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Effect of Talent Management Training Program on Nurse Managers' Leadership Effectiveness

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Abstract:
Background: Talent management has been advocated as an important strategy to engage and retain their employees.Talent management is essential for the organization's sustainable development, healthcare services and patients.
Aim: To examine the effect of talent management training program on nurse managers' leadership effectiveness.
Design: A quasi – experimental design was utilized in this study.
Setting: The study was conducted in different clinical specialties units and departments at New Kasr El Aini teaching hospital affiliated to Cairo University.
Subjects: A convenient sample of (55) nurse managers who are working in the selected different clinical units and department.
Tools: Data werecollected by using the following fourtools: (1)Personal characteristics data sheet, (2) Talent management knowledge questionnaire, (3) Talent management practice observational checklist,(4) Leadership effectiveness practice observational checklist.
*Results:*There was a statistical significant difference in total knowledge test scores (F = 123.5, P = 0.0001), as well as, in mean scores of total talent management practices (F = 136.4, P = 0.0001) during different periods of assessment. There was a statistical significant difference in total leadership effectivenesspractices (F = 154.0, P = 0.0001)among nurse managers during different periods of assessment.
Conclusion: There was a positive effect of a talent management training program on nurse managers' leadership effectiveness.
Recommendations: provide nurse managers with adequate support and needed resources that facilitate implementation of talent management as well as motivatethem to implement the new educational strategies of talent management that improve their leadership effectiveness. Replicate of the current study in other hospitals to get the talent management benefits and effectiveness for nurse managers,hospital and patients.
Key words: leadership effectiveness, nurse manager, talent management, trainingprogram.

INTRODUCTION

In today's fiercely competitive business setting, organizations face the daunting challenge of not only acquiring but also retaining top-tier talent, a mission-critical attempt that exerts a profound impact on their overall success **(Kaushik and Gaur, 2022)**.

As the organizations around the world are competing for the same pool of talents to acquire and retain talents in order to maintain their operations and continue to grow in terms of service and profitability. Only selected human resources can enter and become employees because nowadays human work is increasingly being replaced by robots. The rapid development of artificial intelligence in the world makes organizations

look for competent human resources for the development of technology, qualified skills and good attitude **(Urme, 2023).**

Talent management is considered as the fundamental engine behind an organization's success in competitive market **(Mensah, 2019).** As well as, it is a crucial function in many organizations, especially those that prioritize human capital as a key driver of organizational success **(Alabduljader, 2023).**

The key to maintaining success and keeping a requirement to organizations' sustainable is providing the optimal needed experienced employees, and here is where talent management is crucial. As a result, organizations are vying with one another to attract and retain talent in order to keep running and expanding **(Elhanafy and El Hessewi, 2021).**
In today's competitive economy, talent management is the basic driving force behind businesses' success **(Leggat, Liang, Howard, 2020).**

As a result, businesses are competing with one another to recruit and retain employees in order to continue operating and growing **(Afsar, Masood and Umrani, 2019).** In light of globalization, organizations are concerned about how to develop a talent management strategy that takes into account the national environment (**Mitosis, Lamnisos and Talias, 2021**).

Talent management has become a global challenge, as the organizations compete to manage the same pool of talent in terms of acquisition and retaining in order to sustain their businesses. Most importantly, the human capital skills are gradually replacing technology and products as key assets of transformation and the management or organizational needs. The goal of talent management is to create a high-performance, sustainable organization that meets its strategic and operational goals and objectives **(Alanazi, 2022).**

Evidence indicates that the hospitals that focus more attention on their human resources and employ talent management perform better than those that not, as well as talent management creates a mutual commitment, which improves the staff and organization performance (**Fives and Looney, 2019, Asaad, Shazly, and Abd-elazeem, 2021).**

Effective talent management practices ensures an organization fills vital positions for future leaders and positions that support its core competencies, show commitment to nurses and increase nurses' engagement and decrease their turnover, as well as had positive impact on organizational effectiveness (**Abdel-Azeem, Zaki, and Ghoneimy, 2023).**

Leadership is a method that affects and realizes organizational goals. Thus, leadership is the ability of the individual to affect a group of other people to do something expressive to them (**Baker and Zomorodi, 2018**). Leadership is referred to as blue ocean leadership. Blue ocean leadership is the application of ideas and structure that enable leaders to successfully execute plans releasing in the blue ocean strategic effect, which is the unlocking of untapped and unrealized talents and capacity quickly with minimal costs. Leadership plays a pivotal role in nearly every aspect of organizational success **(Taylor, 2021).**
Effective leadership is a critical predictor of success or failure when considering the elements that contribute to organizational success, according to leadership experts (**Ali, Ali, and Mohammed, 2022).**Also, effective leadership has been recognized as crucial in affecting organizational culture and driving the implementation of reforms in health care sector. This is evident in the growing interests in the concepts of health management and leadership **(Ayeleke, Dunham, North, and Wallis, 2018).**

