**Effect of Training Program about Self Efficacy on Nurses' Innovative Work Behaviors**

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**Abstract**

    **Background** Self-efficacy is a fundamental value for nurses. Nurses as professionals, are expected to behave in the work place in a manner defined by the profession. This commentary discusses challenges and possible solutions to enhance self-efficacy and increases their innovative work behavior. **Aim of study:** Was to enhance self-efficacy for nurses and its effect on their innovative work behavior. **Research design:** A Quasi experimental design was utilized to meet the aim of this study. **Setting:** The study was conducted at Nasser institute Hospital**. Sample:** All available nurses who are working in the above mentioned study setting. The total numbers of nurses were 45 nurses. **Tools of data collection:** Three different tools were used in the present study of data collection. These were namely: (1) Self-efficacy knowledge questionnaire, (2) Self-efficacy skills questionnaire, (3) innovative work behavior. **Results:** There was a highly statistically significant difference among pre, immediate post program, and follow-up of the knowledge test and skills of nurses and level of their innovative work behavior. There was positive statistical significant correlation between knowledge and skills score for nurses and their innovative work behavior during immediately post and follow up (after three months) of the program phases. **Conclusion:** There was general improvement in nurses' knowledge and skills about self-efficacy and also their level of innovative work behavior as compared to pre course knowledge and skills. **Recommendation:** In-service training and training programs must be continuous process for refreshing increasing nurses' knowledge and skills about self-efficacy. Effort made by hospital administration to promote awareness of being a nurse in the clinical unit, this would aid their innovation into their work.

**Keywords:** Self-efficacy, Nurses, Innovative work behavior

**Introduction:**

    Health care organization culture influenced by its ability to manage human resources and satisfy patients. In addition to health care organizations that characterize by constructive cultures encouraging positive interpersonal relationships as well as value self-actualization and achievement oriented .In the rapid changing environment, organizations are facing greater challenges, and need to promote self-efficacy for nurses to deliver a good services, to stay competitive, and lead the change process itself. In order to accomplish their tasks successfully, organizations render support to their nurses to innovate their process, methods, and operations **(Kerber et al., 2018).**

    Self-efficacy deals with acquiring the basic knowledge of work and effective

strategies for managing that. Poor knowledge, lack of support and stress related to intense working situation and high patient acuity are the main reasons why nurses are leaving their unit and why they can't achieve any progress in it ((**Newm et al. 2018**)

Self-efficacy has a numerous benefit in nursing work as sustaining trusting caring relationship, creative problem solving through cooperation in conflict resolving, preserve the standards for mutual respect at work, expansion of safety climate, more concentration on work needs rather than unhealthy relations creating a healthy environment at all perception levels, and enable nurses to managing and dealing with any bad behaviors with a correct manner. Behavioral expectations must be role-modeled by nurses to display professionalism and support moral principal development (**Diliello et al., 2018**).

Many processes may enhance nurse's self- efficacy such as helping the nurses to experience success when completing a chosen task, the observation of others completing similar tasks, as well as the verbal affirmation from others, including health care professionals or peers. Self-efficacy is the concept of self-control and the ability to modulate the behavior to reach the goals. General self-efficacy refers to the overall belief in the ability to succeed (**Greenhaus, et al 2016**).

Self-efficacy is influenced by four important sources of information: performance accomplishments, vicarious experience, verbal persuasion, and physiological information. Other determinants of self-efficacy are internal personal factors and external environmental factors. The degree of change in self-efficacy is partly a function of the variability and the controllability of its determinants (**Williams, 2014**).

Self-efficacy positively influences nurses' behaviors, actions, commitment to success, and degree of efforts put forth into performance and problem solving. Self-efficacy influences peoples' actions that nurses can be highly confident that a particular behavior or action will lead to a certain outcome, however, if they do not have the self-efficacy or belief in their own ability to accomplish such a behavior or action, the original notion will not likely influence their behavior to act (**Hefner et al., 2017**).

Self-efficacy influence that, nurses develop a repertoire of mental schemas that influences their interpretation, perception, and organization of information gathered from the four sources of self-efficacy. Thus, efficacy beliefs of nurses are at the same time products and constructs of past experiences. Both positive and negative biases may arise from such pre-existing schemas that contribute to the maintenance of a current level of self-efficacy and leading to job satisfaction work/personal life balance (**Al-Mahmoud et al., 2017**).

