Effect of Educational Program about Authentic Leadership for Head Nurses on Staff Nurses' Resilience and Innovation Behavior

Samah Abo-Elenein Abdallah[1], Sara Abdel-Mongy Mostafa[2]

Lecturer of Nursing Administration, Faculty of Nursing, Tanta University [1, 2].

ABSTRACT

Background: Authentic leadership has the power to affect nurses' behavior and job outcomes. As leaders, head nurses can utilize authentic leadership style to favorably influence staff nurses, increasing their creativity, innovative behaviors also facilitating their workplace resilience. ***Aim:*** to assess the effect of educational program about authentic leadership for head nurses on staff nurses' resilience and innovation behavior. **Research design:** Quasi-experimental research design was utilized in the study. **Setting:** The study was conducted at the Tanta International Teaching Hospital. **Subjects:** All head nurses worked in the inpatient, outpatient, critical care, and infection control units (n = 54) and all staff nurses worked in the same units (n = 450) were included in the study. **Tools:** Four tools were utilized for data collection namely, Authentic Leadership Knowledge Questionnaire, Authentic Leadership Perception Questionnaire, Resilience Questionnaire, and Innovative Behavior Inventory. **Results:** Head nurses' knowledge and authentic leadership style levels were low pre-program implementation while, they had higher scores with statistically significant differences post program implementation, also staff nurses' resilience and innovation score were increased post program implementation. **Conclusions:** Authentic leadership educational program had a positive effect on head nurses through increasing their knowledge and staff nurses' perception about their authentic leadership style post the program implementation during the different times of measurement. Also, staff nurses' resilience and innovation scores increased post program implementation. **Recommendations:** According to the findings, head nurses must attend periodic seminars and workshops to improve their leadership style competencies so that their staff nurses can be more innovative and empowered.

Keywords: Authentic Leadership, Educational Program, Head Nurses, Innovation, Resilience, Staff Nurses.

INTRODUCTION

Globally, leaders play a critical role in health care services and provide an environment that promotes individual contributions to the organization's work (Abd Elmawla, Shabaan & Abo Ramdan, 2020). Nurse leaders are critical in fostering supportive environment for everyday professional practice, as well as ability to adopt the innovations that benefit nurses, patients, and organizations (Labrague, McEnroePetitte, Leocadio, Bogaert & Tsaras, 2018). Authentic leadership has been established as a- key component of effective leadership, which is required to foster innovative work settings (Ali, Saad & Alshammari, 2019).

The development of head nurses' leadership style can increase hospital productivity by potentiating, coordinating, and articulating nursing tasks for delivery of high-quality patient care, keeping staff informed about evidence-based practices, advocating for health-care reform, and promoting social relationships and encouraging participation in decision-making (Alshahrani & Baig, 2016; Christy & Duraisamy, 2015). In addition, staff nurses can achieve organizational goals if their work environments are arranged in a way that they have access to information and allow them to be more innovative in their discovery and growth (Mubarak & Noor, 2018).

There are many different leadership styles, but none of them are appropriate for every situation or environment (Fallatah & Laschinger, 2016). Authentic leadership is a leadership style that confirms legitimacy of the leaders by fostering self-awareness, internalized moral perspective, balanced information processing, and relational transparency through honest leadership that emphasizes building relationships with followers and enhances positive psychological capacities and ethical climate (Sagnak & Kuruoz, 2017; Carlos, Fernando, Miguel & Juan, 2015).

Authentic leadership style includes four dimensions of self-awareness, balanced processing, relational transparency, and internalized moral perspective (Sagnak & Kuruoz, 2017 ; Van, 2016). The ability to perceive and appreciate one's own talents and weaknesses is known as self-awareness (Gill et al., 2018). Knowing ones-self entails being aware of one's own thoughts, values, and motives also, entails being aware of one's own emotions and contradicting internal features (Rasheed, 2015).

Balanced processing refers to head nurse's ability to objectively analyze external and self-referential facts and data while considering others' opinions before making

decision. It means they don't dismiss facts and objectively assess all relevant evidence before making decision, letting them to avoid bias in their perceptions caused by self-defense or self-protection (Onyalla, 2018).

Relational transparency is an active process of self-disclosure and the development of relationship and trust with followers, which involves being honest about oneself and communicating both positive and negative aspects as well as being open and honest in sharing information about one's thoughts and feelings without any hidden agendas (Aziz, 2018). Moral perspective entails an integrate form of self-regulation that involves adhering to moral and ethical standards in facing of possible group, social, or organizational pressure. It results in transparent and ethical behaviors that aim at serving the general good and odds with the leader's personal interests (Iqbal, Farid, Khattak & Nurunnabi, 2018).

The authentic leadership program teaches participants how to express themselves in the world with dignity, humility, honesty, and integrity (Malik & Dhar, 2017). In addition, it supports the head nurses in increasing nurses' invention to inspire self-discovery, which allows for the development of autonomy also encouraging the growth and nurturing of innovation and uniqueness (Jacques, John, Kyuho & Jae-Youn, 2015).

Innovation refers to the creation of new and valuable product, service, process, management, business model and competitive strategies (Rashid, Islam, Asif & Ahmer, 2019 ; Mubarak &Noor, 2018). The intentional conduct of individual for implementing new ideas to their given job function is defined as innovative work behavior (Bergendahl &Magnusson, 2015).