According to **Taylor (2021),** effective leadership is essential in motivating followers and leveraging individual talents in the completion of duties necessary to successfully meet the objectives of a shared organizational or business goal. Effective leadership practices by nurse managers are linked to higher staff nurse job satisfaction and lower nursing turnover **(Frangieh, and Jones, 2022).**

Leaders with a talent mind-set make talent management a top priority for themselves and their leadership teams. As well as, it is one of the crucial aspects of human resources management nowadays, which can decide of an organization success. They understand that it can't be delegated, so they commit a major part of their time and energy to strengthening their talent pool and helping others in the company strengthen theirs. They see talent management as a central and critical part of their own job as leaders **(Vaiman, Collings, 2023)**.

Talent management is a key area where leaders are, focusing increased amounts of their attention. For too long and in too many organizations talent management has been "owned" by human resources. It has been an annual process, not a business needs driven ever-present requirement needing constant leadership focus. The drive of talent management can turn organizations from low to high performer by improving competitive advantage and sustainability together **(Baker, and Zomorodi, 2018)**.

There is an importance of linking leadership to talent management, which has a priority in need managers who adopt the best leadership practices in order to maximize the effectiveness of their human capital through the development of talent. As well as, the managers are in need to improve their leadership abilities and develop the talent that their organizations may in turn depend upon and find out environment that are favorable to the development of talent. An effective leader recruits talents in support of a vision. Keeps talents informed aboutthe vision and objectives of the organization, contributes to the stability of the workforce, thatis, to talent retention, which in turn contributes to improving the skills and competences required of talents to perform well in the shared organization (**Kafetzopoulos, and Gotzamani, 2022**).

SIGNIFICANCE OF THE STUDY

Nurses are the best supporter of healthcare system in all communities and lack of sufficient qualified nurses can negatively affect providing patients' health (**WHO, 2018**). Recently survey conducted in United Kingdom and United States on human resource professionals found that organizations facing difficulties in retaining key talent of organizations; 60% among the leaders surveyed, respond that retention strategy was not good enough in to retain the employees. As well as Australia is a country with a reported shortage of obtaining talent this dates even further back. Senior executives cited "attracting and retaining talent" as one of their biggest challenges; with only 11 % confident they could attract and retain the talent they needed(**Hopkins, and Sohal, 2019**).

Moreover, Organizations face challenges regarding talent limitations more than capital limitations, as talented employees form only 3–5% of all employees in an organization. Subsequently,this results inhigh demand for highly talented, skilled and competent professionals. Interestingly, this demand to supply the gap of talented individuals is widening as it has been found that 35% of leading organizations are facing the problem of talent shortage. These organizations have argued that it is difficult to manage talented people due to a lack of talent leaders and talent management policies. Moreover, practitioners and academics have argued that talent management is a crucial task for organizations in the 21st century because it is a source of sustainability **(Bolander, Werr, and Asplund2017,Behera and Mohapatra, 2020)**.

From the work experience of the researcher at New Kasr El Aini Teaching Hospital, it was observed that the nurse managers lack the essential leadership skills to manage, develop, motivate and retain the most talented and excellent nurses at the hospital. Furthermore, the leadership style nurse managers use might affect the development of talent that they leads, like those who just using overly directive approach to leading employee without consulting them. That leads to high number of nursing staff at all levels who intended to leave their work in the form of leave without pay or resignation. This leads hospital to loss the experienced and trained staff.

Based on the results of the reviewed literature it is observed that there are limited studies done locally about talent management. The field of talent management is lacking hard academic research to establish what constitutes effective talent management and how it can influence leadership effectiveness **(El Dahshan, Keshk and Dorgham, 2018).** Also, most of talent management studies reviewed did not directly link talent management with the leadership effectiveness.

SUBJECTS AND METHODS

Aim of the study:

The aim of the current study was to examine the effect of talent management training program on nurse managers' leadership effectiveness.

Research hypothesis:

The current study is carried out to investigate the following hypotheses:-

H (1): There will be difference in total mean scores of nurse managers' talent management knowledge after the program implementation and three months later compared to before program implementation.

H (2): There will be difference in total mean scores of nurse managers' talent management practices after the program implementation and three months later compared to before program implementation.

H (3): There will be difference in total mean scores of nurse managers' leadership effectiveness practices after program implementation and three months later compared to before program implementation.