Level of self-efficacy predicts how nurses are functioning, in terms of choice behavior, effort expenditure and persistence, thought patterns and emotional reactions. Measurement of self-efficacy is related to three dimensions of self-efficacy: magnitude, strength and generality. Self-efficacy should be measured in terms of particularized judgments of capability that may vary across realms of activity, different levels of task demands within a given activity domain, and

under different situational circumstances (**Raymond, & Sheppard, 2018**) .

Nurse has very important vision which can help them to understand what kind of value they should create for patients in the healthcare process in order to satisfy their needs. As patient needs change over time, hospitals should adopt innovative practices to continually satisfy patient needs and provide value to patients so managers should encourage nurses to use their knowledge and skills to change the old ways of thinking and practicing and to develop new ways of working that actually improve nursing practice (**Joseph, 2015**).

Innovation is a crucial factor for organizational success in today's competitive and dynamic environment and considers the major source of creating competitive capacity for different work. Innovation as the critical factor helping organizations to have a sustainable competitive advantage which lead to increasing nurses' job satisfaction, absence rates, patient satisfaction, and organizational success. Highly innovative nurses are more positive about their jobs and organizations, help others improve work efficacy, continually improve work-related skills and highly active (**Parker et al., 2017**).

Innovation is vital in terms of improving the quality of nursing care and maintaining. innovation in the nursing practice has a significant role, in terms of promotion of health, prevention of disease, identification of risk factors, prevention and health enhancing developers' behavior, maintenance and management of the new information to have qualified / methods / services findings. In the planning of nursing services, submission, and evaluation of the

use of innovative strategies are among the key factors that directly affect the quality of the service. Because nurses know what they do is important in a complex service system, (**Gundersen et al., 2019**).

Nurse's innovativeness is a persistent trait or disposition that determines how a nurse perceives and reacts to an innovation. Findings of the study by Ali explored that extraversion; agreeableness, conscientiousness, and openness to experience have positive effects on nurse's innovativeness and satisfaction with life perceptions, whereas neuroticism has negative influence on nurse's innovativeness (**Tsai and Wu, 2015**).

**Significance of the Study**

Nowadays the importance of scientific knowledge has been increasing and health-care applications are changing rapidly. The increasingly aging population, chronic treatment of acute illness depending on which treatment applications have changed the perspective on the quality of the patient's care and maintenance.so self-efficacy in nurses must be the main factor must developed. Increasing self-efficacy may foster independence and confidence Evidence suggest that job satisfaction and intention to stay in a profession are enhanced by a strong sense of practice self-efficacy? Nurses with low levels of self-efficacy would tend to avoid situations that led to failure in the past. When this occurs in nursing it can lead to an educational catastrophe. This leads to this issue that nurses would avoid specific tasks that they perceive may result in failure during work (**Iacobucci, & Lindell, 2017**).

Innovation is the most important tool for improving the community's quality of life. Usually, the concept of innovation in the health sector and in particular for nursing, new approaches, technologies and ways of working is described as a process of development. Innovation is vital for improving the quality of nursing care and its sustainability. The planning of nursing practice, submission and evaluation of the use of innovative strategies are among the key factors that directly affect the quality of the service. Based on all of these reasons and in the light of the literature, this compilation is prepared to offer information of innovation in nursing practice (**Bennett et al., 2018**).

**Aim of study**

This study aimed to enhance self-efficacy for nurses and its effect on their innovative work behavior

**Research hypothesis**

There would an improvement for nurses' knowledge and skills after implementing self-efficacy training program and there will have a positive effect on their innovative work behavior.

**Subjects and Methods**

**Research design:**

A quasi-experimental design was utilized to achieve the aim of the study**.**

**Research Settings:**

The current study was conducted at Intensive Care Units at Nasser institute Hospital. This institute affiliated to Shubra. It was established in 1987 as privacy hospital then turned to special medical institute in 1999, the hospital get the quality certification at January 2017 and the hospital is consists of 8 levels plus basement and bedroom. And its

Capacity 750 bed and 50 Outpatient clinics and 6 ICU units divided into:

**Table (A)**

| Intensive Care Units | Number of units |
|---|---|
| Kidney Care Unit | (1) |
| Cardiac Care Unit | (1) |
| Surgery Care Unit | (1) |
| Nneurological Care Unit | (1) |
| General Care unit | (1) |
| Pediatric care Unit | (1) |
| **Total** | **6** |

**Sample:**

The subjects include all available nurses who are working in the above mentioned study setting. The total numbers of nurses were 45 nurses were distribute d as following

| Intensive Care Units | No. of nurses |
|---|---|
| Kidney Care Unit | 5 |
| Cardiac Care Unit | 13 |
| Surgery Care Unit | 6 |
| Neurological Care Unit. | 7 |
| General Care unit | 9 |
| Pediatric care Unit | 5 |
| **Total** | **45** |

**Tools of data collection:**

Three different tools will be used to collect data for this study.