Innovative behavior helps organizations to generate new ideas and offer innovative products and methods (Malik & Dhar, 2017). As staff nurses, authentic leaders have a critical role in supporting innovation among them in the health-care sectors. Staff nurses' innovation can be encouraged if their leaders meet job needs, respond to inventive goal advancement, and reward them (Hidayat, 2016). Nurses need to be innovative enough to manage and solve obstacles such as securing funds, obtaining supplies, dealing with various patients and medications and medical equipment which in turn lead to successful organization and economic growth (Semedo & Coelho 2017).

Furthermore, in the presence of authentic leadership, nurses can develop resilience by finding creative methods to overcome the issue and viewing the challenging scenario as opportunity to learn and adapt to new situations while maintaining optimistic future

aspirations. (Anwar, Abid & Waqas, 2020). Resilient nurses can keep balance and direct and interact to gain more knowledge, healthy companionships and find the purpose of life as well as handle unfavorable circumstances with effective problem-solving coping strategies (Yılmaz, 2017).

Resilience is ability to cope with life's challenges and respond positively to adversity, adaptability, and adjustment. It has specific characteristics as sense of perseverance, problem solving, constant values, appreciation for interaction with others and some degree of solitude flexibility, self-confidence, faith, innovation, humanistic approach and developed insight about roles and responsibilities and social network (Jackson, Walker, Wright, Wishart & Sharon, 2018).

Also, resilience is defined as an individual's strength at difficult time in life, accept the situation, make his or her own choice among limited options, and see these as an opportunity that improve one's chances, optimistic, spiritual, faithful and to have meaningful relationships (Kasparkova, et al., 2018).

Staff nurses' resilience can be enabled and supported by head nurses through creating an open and honest relationship between the leader and the nurses. As well as increasing their positive emotions by fostering positive, helpful, fair, and transparent interactions, which encourages them to be more creative and explore new options (Goestjahjanti, Novitasari, Hutagalung, Asbari & Supono, 2020).

Ideally, authentic leadership is an emerging style and need appropriate strategies to facilitate its practice through training programs. However, the implementation of authentic leadership gives a positive value for nursing profession and healthcare services. Head nurses must create workplace that is optimal in the maintenance of staff nurses by developing healthcare practice conditions to promote their resilience and utilizing best innovative ideas and behaviors for self or organization development (Godsey, David & Houghton, 2020 ; Carmeli, Brammer, Gomes & Tarba, 2017).

Significance of the study

Nowadays, there is a critical need for leaders who can work cooperatively in their workplace, motivating their nurses to sacrifice and directing efficiently to achieve the organization's goals in our globalized world as well as to take the pulse of consumers and staff nurses (Lewis & Cunningham, 2016 ; Paron & Parent, 2015). Therefore, the focus of this research is on authentic leadership as an approach that adds value to the nursing

profession by improving staff nurses' resilience and innovation behavior outcomes in their work setting. Consequently, understanding such approach in the context of the healthcare sector may in turn, help for establishing new links between leaders and their subordinates to enable them to provide high quality patient care and enhance their professional practice to improve the organization's effectiveness and success. As a result, authentic leadership development, a subset of positive leadership, must be prioritized (Nagib, Rashed & El-Said, 2020). Also, the impact of authentic leadership on nurses' resilience and innovation has rarely been addressed in leadership context (Okmen, Elci, Murat & Yilmaz, 2018). Thus, this study directed to assess the effect of educational program about authentic leadership for head nurses on staff nurses' resilience and innovation behavior.

Research Design

A quasi-experimental design was used to achieve the aim of this study.

Setting

The study was conducted at all units of Tanta International Teaching Hospital, Gharbia Governorate, it is 1000 beds capacity. It involved: neonate, medical, cardiac, pediatric, chest, burn, renal dialysis, bone marrow transplantation, quality & infection control units, outpatient clinics and operation rooms.

Subjects

All head nurses (n = 54) and all staff nurses (n = 450) who working in a previous mentioned setting and met the inclusion criteria were included in the study.

Inclusion criteria for head nurses are:

- Agree to participate in the study.

- Head nurses have at least one year of job experience.

- They did not involve in previous training program about authentic leadership.

 For staff nurses:

- Agree to involve in the study.

- Staff nurses have at least one year of job experience in the current job.

 Exclusion criteria are head nurses and staff nurses who refused to participate in this study, absence from more than one session of training classes and who work at night shift continuously.

Tools of the study: To collect data, four tools were utilized as follow:

Tool I: Authentic Leadership Knowledge Questionnaire

The tool consisted of two parts as follows: **part one** head nurses' personal characteristic such as age, gender, marital status, level of education, years of experience, work unit and attendance of training program. **Part two: included:** authentic leadership knowledge questionnaire. This tool was designed to collect data from head nurses to assess their knowledge about authentic leadership. The questions were constructed in either form of true & false or multiple choices. The tool was produced by the researchers after reviewing of related works of literature (Levesque-Côté, Fernet, Austin & Morin, 2018 ; Bakari & Hunjra, 2017). The tool contained (50) questions grouped under five headings as follow: concept of authentic leadership, four components of authentic leadership, characteristics of authentic leaders, the theory of authentic leadership and authentic leadership strategies. The questions scored as "1" for true answer and "0" for false answer. So, scoring system represents varying levels of nurse's knowledge ranging from a poor level of knowledge (0-16), fair level of knowledge (17-33), and a good level of knowledge (34-50) based on cut of points. For higher score, the higher knowledge of the head nurse about the authentic leadership style.

Tool (2): Authentic Leadership Perception questionnaire

The tool was developed by Droffelaar and Jacobs (2018); Sercan, (2016) which was adopted and modified by the researchers. The tool consisted of two parts as follows:

-**Part one:** Staff nurses' personal characteristics such as (age, gender, years of experience, educational qualification and department….etc.).