Research design:

A quasi – experimentaldesign was utilized in this study.

Setting of the study:

The current study was conducted in different clinical specialties units and departments (inpatient medical and surgical departments, intensive and critical care units, operating theater, and ambulatory care). As well as, in certain administrative functional departments (nursing director office, in-service training department and infection control unit) at New Kasr El Aini teaching hospital, this is affiliated to Cairo University Hospital. The hospital is a specialized unit, providing paid services.

The hospital bed capacity is 800 beds. This hospital consists of 12 floors. It contains 27 inpatient departments (medical, surgical and other different specialties), 18 operating theaters and 11critical and intensive care units. It have emergency unit, blood bank, X – ray department, laboratory, physiotherapy, and infection control units. Also, have catheterization unit, hemodialysis, and comprehensive health checkup unit and outpatient clinics.

Subject sample:

Study sample composed of a convenient sample of (55) nurse managers from different administrative level, who are divided into (4) top level managers (one nursing director and three assistant nursing director) (26) nursing supervisors and (25) head nurses who are working in the previous mentioned units and departments at New Kasr El Aini teaching hospital.

Data collection tools:

To achieve the aim of this study data have been collected by using the following tools:

1ˢᵗ Tool: The Personal Characteristics Data Sheet: It was developed by the researcher and contains such data of the participants as: gender, age, the level of education, years of experience, and the type of unit they are working in, job title and attendance of previous training program about talent management.

2ⁿᵈ Tool: Talent management knowledge questionnaire: It was developed by the researcher after reviewing the related literature **(Oehley, 2007, Thunnissen and Gallardo-Gallardo, 2017, and King, 2018),** to assess nurse managers' knowledge regarding talent management.

Talent management knowledge test questionnaire: consisted of (20) multiple choice questions divided into five dimensions to assess nurse managers' knowledge regarding the following: concept of talent management (2 questions); benefits of talent management (2 questions); talent management process (4 questions); components of talent management (5 questions); talent management model (2 questions) and talent management elements and practices (5 questions).

Scoring system: each question was granted (1 point) for the correct answer, and (zero) for incorrect answer. The total scores for all questions ware 20. Total scores were expressed as percentage, with cut point 60 %. Score of (< 60 %) indicate low knowledge level, score of (60 – <75%) indicate a moderate knowledge level and, score of (≥ 75 %) indicate high talent management knowledge level, **(Oehley, 2007, Thunnissen and Gallardo-Gallardo, 2017, and King, 2018).** This tool was used during different periods of assessment, (before program, immediately after program and three months later).

3ʳᵈ Tool: Talent management practice observational checklist: It was developed by **Oehley (2007)** and was modified by the researcher. It used to assess talent management practices among nurse managers. This tool consisted of 44 items divided into eight dimensions as follows:

Displaying a talent management mindset (6 items); attracting and recruiting talent (5 items); identifying and differentiating talented employees (6 items); developing others (7 items); building and maintaining positive

relationships (6 items); providing meaningful and challenging work (7 items); remunerating and rewarding fairly (2 items); and managing work-life balance (5 items).

Scoring system: The responses for the practices were either done with (1) point or not done with (0). As the total scores for all items were 44. Total scores were expressed as percentages with cut point 60 %. The score of (< 60 %) indicate low talent management practices level, score of (60 % - < 75 %) indicate moderate talent management practices level, and score of (≥ 75 %) indicate high talent management practices level **(Oehley, 2007).**

This tool was used during the different periods of assessment (before program, immediately after program and three months later).

4<u>th</u> Tool: Leadership effectiveness practice observational checklist: It was developed by the researcher based on literature review **(Anderson, Krajewski, Goffiin, and Jackson, 2008; Guillen and Florent, 2011; and Farahnak, Aarans, and Ebrhart, 2014).** It used to assess leadership effectiveness practices among nurse managers. This tool consisted of 58 items grouped under six dimensions as the following: Envisioning (9 items); energizing (9 items); designing and aligning (8 items); rewarding and feedback (10 items); team – building (14 items); and empowering (8 items).

Scoring system: The responses for the practices were either done with (1) point or not done with (0). As the total score for all questions were 58. Total scores were expressed as percentages with cut point 60 %. The score of (< 60 %) indicate low leadership effectiveness practices level, score of (60 % - < 75 %) indicate moderate leadership effectiveness practices level, and score of (≥ 75 %) indicate high leadership effectiveness practices level **(Guillen and Florent, 2011 and Farahnak, et al., 2014).**

This tool was used during the different periods of assessment (before program, immediately after program and three months later).