**I- Self-efficacy Knowledge Questionnaire**

It was developed by investigator based on review of related Structured questionnaire literature as (**Evers et al., 2018, and De Jong 2019),** to assess nurses' knowledge about self-efficacy, it include two parts:

**Part (1):** Personal data.

**Part (2):** It included different questions as (Multiple choice- MCQ) aim to assess nurses' knowledge about self-efficacy, It consisted of seven main elements which included (102) items subdivided into. 1) Concept of self-efficacy. It contained (16) questions. 2) Factors of self-efficacy. It contained (16) questions. 3) Dimensions of self-efficacy .It contain (16) questions, 4) Methods of self-efficacy (16) questions, 5) Types of self-efficacy. It contained (10) questions. 6) Sources of self-efficacy. It contained (14) Questions and 7) Skills of self-efficacy .It contain (14) questions.

**Scoring system:**

For answer in each question, scores were allocated as follow: (2) for agree, (1) for neutral and (zero) for dis agrees so the total scores (51). The participant who had a percent more than 60% this indicated an adequate knowledge and if less than 60% this indicated an inadequate knowledge (**Abo Habieb, 2018).**

**II- Self-efficacy Observational Checklist**

It was developed by (**DeGraff 2018, McDermott 2018, and Crow 2019**) to assess nurses' skills toward self-efficacy. It consisted of four main elements which contained (25) items, which are critical thinking skill (7) items, decision making skill (4) items, time management skill (7) items and communication skills(7 items **.**

**Scoring system:**

For answers in each question, scores were allocated as follows: (2) done, (1) incompletely done, (0) not done, and. The participant who had a percent more than 70% this indicated high skills, from 60% to 75%

indicate moderate skills and if less than 60% this indicated low skills (**Jessica and Crossman, 2017).**

**III - Innovative Work Behavior Scale**

This scale developed by (**Scott and Bruce, 2019**) .It aimed to assess innovative work behavior levels among nurses. It contain four domains (1) idea generation. It contain (18) sub items (2) idea exploration, It contain (15) sub items. (3) Idea championing. It contain (18) sub items and idea implementation, It contain (15) sub items.

**Scoring system:**

For answers in each question, scores were allocated as follows: (3) always, (2) sometimes, (1) never. The participant who had a percent more than 75% this indicate high innovative work behavior level, if the score was from 60-75 % this indicate moderate innovative work behavior level, if the score less than 60% this indicate low innovative work behavior level (**Amer,2019).**

**Validity of the tools:**

These three tools were tested for validity (Face and Content) through distribution of the tool to a jury of three Experts on field of Nursing Administration and Education from Benha. Modifications were done in the light of their valuable comments such as modify some words to give the most appropriate meaning for the phrase which were not clear.

**Tools Reliability:**

The reliability was done by Cronbach's Alpha Coefficient test for self-efficacy knowledge questionnaire was $\alpha = 0.940$, for self-efficacy skills was $\alpha = 0.882$ and for innovative work behavior scale was $\alpha = 0,908$.

**Ethical consideration:**

At the interview with nurses to collect data, they were informed about the purpose

and benefits of the study and their participation is voluntary and they have the right to refuse to participate in the study without giving any reason. In addition, confidentiality and anonymity of the subjects were assured through coding of all data.

## Pilot Study

Pilot study was carried out from the beginning of May, 2021 to the end of May, 2021 to assess tools clarity and applicability. It was done on 10% form the subject: 5 nurses were included in the main study subject because there no modifications are required. To evaluate the effectiveness of the proposed data collection tools, and assess the feasibility of the study. In addition to estimating the time required to fill the appendices that approximately ranged from 20 - 40 minutes. Subjects of pilot study were included in the study

## Field Work

The following phases were adopted to achieve the aim of the current study: assessment, planning, implementation and evaluation phases. These phases were carried out from the beginning of June, 2021 to the end of November, 2021.

## Assessment phase:

The process of data collection was carried out in June, 2021 to July, 2021.

## B- Planning phase:

This phase started at July, 2021 to beginning of august 2021

## C-Implementation phase:

This phase was initiated from the beginning of august 2021 to the beginning of September for two days weekly. Three days/week. The duration of each session lasted for 2 hours,

## D- Evaluation Phase:

The time of the data collection lasted for three months from the beginning of September, 2021 to end of November, 2021.