-**Part two: Authentic Leadership Perception questionnaire**. It consisted of 65 questions are grouped into four subscales to meet the purpose of assessing staff nurses' perception of head nurses' authentic leadership style which include self-awareness (14 questions), internalized moral perspective (15 questions), balanced processing (19 questions), and relational transparency (17 questions). There are no rights or wrong responses. Staff nurses' responses were measured on five points Likert Scale where (1) reflect strongly disagree to (5) rate that mean strongly agree. The total score calculated by cut of points and summing scores of all categories. The maximum scores of these scale were 325; these scores were classified into three categories according to the following strength: 65-151 low, 152-238 moderate, and 239-325 high.

Tool (3): Resilience questionnaire

The tool was developed by the researchers based on reviewing the relevant literature (Tau, Plessis, Koen & Ellis, 2018 ; Mi & Won, 2016) to meet the purpose of assessing

staff nurses' resilience behaviors. The questionnaire consisted of 25 questions distributed into five patterns: situational pattern (7 questions), philosophical pattern (5 questions), dispositional pattern (4 questions), professional pattern (5 questions), and relational pattern (4 questions). The subject's responses rated on 5 points Likert scale ranging from (1) strongly disagree (5) strongly agree. The total score calculated by cut of points and summing scores of all categories. The maximum score of this scale was (125) these scores were classified as follows: Low resilience behaviors (25-58) moderate (59-92) and high resilience behaviors (93- 125).

Tool (4): Innovative Behavior Inventory

This scale was adapted from (Mahgoub, Shazly & El-sayed, 2019) and used to determine level of staff nurses' innovation behavior. This variable was measured by (22) questions under 7 main dimensions that are: idea generation (3 questions), idea search (3 questions), idea communication (4 questions), implementation starting activities (3 questions), involving others (3 questions), overcoming obstacles (3 questions), and innovation outputs (3 questions). Every item was assessed on a five-point likert scale where (1) reflect strongly disagree to (5) rate that mean strongly agree. The total score calculated by cut off points and summing scores of all categories. The total score of the innovation scale was ranged from (22 – 110), that represent the sum of all staff nurses' responses on this scale. Staff nurses' response that considered "low innovation level" its scores graded from (22-50) points. While "moderate innovation level" response figured out by scores ranged from (51- 80). On the other hand, "high innovation level" response represented by scores from (81-110).

Validity

Tools were examined for face validity by jury of five experts from specialty field. Face validity was made to identify the extent to which assumed to be measured. Experts' comments and instructions, minor adjustments had been made such as rephrasing and rearrangements.

Reliability

Reliability test was measured using Cronbach's Alpha Coefficient for the study tools to measure the internal consistency of the items composing to each tool. The values of internal consistency reliability of tools were valued. It was 0.820 for tool (1) 0.812 for tool (2), 0.804 for tool (3) and 0.856 for tool (4).

METHOD:

The study was carried through the following stages:

Assessment, planning, implementation, and evaluation phase.

The assessment and planning phase

- Official confirmation from the authoritative personnel at Faculty of Nursing Tanta University and Tanta International Teaching Hospital was obtained for conducting the study after explaining its purpose. The study was done for 8 months from at the beginning of May 2021 to the end of December 2021.

- Oral agreement of participation from head nurses and staff nurses was obtained.

-The pilot study was carried out on (10%) of the participants (5) head nurses and (45) staff nurses to ensure the clarity and applicability of the tools items and excluded from the study.

-Pre-test before the program started to appraise the head nurses concerning authentic leadership style and staff nurses' perception about head nurses' authentic leadership style using toll (1&2). The knowledge test was taken from 40 to 60 minutes, and the time needed to respond to the sheet of staff nurses' perception about head nurses' authentic leadership style was nearly 30 minutes, data gathered for one month from the beginning to the end of May 2021.

-Assess the staff nurses' perception of resilience and innovation behavior before starting the head nurses program using tool (3&4). The innovation and resilience scale were given to the staff nurses by the researchers. The time required to answer these sheets was 20-30 minutes for each, data obtained in one month from the beginning to the end of June 2021.

-The researchers prepared the timetable of the program.

-The researchers planned the learning atmosphere which the study was administered, and every needed resource (conference room and data show).

The implementing phase (implement training program):

- Based on the results of the assessment and planning phase. The training program was developed based on the review of related literature of (Abd Elmawla et al., (2020; Anwar et al., 2020; Ali et al., 2019). As well as the teaching sessions and time schedules were developed. The program covered the following items: concept and importance of authentic leadership in health care organization, components of authentic leadership, characteristics of authentic leaders, the theory of authentic leadership, authentic leadership strategies, and ways for authentic leaders to inspire innovation at the workplace.

-The study subjects of head nurses divided into 5 subgroups, every one comprised of (10 - 11) head nurses, and the researchers implemented the program for each subgroup at a separate time. The program was 5 sessions; its time was 10 hours for each group, each session 2 hours.

-Total sessions were implemented according to free time of the head nurses; and it was done in their work units and conference room.

-The researchers explained the objectives of the educational program to the head nurses, timetable, and content.

-At the start of each session, the objectives of the session were told. The feedback before each session was obtained about the earlier session and after each session; there was a-review of the current session.

-The training program was performed for head nurses at the studied hospital. The teaching methods were utilized: lecture, discussion; brainstorming, assignment, and small group work activities.

- The teaching materials were utilized: PowerPoint, video, and booklets.

-The time plan of the program was done in two months from the start of July 2021 to the finish of August 2021.