Tools validity:

Content validity was established by a panel of five experts from nursing administration department at Faculty of Nursing - Cairo University. As they were asked to examine the data collection tools for their content coverage, clarity, wording, length, format, and overall appearance of the tool.

Based on experts' comments and recommendations, some changes had been made at the data collection tools as the required modifications were done, such as rearranging some dimensions of tools, rephrasing of some items and rewording of other tools statements. Also, the training program validity was tested for its readability, relevance to objectives and completeness.

Tools reliability:

The Cronbach's Alpha test was done for study tools. The calculated reliability was (91 %) to talent management knowledge questionnaire and that was within the accepted limit. Regarding to talent management practice observational checklist, the calculated reliability was (94 %) which was within the acceptable limit also. According to leadership effectiveness practice observational checklist, the calculated reliability was (97 %) and that was within the accepted limit.

Procedures:

Prior to data collection an official permission was obtained from the research ethical committee of the Faculty of Nursing – Cairo University, after that letter from the Faculty of Nursing was sent to the director of New Kasr El Aini Teaching Hospital, a formal permission was obtained from medical and nursing director of New Kasr El Aini Teaching Hospital after explaining the aim of the study, seeking the approval for conducting the study.

The researcher explained the aim, nature, and significance of the study for every eligible nurse managers to obtain their acceptance to participate in the study. Then, the researcher obtained their acceptance in a written form.

Prior to program implementation, an initial assessment of the nurse managers' knowledge about talent management was done using the developed questionnaire. As well as talent management practices of nurse managers was measured by the researcher through utilizing the talent management practice observational checklist. Moreover, nurse managers' leadership effectiveness practice was measured by the researcher using the leadership effectiveness practice observational checklist. It was completed in a period from 1st November 2021 to 30th November 2021. The time spent from each nurse manager to answer the talent

management knowledge questionnaire was 30 to 45 minutes. While the researcher took about 45 – 60 minutes to observe the talent management practices and leadership effectiveness practices.

The results obtained from initial assessment of nurse managers' talent management knowledge, the researcher analyzed it and then the educational needs were delineated. Accordingly the training program was designed by the researcher, as well as training program schedule. After designing training program, it was implemented for nurse managers. The talent management training program was carried out in one month from 1st to the end of December 2021. The total number of nurse managers was divided into three groups to receive the training program. The duration of each session was two hours with total number of ten sessions each session was carried out three times per week, because sometimes the sessions schedule was not appropriate for all the participants.

At the beginning of each session, an orientation to the program and its aim took place and the nurse managers were informed about the time and place of sessions, which were carried out three times a week at the 1st floor training department lecture room. Each session was started by setting objectives and overview of the new topic, at the end of each session the nurse managers' questions were discussed. Feedback was given continuously after each session to ensure understanding.

The program included the following ten sessions: session one: (the aim of the program - importance of the talent management), session two: (concept of talent management - benefits of talent management), session three: (components of talent management - stages of practicing talent management), session four (model of talent management and replacement planning), session five (key elements in developing - winning talent strategy), session six (talent management in health care), session seven (ways to reward employees and reasons for employees leaving an organization) session eight (the leadership in nursing and characteristics of effective leader), session nine (principles of effective leadership - skills of effective leader - importance of effective nurse leaders in the organization), and session ten (ways to enhancing effective nurse leaders - challenges of talent management).

The duration of each session was two hours. The total program sessions were carried out in one month, at the beginning of the program sessions, an orientation to the program and its purpose took place and the nurse managers were informed about the time and place of sessions, which were carried out at the training department lecture room.

Evaluating of the immediate effect of training program on nurse managers was done through utilizing the pervioustools. It was filled in a period from 1st January 2022 to the end of January 2022.Follow up was conducted three months after program implementation by using the same previous tools. It was filled in a period from 1st May 2022 till the end of May 2022.

Ethical consideration:

Before data collection, primary approval from the research ethical committee at Faculty of Nursing Cairo University was obtained to carry out the study. Also, an official permission was obtained from the medical and nursing director of New Kasr El Aini Teaching Hospital, Cairo University.

Written consent was obtained from the participants. Each nurse manager was informed about the aim of the study and its importance. The researcher also emphasized that participation in the study is entirely voluntary and possibility to withdraw at any time without explanation of the cause. Confidentiality of the information was assured. Final approval was obtained from the research ethical committee of the Faculty of Nursing Cairo University after data collection to assure the ethical conduct during data collection process.

Statistical design:

Upon completion of data collection, the data were scored, tabulated and analyzed by using the "Statistical Package for Social Science" (SPSS) program using version 22.