## Statistical analysis:

Data were verified prior to entry into the computer. The Statistical Package for Social Sciences (SPSS version 22.0) was used for that purpose, followed by data analysis and tabulation. Descriptive statistics were applied quantitative data (frequency and percentages). ($\chi2$) test was utilized to compare percentage between studied variable. Paired -t test was used to compare mean scores between pre and post program. Non-significant level value was considered when $p > 0.05$. A significant level value was considered when $p \leq 0.05$ and a highly significant level value was considered when $p \leq 0.001$. Arithmetic mean: as average describing the central tendency of observation. The standard deviation: as a measure of dispersion of results around the mean (for quantitative variable). T. test is a test of significance used for comparison between two variables for the same sample and Pearson correlation (r) test was used for association between total scores.

## Results:

**Table (1):** Shows that, the total studied number of nurses was (45) regarding to age the mean age of the studied nurses was (28.51±8.30) years old , about two fifth (40.0%) were aged 25 <35 years . as regarding to sex , more than half of them were females, As it show (57.8%), where (28.9%) of them worked in cardiac care unit , as for their educational qualification most of them Post-graduation studies (42.2%), as regarding years of experience more than half of them (57.8%) had from 5 < 10 years of experience

with Mean ± SD (7.37±3.79), and the majority of them (80.0%) didn't have any training about self-efficacy.

**Figure (1):** Its clear from figure that, there were highly significant improvement on nurses' knowledge levels regarding self-efficacy throughout post and follow-up phases (after three months) of the program compared with the preprogram phase, the minority of nurses(17.8%) had inadequate knowledge regarding self-efficacy through preprogram phase, but the majority of them (91.1%) had highly adequate knowledge regarding self-efficacy during immediately post program phase while it decrease(86.7%) through follow up phase (after three months) but they had adequate knowledge regarding self-efficacy compared with the preprogram phase.

**Figure (2):** Its clear from the figure that, the program had a greater effect on improving nurses total skills regarding self-efficacy throughout immediate post program and follow-up phases (after three months) of the program compared with the preprogram phase, the minority of nurses(24.4%) had low skills regarding self-efficacy through preprogram phase, but the majority of them (95.6%) had highly skills regarding self-efficacy during immediately post program phase while it decrease(55.6.7%) through follow up phase (after three months) but they had high skills regarding self-efficacy but still more than preprogram phase

**Figure (3):** Its clear from the figure that, the program had a greater effect on improving nurses' innovative work behaviors regarding self-efficacy throughout immediate post program and follow-up phases (after three months) of the program compared with the pre-program phase, about two third (4.4%) of

nurses had very low innovative work behaviors regarding self-efficacy through preprogram phase, but majority of them (97.8%) had high innovative work behaviors regarding self-efficacy during immediately post program phase. While about (82.2%) of them had high innovative work behaviors through follow up phase (after three months) regarding self-efficacy compared with the preprogram phase

**Table (2):** Reveals that, there was a statistical significant correlation between total knowledge level and total skills during immediate post program phase and there was a statistical significant correlation between total knowledge and total innovative work behaviors of them through follow-up phase (after three month)of program, while, there was a statistical significant correlation between total skills level and total knowledge during pre-program phase and there was a statistical significant correlation between total skills level and total innovative work behaviors of nurses through follow-up phase, there was a statistical significant correlation between total innovative work behaviors and total knowledge during immediate post program phase and there was a statistical significant correlation between total innovative work behaviors and total skills level toward self-efficacy of nurses through follow-up phase (after three month)of program.