Evaluation phase:

- Evaluating of the immediate effect of an authentic leadership educational program on staff nurses' perception of head nurses' authentic leadership style, as well as their resilience and innovation behavior were done using the four tools as Authentic Leadership Knowledge Questionnaire, Authentic Leadership Perception Questionnaire as well as staff nurses' perception about Innovation and Resilience Scale. It was filled in a period from the beginning to the end of September 2021.

- The follow-up was done after three months of the program implementation to examine the effect of the authentic leadership educational program on staff nurses' perception of head nurses' authentic leadership style, as well as their resilience and innovation behavior were done using the four tools. It was filled in a period from the beginning to the end of December 2021.

Ethical consideration

The study approval was done from authorities' bodies pre initiating the data collection. The objectives of the study were described to head nurses and staff nurses to gain their cooperation to involve in the study and they had the right to withdraw from the study. Their anonymity and confidentiality of the information were maintained.

RESULTS

Table (1): shows distribution of nursing staff according to their personal characteristics. Nursing staff' age ranged from 25 - 45 years which less than half (44.4% %, 38.9%) of head nurses and staff nurses aged from 30 to less than 40 years with mean age 38.64±5.32 and 33.7±4.66 respectively. Majority (85.2, 77.8%) of head nurses and (70.0%, 62.2 %) of staff nurses were respectively female and married. As regard to education level, majority (87%) of head nurses and (60.0%) of staff nurses had bachelor's degree of nursing. Majority (83.3%, 86.0%) of head nurses and staff nurses didn't attend previous program on authentic leadership respectively. Most (37.0%) of head nurses were working in quality and infection control department while, 20.0% of staff nurses were working in internal ward. As regard to years of experience, nursing staff ranged from 1-25 years of experience which less than half (48.1%, 46.7%) of head nurses and staff nurses had 10 to 20 years of experience with mean scores 9.46±5.12 and 7.6±4.87 respectively.

Figure (1): shows head nurses' knowledge levels about authentic leadership pre, immediate and 3 months post program. Preprogram minority (9.3%) of head nurses showed good level of total knowledge which increased to be 94.4% and 87% at immediate and three months post program respectively.

Table (2): shows levels of head nurses' knowledge items about authentic leadership pre, immediate and 3 months post program. There was statistically significant improvement of head nurses' knowledge of all items at (P<0.05). Preprogram 7.4 % of head nurses had good level of knowledge related to basic concept of authentic leadership which increased to be 94.4%, 87.0 % at immediately and 3 months post program respectively. Also, components of authentic leadership revealed that 9.3 % of head nurses had good level of knowledge preprogram which increased to be 96.3%, 85.2% immediately and 3 months post program respectively. Regarding characteristics of authentic leaders, 11.1% of head nurses had good level of knowledge preprogram which improved to be 92.6% immediately and 88.9% at 3 months post program. The theory of authentic leadership revealed that preprogram only 14.8 % of head nurses were at good level of knowledge, compared to 90.7% and 85.2% at immediate and 3 months post program respectively. As regards to authentic leadership strategies demonstrated that preprogram 5.6 % of head nurses had good level of knowledge, increased to be 96.3 % and 87.0 % at immediate and 3 months post program respectively.

Figure (2): shows levels of head nurses' authentic leadership pre, immediate and 3 months post program. Preprogram minority (14.8%) of head nurses had high level of total

authentic leadership which improved to be 90.7% and 85.2% at immediate and three months post program respectively.

Figure (3): shows levels of staff nurses' resilience pre, immediate and 3 months post-program. Preprogram more than sixty percent (62.7%) of staff nurses had low level of resilience, changed to be 91.6% and 88.2% immediately and three months post program respectively which they had high level of resilience.

Figure (4): shows levels of staff nurses' innovation pre, immediate and 3 months post-program. Preprogram more than half (58.2%) of staff nurses had low level of innovation, changed to be 62.7% and 56.4% at immediate and three months post program respectively which they had high level of innovation.

Table (3): shows correlation between head nurses characteristics and total authentic leadership score. There was statistically significant correlation between head nurses age, level of education and years of experiences and total authentic leadership.

Table (4): shows correlation between head nurses' authentic leadership and staff nurses' innovation and resilience. There was a statistically significant correlation between head nurses' total authentic leadership dimensions and staff nurses' innovation and resilience.

Table (1): Distribution of nursing staff according to their personal characteristics

