” exposed a high improvement in the level of studied staff awareness and performance throughout program implementation phases regarding the organizational diagnosis, the manner of decisive how an organization achieves its goals and functions, helpful structure and working mechanism, making good authorities and recommendations for rewards related to organizational development with a highly statistically significant difference between program implementation phases.

Conclusion

Based on the findings of the present study, it can be concluded that most of the studied nurses gained a high level of organizational diagnosis and organizational change during the post-test phase, which decreased to the majority of nurses at the follow-up test compared with around one-quarter of nurses at the pre-test. Additionally, the results clarify that enhancing awareness about organizational diagnosis had a positive, large effect size on nurses’ awareness regarding organizational change during pre, post, and three-month follow-up among the studied nurses.

Recommendation

On the light of the findings of the current study recommended the following:

Nurses’ level

- Implement continuous professional development sessions to improve awareness of organizational change.
- Encourage open communication channels for nurses to discuss organizational challenges and solutions.

Organizational level

- Integrate organizational diagnosis tools into performance evaluation systems.
- Encourage the formation of change agent networks about organizational change.
- Invest in leadership development programs focusing on change management skills.

Educational level

- Incorporate organizational diagnosis and change management concepts into nursing curricula.
- Design simulation-based training sessions to allow nursing students to practice managing organizational changes.
- Develop organizational educational program about the six box model for the nursing managers.

Research level

- Develop and validate tools to measure organizational change capacity among nurses.
- Encourage collaboration between academic institutions and healthcare organizations to research best practices in organizational change management.

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