**Table 1: Distribution of the studied nurses according to their personal characteristics (n =45)**

| Personal Characteristics | No | % |
|---|---|---|
| **Age (years)** | | |
| < 25 | 17 | 37.8 |
| 25 <35 | 18 | 40.0 |
| 35 <45 | 8 | 17.8 |
| ≥ 45 | 2 | 4.4 |
| **X̄±SD** | 28.51±8.30 | |
| **Gender** | | |
| Male | 19 | 42.2 |
| Female | 26 | 57.8 |
| **Unit** | | |
| Cardiac | 13 | 28.9 |
| Pediatric | 5 | 11.1 |
| Kidney | 5 | 11.1 |
| General | 9 | 20.0 |
| Neuro surgery | 7 | 15.6 |
| Surgical | 6 | 13.3 |
| **Educational Qualification** | | |
| Nursing diploma | 9 | 20.0 |
| Technical diploma | 9 | 20.0 |
| Bachelor of Nursing | 8 | 17.8 |
| Post-graduation studies | 19 | 42.2 |
| **Years of experience** | | |
| 1 < 5 | 9 | 20.0 |
| 5 < 10 | 36 | 57.8 |
| 10 < 20 | 6 | 13.3 |
| ≥ 20 | 4 | 8.9 |
| **X̄±SD** | 7.37±3.79 | |
| **Attending training program about Self-Efficacy** | | |
| Yes | 9 | 20.0. |
| No | 36 | 80.0 |
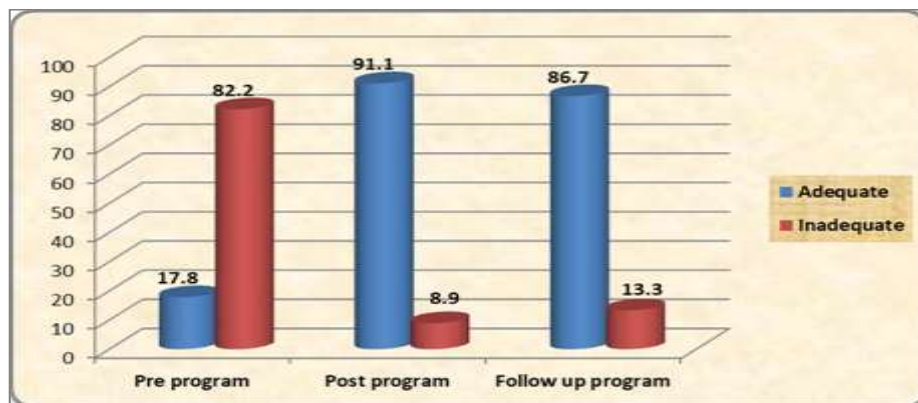


**Figure (1): Total knowledge levels of nurses regarding self-efficacy through the program phases. (n=45).**
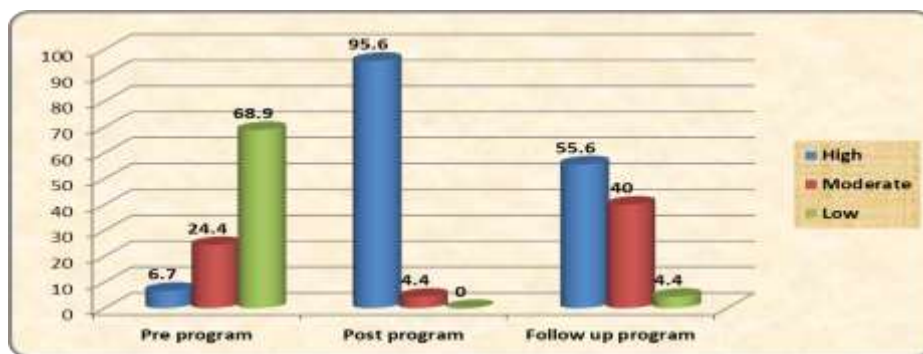
**Figure (2): Total skills levels of nurses regarding self-efficacy through the program phases. (n=45).**
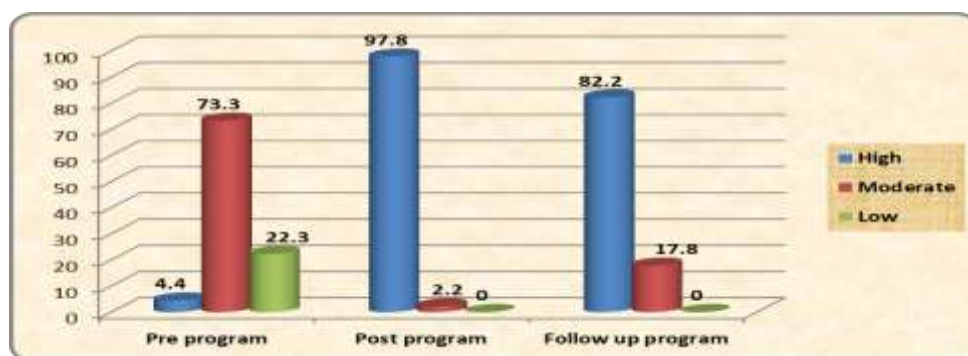


**Figure (3): Total innovative work behaviors levels of nurses regarding self-efficacy through the program phases. (n=45).**

**Table (2): Correlation matrix nurses` knowledge and their skills and innovative work behaviors (post program).**

| Variables | Total Knowledge | | Total skills | | Total innovative work behaviors | |
|---|---|---|---|---|---|---|
| | R | P | r | P | r | P |
| **Total Knowledge** | - | - | 0.308 | 0.040* | 0.289 | 0.021* |
| **Total skills** | 0.308 | 0.040* | - | - | 0.312 | 0.037* |
| **Total innovative work behaviors** | 0.289 | 0.021* | 0.312 | 0.037* | - | - |