| Tanta International Teaching Hospital									
Personal data	**Head nurses**		**Staff nurses**		**Personal data**	**Head nurses**		**Staff nurses**	
	N	**%**	**N**	**%**		**N**	**%**	**N**	**%**
Age						**Department**			
<30	16	29.6	150	33.3	Neonate unit	3	5.6	35	7.8
30- <40	24	44.5	175	38.9	Renal dialysis unit	2	3.7	30	6.7
40 or more	14	25.9	125	27.8	Lab/cath	2	3.7	20	4.4
Mean±SD	38.64±5.32		33.7±4.66		Surgical ICU	4	7.4	40	8.9
Gender					Operating room	4	7.4	50	11.1
Female	46	85.2	315	70.0	Sterilization	2	3.7	20	4.4
Male	8	14.8	135	30.0	Cardiology CCU	3	5.6	55	12.2
Marital status					Bone marrow transplantation unit	1	1.9	30	6.7
Single	12	22.2	160	35.6	Medical ICU	2	3.7	30	6.7
Married	42	77.8	280	62.2	Pediatric unit	2	3.7	25	5.6
Other	0	0.0	10	2.2	Internal ward	6	11.1	90	20.0
Level of education					Outpatient	3	5.6	25	5.6
Doctoral	7	13	0	0.0	Quality & infection control team	20	37.0	0	0.0
Bachelor	47	87	270	60.0	**Years of experience**				
Technical Nursing Institute	0	0.0	180	40.0	<10	16	29.6	150	33.3
Attended of training program					10- <20	26	48.2	210	46.7
Once	9	16.7	63	14.0	20 or more	12	22.2	90	20.0
None	45	83.3	387	86.0	**Mean±SD**	9.46±5.12		7.6±4.87	
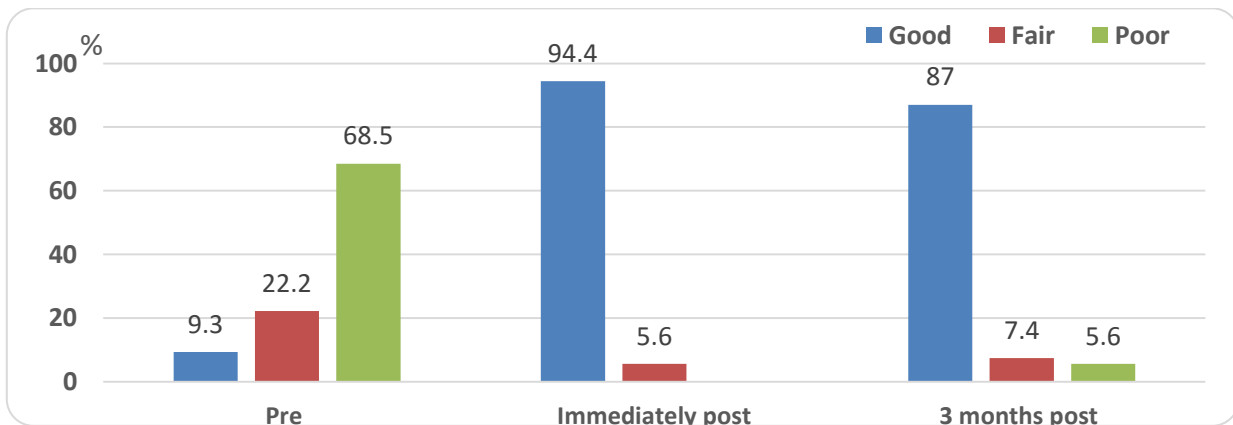
Figure (1): Head nurses knowledge levels about authentic leadership pre, immediate and 3 months post-program (n = 54)

Table (2): Levels of head nurses' knowledge items about authentic leadership pre, immediate and 3 months post program in both hospitals (n = 54)

knowledge items about authentic leadership		Good		Fair		Poor		Chi-square p-value	
		N	%	N	%	N	%	X²	P-value
Concept of authentic leadership	Pre	4	7.4	14	25.9	36	66.7	83.281	<0.001*
	Immediately	51	94.4	3	5.6	0	0.0		
	3 months	47	87.0	5	9.3	2	3.7	2.663	0.264
Components of authentic leadership	Pre	5	9.3	11	20.4	38	70.4	82.985	<0.001*
	Immediately	52	96.3	2	3.7	0	0.0		
	3 months	46	85.2	3	5.6	5	9.3	5.567	0.062
Characteristics of authentic leaders	Pre	6	11.1	12	22.2	36	66.7	74.571	<0.001*
	Immediately	50	92.6	4	7.4	0	0.0		
	3 months	48	88.9	4	7.4	2	3.7	2.041	0.360
The theory of authentic leadership	Pre	8	14.8	13	24.1	33	61.1	66.047	<0.001*
	Immediately	49	90.7	5	9.3	0	0.0		
	3 months	46	85.2	2	3.7	6	11.1	7.380	0.025
Authentic leadership strategies	Pre	3	5.6	9	16.7	42	77.8	90.109	<0.001*
	Immediately	52	96.3	2	3.7	0	0.0		
	3 months	47	87.0	6	11.1	1	1.9	3.253	0.197

Statistically significant at p ≤ 0.05
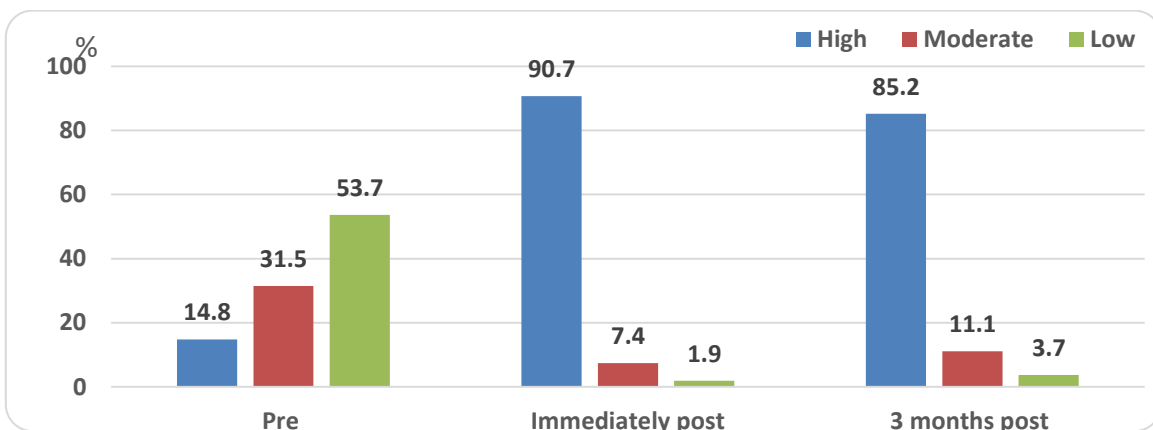
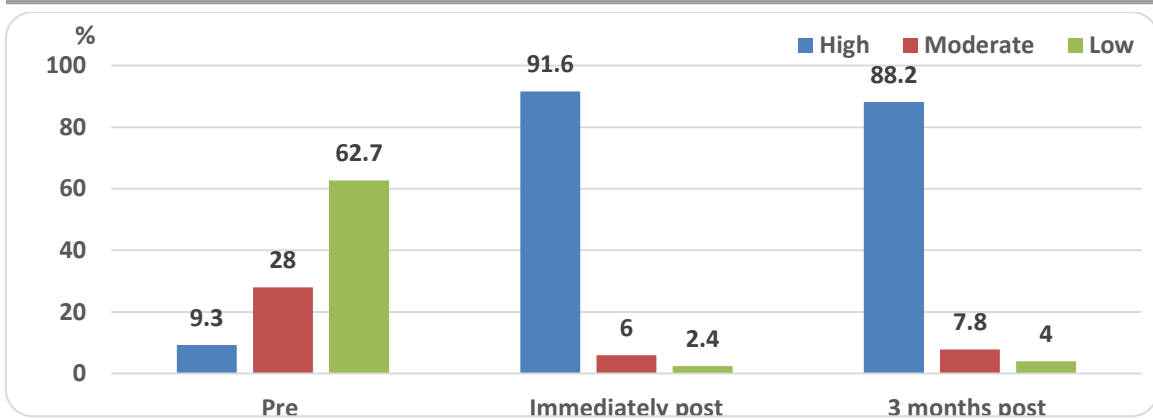**Figure (2): Levels of head nurses' authentic leadership pre, immediate and 3 months post program (n = 54).**

Figure (3): Levels of staff nurses' resilience pre, immediate and 3 months post-program (n = 450)
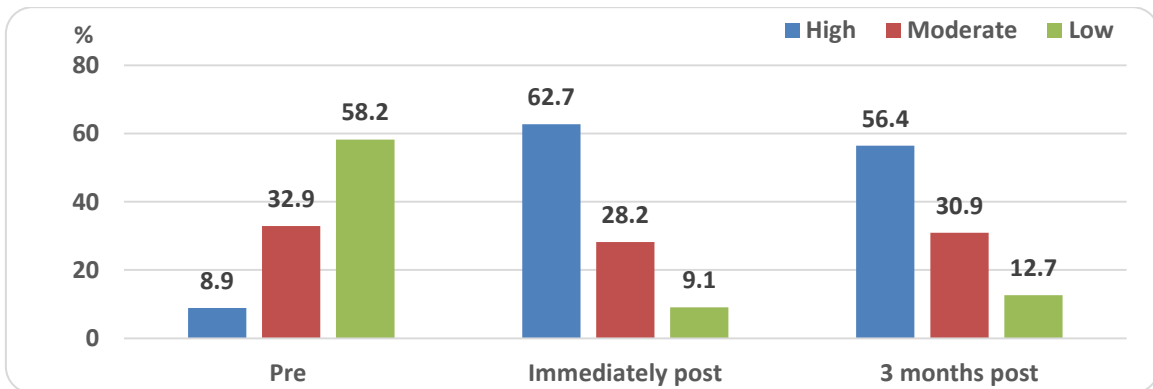

Figure (4): Levels of staff nurses' innovation pre, immediate and 3 months post-program (n = 450)

Table (3): Correlation between head nurses' characteristics and total authentic leadership score (n=54).

Head nurses' characteristics	Total authentic leadership	
	r	P-value
- Age	0.384	<0.001*
- Gender	0.047	0.723
- Marital status	0.115	0.164
- Level of education	0.508	<0.001*
- Years of experience	0.332	<0.001*
- Department	0.026	0.799

Table (4): Correlation between head nurses' authentic leadership and staff nurses' innovation and resilience data {Head nurse (N=54) and Staff nurses (N=450)}

Authentic leadership Dimensions	Staff nurses' resilience and innovation			
	Resilience		Innovation behavior	
	r	P-value	r	P-value
- Self-awareness	0.356	<0.001*	0.169	0.015*
- balanced processing	0.425	<0.001*	0.332	<0.001*
- relational transparency	0.230	0.004*	0.377	<0.001*
- Internalized moral perspective	0.395	<0.001*	0.234	0.003*
Total	0.323	<0.001*	0.375	0.002*

DISCUSSION:

Authentic leadership is currently becoming a crucial shared social practice among nurses and across teams to achieve long-term innovative performance and organizational resilience. Because authentic leadership is a new perspective that focuses on a leader's values and beliefs, it is critical for head nurses to incorporate authentic leadership into clinical nursing practice to foster a-culture of trust and loyalty that encourages creative thinking and resilience. As a result, it's not surprising that organizations devote a significant amount of time and money to improving the skills of their leaders. In essence, an organization's success or failure is determined by the performance and efficacy of its personnel, as well as the direction receives from leadership (Abd Elmawla et al., 2020). Therefore, this study was directed to assess the effect of the authentic leadership educational program on staff nurse's resilience and innovation behaviors.

The findings of current study demonstrated that there were highly statistically significant variations in authentic leadership style knowledge among a total of head nurses at each of the three stages of the program (pre, immediately and, three months after the program implemented). Head nurses had poor knowledge level about authentic leadership style preprogram improved to good immediately post and after three months of the program implementation. This may be due to most of head nurses didn't attend previous training program in authentic leadership style and don't recognize the importance of authentic leadership. Also, those head nurses studying leadership many years ago and there is not up to date of their knowledge. So, the head nurses who attended authentic leadership program did not have information about authentic leadership strategies prior to this study. The lack of such training program is due to a lack of concern from responsible authorities in the hospital.