## Discussion

Self-efficacy construct covers internal resources that nurses ascribe to themselves. It refers to nurses' beliefs that they are capable of carrying out an action to achieve a particular goal. Self-efficacy plays an important role in determining the quality of one's performance. So self-efficacy beliefs are conceived of as cognitive structures developed via interaction with the world and influences behavior both directly as well as through its impact on nurses' goals, nurses' perception which can influence changes nurse's greater self-efficacy on the investment of more resources, greater creativity, innovativeness, better performance and improving his job performance (**Suplee, et al., 2018**).

Nurse's innovation involves applying new ideas, techniques or procedures in healthcare practices to reduce care costs satisfy patient needs and improve job productivity. Nurse innovation can facilitate developing methods that satisfy patients and maximize the benefits of solving health problems in various clinical situations. Nurse's work together to accomplish the hospital activities, Open-mindedness which refers to receptiveness to new ideas, changes, improved knowledge and practices and intra organizational knowledge sharing, which involves a lively knowledge sharing (**Simone et al., 2018**).

The present study illustrated that the distribution of personnel characteristics of the nurses, where minority of them working in intensive care units, regarding to age, about two fifth of nurses were aged 25 <35 years, more than half of them were female. As regards to their work pattern, majority of them were worked in cardiac care unit, regarding years of experience more than half of had from 5 < 10 years of experience with Mean ± SD (7.37±3.79).

These results are in agreement with **Mahrous (2018)** who studied the Standards of Nursing Care for Cardiac Arrhythmic Patients, in an un published Master thesis , Faculty of Nursing, Ain Shams University who found that, more than half of the nurses were with years of experience between 5- 10 years.

The present study illustrated that the program had a greater effect on improving nurses knowledge levels regarding self-efficacy throughout post and follow-up phases (after three months) of the program compared with the preprogram phase, the minority of nurses had inadequate knowledge regarding self-efficacy through preprogram phase, but the majority of them had highly adequate knowledge regarding self-efficacy during immediately post program phase while it decrease through follow up phase (after three months) but they had adequate knowledge regarding self-efficacy compared with the preprogram phase.

From researcher point of view nurses' didn't have adequate training for it than before or lack of interest from nurse managers to acquire new knowledge. However, increasing knowledge acquired by nurses could be explained by the fact that learning was not a passive experience and courses created an interactive environment. In addition, the several cycles of repetition had created a truly dynamic interactive training sessions. This improvement could be due to simple, clear and concise way of presentation and lectures and the availability of relevant media that gave more illustration for understanding the text and frequent

repetition and motivating them to share in the program. In addition to, during sessions the nurses showed an interest to the program content revealed by the positive interaction during program sessions.

These finding was supported by, **Price and Reichert, 2018**) who conduct a study about "the effects of self-efficacy on nursing innovative work behavior" who found that there were highly significant statistical differences in self-efficacy pre- and post-instruction guidelines. Moreover, these finding was in agreements with **Asfour et al., (2018)** who conduct a study about "Exploring Employees' Perceptions, Job-Related Attitudes and Characteristics During a Planned Organizational Change" who found that, there is a highly statistically significant improvement in nurse's perception at immediately post intervention and follow up intervention compared with pre-program intervention.

In addition, **Hands (2019)** who conduct a study about "perception and frequencies of self-efficacy on community college campuses", revealed that there was general improvement in nurses' knowledge related to self-efficacy immediately post intervention. Also, **Rad & Karimi (2018)** added that, there was general improvement in nurses' behavior related to self-efficacy immediately posts intervention

The present study indicated that, the program had a greater effect on improving nurses in total skills level regarding self-efficacy throughout post and follow-up phases (after three months) of the program compared with the preprogram phase, more than two third of nurses had unsatisfactory skills regarding self-efficacy through preprogram phase, but the majority of them had highly satisfactory skills regarding self-efficacy during immediately post program phase while it decrease through follow up phase (after three months) but they had satisfactory skills regarding self-efficacy compared with preprogram phase**.**

From researcher point of view**,** this improvement in the skills of the nurses could have resulted from utilizing creative teaching approaches that can facilitate the interactions and collaboration in the learning process, and this might have finally increased the effective performance for the nurses and their readiness to acquire new skills to facilitate their work and increases the quality of nursing care provided to the patient. The decline that occurred in skills scores at the follow-up phase could be explained by a gradual decrease in the nurses skills over time due to many causes such as; there is no continuing training and education programs, increasing work load, forgetting, lack of monitoring.