Although almost all participants' knowledge scores improved after the program was implemented; most head nurses demonstrated a high level of authentic leadership practice. It's possible due to their active involvement and interest in the program sessions and frequent review of their knowledge.

In fact, the present authentic leadership training program was successful in increasing head nurse' knowledge and practice. As the program aided those head nurses in performing their leadership roles effectively, as well as providing them with the opportunity to engage in open dialogue, evaluate and value different points of view, genuinely study life history, share experiences with others, and learn from others' stories. As a result, hospitals must take considerable steps to provide support and resources for

head nurses in the form of educational and training opportunities aimed at improving their leadership position and ensuring that they are re-educated on a regular basis about real leadership practices.

Ali et al. (2019) asserted that training programs regarding authentic leadership is considers a new trend in Egyptian nurses' culture. Also, Van (2016) noted that authentic leadership is an emerging style and need appropriate strategies to facilitate its practice through training program. Added that, the training program will reduce the time it takes for head nurses to create authentic leadership by linking them with truth, innovative ideas, self-discovery, and sharing experiences.

These results agreed with Saleh, El-Gilany, Abdelhamid, Hamed and Elsabahy (2021) ; Nagib et al. (2020) who found head nurses knowledge and practices redarding authentic leadership improved post program than pre-program implementation. Moreover, Abd Elmawla et al. (2020) showed that the knowledge of head nurses was below the acceptable level before implementing the program and, reported that preprogram no one had a good level of total knowledge, changed to majority of head nurses got good level immediate and three months post-program.

In the same line, Abdallah, Shabaan, Ghadery and Shokier (2019) support our study finding and stated that head nurses don't use their leadership role effectively due to lack of their knowledge and improper training. Also, Ali et al. (2019) and Droffelaar and Jacobs (2018) showed that post educational program, most head nurses have adequate knowledge level regarding authentic leadership with a statistically significant difference between the three phases of the program.

On the other hand, Tanafranca (2018) not support the study finding and indicated that no statistical significance differences recorded with all components of authentic leadership pre- and post-training intervention. Also, Rego, Lopes and Nascimento (2016) proposed that the average value was obtained by authentic leadership and its four dimensions is slightly below the midpoint of the range.

When compared to pre-program implementation, staff nurses' resilience increased immediately and post three months of program implementation, with highly statistically significant improvements in all levels of staff nurse resilience at different times of testing. This could be linked to the impact of a training program on head nurses since real leadership style can be learnt, and followers may respond favorably to such learned behavior. This allows staff nurses to deal with the obstacles of their workplace while maintaining healthy and stable psychological functioning.

Nurses, unfortunately, face numerous problems in the workplace, as they do not receive adequate financial compensation or respect in accordance with their responsibilities, which are far more difficult than those of doctors, as they are constantly dealing with patients and working unbearably long hours but are still not compensated as much as they deserve. Also, nurses counter to face the violent behavior of patients and their relatives in the hospital. Really, Nurses are exposed to high amounts of stress in a challenging atmosphere, which forces head nurses to establish a work climate that is best for providing nursing care by motivating, resilience, supporting, and encouraging their staff.

These findings confirmed by Sonal, Sangeeta, and Vivek (2019) who asserted that attitudes and work performance of staff nurses are affected by behavior of head nurses. Head nurses must develop authentic skills, resilience, conflict management skills and healthy relationships to achieve productive goals. Where, authentic leaders support staff members by engaging them in considering potential obstacles for moving toward the new reality. As well as Miniotaite & Buciuniene (2013) who demonstrated that authentic leadership enhances not only members' intrinsic motivation, but also their resilient behaviors, their institutional commitment, and whole job satisfaction level.

Also, the result of the current study illustrated that staff nurse's innovation behaviors by increased immediately post program implementation and post three months of implementing program when to compare with pre-program implementation with highly statistically significant differences during different times of testing. This could be because leaders respond positively to staff nurses and allow them to think for themselves, allowing them to be more innovative.

Saleh et al. (2021) asserted that leaders are critical in allowing and supporting the growth and nurturing of creativity and novelty. Leaders help followers discover meaning and affiliation at work, making a big influence in hospitals and authentic leadership has conventional a lot of attention in this regard. In addition, Tung, Kkadechanunt and Chontawan (2014) added that to involve nurses in innovative behavior, they need management support, caring work environment, enough resources, also, appropriate knowledge about their role and construct an innovative culture to enhance nurses' responsibility toward innovation to face challenges of healthcare imperative.

This agrees with Khan, Hui and Soomro (2021) suggested that authentic leadership plays significant role in generating culture of knowledge sharing and innovation. As well as Laguna, Walachowska, Marjan, Duijvesteijn and Moriano. (2019) found a significant

association between authentic leadership and innovation. Added that authentic leadership is necessary for nurses as it promote a positive attitude and innovation performance as well as building their future hopes and help them to find meaningful connection with their work and assist them to do the required task in a novel way.

The current study's findings also revealed that all levels of staff nurses' innovation improved statistically significantly post program implementation. As those head nurses give their staff nurses a space of freedom to implement innovative ideas. This agrees with kamel and Aref (2017) suggest that idea implementation was the highest mean score of innovative behavior dimensions. Also, Mahgoub et al. (2019) indicated that staff nurses perceived that the highest dimension of innovative behavior was innovation outputs.