In the same respect **Jordan et al., (2020)** stated that the nurses enter professional nursing with a desire to acquire knowledge, develop skills, provide nurturing support during life changing experiences, and they have high expectations for gaining skills and knowledge to prepare them to enter professional practice, also, having an open mind and a strong desire to learn new things which are important items of quality for all nurses.

Furthermore, **Innes and Calleja** (**2019)** conducted a study about "self-efficacy for nurses in Critical Care settings". They stated that, the development of intuition skills in Critical Care, featuring nurses with varied experience. Those least experienced exhibited greater anxiety, lacking both confidence and critical thinking skills. These studies of

experienced nurses cast doubt upon the suitability of this environment for nurses

This finding was similar to **clark (2020)** who state in her study about "self-efficacy in nursing education and practice. Reflections on nursing leadership", that there was general improvement in nurse's behavior related to self-efficacy according to immediately post intervention. In addition, this result was similar to **Hassan& Saad (2019)** whose mention that, there was highly statistically significant improvement in nurse students' skills regarding all dimensions of self-efficacy in post program phase, slightly decline in follow up phase as compared with preprogram phase.

Also, this finding was similar to **Saeed & Ghoneimy (2019)** who mention in their study about "effectiveness of training program regarding professional nursing ethics on workplace self-efficacy in Mansoura University", that there was highly statistically significant improvement in skills level of staff nurses' workplace self-efficacy immediate post and three months follow up the program.

The present study was consistent with **Dyess and Sherman (2019)** who conducted study about "The first year of nursing practice: nurses' self-efficacy and work needs". Stated that, the improvement of administrative skills for nurses that required to participate in work environment , lead to quality improvement effort that positively affect patient care outcomes .In addition to increase their competence and self - confidence.

Furthermore, **Hoffman (2018)** who conducted study about "Factors related to successful self-efficacy for acute care nurse

practitioners. AACN advanced critical care" Reported that, skill acquisition for nurses is a complex process that takes place over time. and their skills is affected by how they see themselves as members of the unit; therefore, to give nurses the confidence to put their skills into practice it is imperative for them to be integrated into their respective units.

The present study revealed that, there was a highly statistical significant difference improvement of nurses' innovative work behavior throughout immediate post and follow-up program phases compared with preprogram phase. The highest mean and standard deviation was Idea generation throughout immediate post and follow-up phases (after three months) of the program compared with the preprogram phase.

From researcher point of view, the innovative work behavior of nurses is important to sustaining a stable workforce, as they are utilized to fill vacancy gaps in acute care settings. In addition, the retention of nurses is important to patient safety and quality of care. Innovative work behavior provides positive outcomes for both individual and organization. For organization, innovative work behavior induces increasing of nurse performance, predicts financial returns, leads to increase of customer satisfaction and loyalty, productivity and profitability, whereas decrease of nurse turnover. Organizations need to provide nurses with the support, resources, and an environment that promotes innovative behavior and Research utilization. This study found that there are very tangible ways to increase nurse's innovative behavior.

According the study of innovative behavior by **Jassen 2019,** nurses usually get involved in the innovative idea generation at first, and then embed the promotion of

innovation ideas. Finally, a clearly defined mission will foster the realization of innovative ideas. This is an evolutionary and gradual process.

The present study was consistent with **Kimberly (2018)** who found that nurses applying innovative self-efficacy cannot predict the behavior of nurses. In other words, nurses should be encouraged to use strategies to build self-efficacy in various ways. Nurses can go through more team building methods or challenging tasks assigned by them. Then, they have the opportunity to create more innovative work behavior.

The result of present study revealed that there was highly statistical significant positive correlation between total knowledge and total skills and total work innovative behavior. This means that when knowledge increase, skills' will increase also.

This result was supported with **Dimitriadou et al. (2020**) who found positive correlation between acquisition of knowledge and generic skills, there was a significant positive correlation between the scores of the three domains for all batches of nurses.

In the same line, this finding was congruent with **Yehia (2020)** who conducted a study entitled "Intervention program for nurses about managerial skills" and found that there was positive correlation with statistically significant relation between managerial skills knowledge and practice throughout program phases.

**Conclusion**

The instruction guidelines were effective. There was an improvement in the levels of nurses' perception level toward self-efficacy, there were highly significant statistical differences in nurses' self-efficacy before and after program, however there were highly significant statistical differences at innovative work behavior before and after program.