In relation to the correlation between head nurses' authentic leadership and staff nurses' innovation and resilience behavior, our study findings demonstrated positive substantial relationships between head nurses' authentic leadership and staff nurses' innovation and resilience. These attributed to those authentic leaders can alter staff nurses' work attitudes and actions through their leader behaviors, which provide their staff nurses caring, resources and organizational support, involving them in any decision and providing needed information. Anwar et al. (2020) supports our study results and found that significant association between authentic leadership and staff nurse's innovation and resilience. As nurses, who are resilient can find creative ways to overcome the situation and the difficult as mean to grow.

Also, research by Gaddy, Gonzalez, Lathan and Graham (2017); Zehir and Narcıkara (2016) ; Nelson et al., (2014) found that significant relationship between authentic leadership and subordinate resilience, asserting that leader demonstration of moral behaviors, more self-aware, and logical decision making improve follower resilience. In the same line Hassan and Din (2019) indicated that authentic leadership had a considerable impact on staff members' innovation, since knowledge sharing mediated the association between employee creativity. While these results disagree with Ford and Harding (2011) found that the innovation of resilient nurses decreased when they are supervised by an authentic leader.

Correlation between head nurses' characteristics and total authentic leadership score

The outcomes of this study revealed a statistically significant correlation between head nurses' age, level of education and years of experience and total authentic leadership. These attributed to those older head nurses with more years of experience and a higher level of education, may have developed higher degrees of judgment toward their

work and management, which influence their perceptions of authentic leadership and influence the behavior of nurses and their work outcomes, inspire their team members, create a healthy work environment and supporting the creativity and resilience of staff nurses. Furthermore, they can create and nurture an organizational culture that encourages healthcare workers to engage in meaningful work. These results agreed with Ali et al. (2019) found that there was positive statistically significant correlation between head nurses' age, years of experience and educational level and authentic leadership attitude.

On the other hand, Smith and Alexis (2018) not support the study finding and reported that no significant relationships found between age and years of experience to authentic leadership. Also, Kilinç and Öztürk (2018) found that nurses who had associate degree had higher scores in the internalized perspective subscale compared to the nurses with bachelor or postgraduate's degree.

CONCLUSION:

According to the findings of the current study, head nurses' knowledge score and levels of authentic leadership style were low pre-program implementation while, they had higher scores with statistically significant differences post program implementation, also authentic leadership educational program had a positive effect on staff nurses' resilience and innovation behavior.

RECOMMENDATIONS:

Based on the findings of the current study, the following recommendations were suggested:

- Implement an authentic leadership educational program and workshops for all head nurses and whom in a management position in the nursing field to increase their knowledge and competencies regarding their authentic leadership.
- Reforming hospital's policies to emphasize using authentic leadership coaching behaviors as an effective approach to support head nurses in a variety of positions.
- Creating a supportive working environment that enhancing nurse's resilience and innovation by enough resource, preparation and time that help in building relationships, training programs, and communicating effectively.
- Enforcing leadership competencies in nursing education to enhance the capacity of nurses to voice their personal and professional rights.

- Offering continuous staff development activities and workshops to enforce resilience and innovation skills in nursing profession to empower nurses and equip them to handle the adverse working conditions.

- **Further research** is needed to study the effect of head nurses' authentic leadership on staff nurses' productivity and identify the strategies that help nurses to develop resilience and innovative behavior.

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تأثير برنامج تعليمي عن القيادة الأصيلة لرئيسات التمريض وأثرها على المرونة والابتكار لهيئة التمريض

سماح أبوالعنين عبدالله مدرس بقسم إدارة التمريض كلية التمريض جامعة طنطا

سارة عبدالمنجي مصطفي مدرس بقسم إدارة التمريض كلية التمريض جامعة طنطا

الخلاصة

تتمتع القيادة الأصيلة بالقدرة على التأثير على سلوك الممرضات ونتائج العمل. حيث ان استخدام أسلوب القيادة الأصيلة يمكن رئيسات التمريض بالتأثير بشكل إيجابي على اداء الممرضات، وزيادة إبداعهم وسلوكياتهم المبتكرة مع تسهيل المرونة في مكان عملهم. لقد اجريت هذه الدراسة بهدف تقييم تأثير برنامج تعليمي حول أسلوب القيادة الأصيلة لرئيسات التمريض على اداء الممرضات فيما يتعلق بالمرونة في العمل وسلوكهم الابتكاري. وقد استخدم منهج شبه تجريبي لإجراء الدراسة بمستشفى طنطا التعليمي الدولي بمحافظة الغربية. وقد استخدمت في هذه الدراسة أربع أدوات لجمع البيانات وهي استمارة حول معرفة القيادة الأصيلة، مقياس إدراك القيادة الأصيلة، مقياس المرونة في العمل، واستمارة عن السلوك المبتكر. وقد اظهرت نتائج الدراسة تحسن في معرفة واداء رئيسات التمريض لأسلوب القيادة الاصيلة، كذلك تحسن في درجة المرونة والابتكار لدى الممرضات بعد تنفيذ البرنامج التعليمي. الخلاصة: كان للبرنامج التعليمي عن القيادة الأصيلة المقدم في هذه الدراسة تأثير إيجابي على معرفة واداء رئيسات التمريض. بالإضافة إلى ذلك، زادت درجات المرونة والابتكار لدى الممرضات بعد تنفيذ البرنامج. وقد أوصت الدراسة بضرورة اعطاء ندوات وورش عمل الدورية لرئيسات التمريض لتحسين كفاءاتهم في أسلوب القيادة حتى تكون ممرضاتهم أكثر إبداعًا وتمكينًا.

الكلمات المرشدة: القيادة الأصيلة، برنامج تعليمي، رئيسات التمريض، الابتكار، المرونة وهيئة التمريض.