Moreover, there were positive significant correlation between nurses' self-efficacy and innovative work behavior in both before and after program. Majority of jury group had agreed regarding face and content validity of the developed program. The result of the present study was supported the research hypothesis which was designing and implementing program will improve nurses' self-efficacy and innovative work behavior.

**Recommendations**

**Recommendation for Hospital administration level:**

- Hospital managers convey positive appraisals. In addition to raising nurse's beliefs in their capabilities Effort made by hospital administration to promote awareness of being a nurse in the clinical unit, this would aid their innovation into their work.

- Head nurse help nurses to identify strategies and policies which help them to facilitate their integration of into clinical units.

- Head nurse participate nurses to a varying extent in activities such as decision-making, goal setting, problem-solving and change that will improve the effectiveness of nurses.

- Head nurses motivate nurses to attend of certified training courses in time management should be considered a requirement for promotion of nurse.

- Provide effective open communication between nurses and their managers and eliminate of distress sources such as an unsupportive atmosphere is significant through monthly meetings, conferences to pose their problems, opinions and their needs.

- More appreciation for high qualified nurses that increase autonomy and feeling of

responsibility and decrease absence rates and increase level of their innovation.

- Head nurses understand the problems and difficulties of administrative work for nurses because it is vital for nurse executives who have ultimate accountability and responsibility for nursing practice which enhance their self-efficacy.

- Hospital manager improve the nursing image through media and nursing association.

### Recommendation for educational level:

- In-service training and education programs must be continuous process for refreshing increasing nurses' knowledge and skills about the concept of self-efficacy.

- Hospital quality monitoring unit initiate an In-service educational and continuous training courses for nurses about managerial skills such as problem solving, decision making.

- Encouraging nurses to improve and update their knowledge by self-learning. This can be achieved by establishing small nursing library within hospital departments supplied with, nursing periodical and simple booklets, handouts and pamphlets with update knowledge and practice about self-efficacy.

- Publishing posters containing tips for self-efficacy and its effect on innovative work behavior of nurses posted in each department.

### Opportunities for further research:

- Further research is needed to draw more direct correlations between using a structured preceptor- training program and the necessary resources required to support such a program to improve self-efficacy to practice.

- Repetition of the same study for large number of nursing is highly recommended to achieve generalizable results

- Investigate factors that affect nurses' managerial skills acquisition at the clinical setting.

- Assess factors affecting on innovative work behavior.

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# تاثير برنامج تدريبي عن الكفاءه الذاتيه علي سلوكيات العمل الابتكاريه للممرضين

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الكفاءة الذاتية هي قيمة أساسية للممرضات ، والتي أدركت عاملاً مهمًا في تحفيز الممرضة وتعلمها وتحدياتها التي تؤثر على سلوك العمل المبتكر. لذا هدفت هذه الدراسة إلى تعزيز الكفاءة الذاتية للممرضات وأثرها على سلوكيات العمل الابتكاري. وقد أجريت الدراسة في وحدة العناية المركزة بمستشفى معهد ناصر على عينة ملائمة قوامها (45 ممرضة) عمل في بيئة سابقة الذكر. وقد اظهرت النتائج بوجود تحسن مستوى المعرفة فيما يتعلق بالكفاءة الذاتية إلى (91.1%) منهم بعد تنفيذ البرنامج ، ثم انخفض في مرحلة المتابعة ولكنه لا يزال مرتفعاً مقارنة بالبرنامج اللاحق. تحسنت المهارات المتعلقة بالكفاءة الذاتية إلى (95.6%) بعد تنفيذ ما بعد البرنامج وما زالت عالية في مرحلة المتابعة. كان هناك تأثير أكبر على تحسين سلوكيات العمل الابتكارية للممرضات فيما يتعلق بالكفاءة الذاتية طوال فترة ما بعد البرنامج ومرحلة المتابعة. الاستنتاج: كان هناك ارتباط إيجابي ذو دلالة إحصائية بين المستوى الإجمالي للممرضات الخاضعات للدراسة لمعرفة الكفاءة الذاتية ، والنتيجة الإجمالية للقدرة الذاتية. مهارات الفعالية وإجمالي سلوكيات العمل المبتكرة خلال مراحل ما بعد البرنامج مباشرة ومرحلة المتابعة. كما اوصت الدراسة بإجراء برنامج تدريبي وورش عمل بشكل دوري للممرضات حول الكفاءة الذاتية في وحدات الرعاية الحرجة لتحسين سلوكهم في العمل المبتكر وتصميم دليل حول أدوار ومسؤوليات الممرضات في أقسام الطوارئ.