Descriptive statistics such as frequency, percentage distribution, mean score and standard deviation were utilized in analyzing data pretended in this study. Relative statistical tests of significance were used to identify the relationships among the study variables. Threshold of significances is fixed at (P value ≤ 0.05). Using an enter method for liner regression analysis to identify the correlations among study variables and Separate regression analysis to identify the power of relation between each variable.Test of significance was performed to test the study hypotheses (F-test). For qualitative data, comparison between two groups and more was done using Chi-square test.Correlation between variables was evaluated using Pearson's

correlation coefficient (r). Significance was adopted at p<0.05 for interpretation of results of tests of significance.

RESULTS

Table (1): Distribution of nurse managers according to their personal characteristics data (N=55)

Personal Characteristics	No.	%
Gender		
Female	55	100
Age		
20-<30	1	1.8
30-<40	6	10.9
40-<50	27	49.1
50 +	21	38.2
Level of Education		
Bachelor degree	39	70.9
Post graduate diploma	9	16.4
Master degree	6	10.9
Doctorate degree	1	1.8
Position		
Nursing director	1	1.8
Deputy nursing director	3	5.5
Nursing supervisor	26	47.3
Head nurse	25	45.4
Experience in nursing		
1-<5	1	1.8
5-<10	2	3.6
10-<15	4	7.3
15-<20	6	11
20-<25	24	43.6
25-<30	18	32.7
Work place		
Nursing director office	17	30.9
In service training	4	7.3
Infection control unit	3	5.5
Critical care unit	4	7.3
Intensive care unit	9	16.4
Ambulatory care	6	11
Inpatient ward	10	18
Operating theater	2	3.6
Attended previous talent management training programs		
Yes	6	10.9
No	49	89.1

Data in table(1) shows that (100 %) of nurse managers in the current study were females. The highest percent (49.1 %) of nurse managers' age were between (40 - 50) years.

It is clear that the majority of nurse managers (70.9 %) had bachelor degree of nursing. The highest percent (47.3%) of nurse managers were nursing supervisor. Also, the same table shows that (43.6%) of nurse managers had years of experience ranged between (20 - < 25).

The highest percent of nurse managers (30.9%) were working at nursing director office.Also, it is clear from this table that the highest percent (89.1%) of nurse managers did not attend any previous talent management training program.

Figure (1): Frequency distribution of nurse managers total talent management knowledge levels during different period of assessment (pre, immediately post program and three months post program) (N = 55).
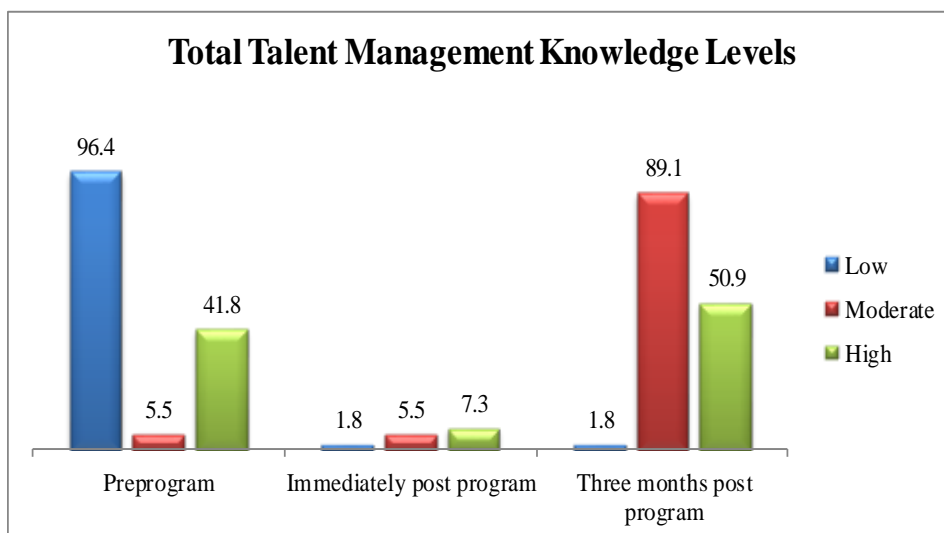
Data in figure (1) shows that (96.4 %) of nurse managers scored low (< 60%) preprogram, while a marked improvement was seen immediately post program and three months post program as (89.1 %)werescored high (≥75%) in immediatelypost

program, the scores were decreased three months post program as (50.9 %) of them had high scores. All differences were statistically significant (X^2 = 94.3, P = 0.0001).

Table (2): Differences in total talent management knowledge during different periods of assessments (pre, immediately post program and three months post program) (N = 55).

Periods of assessments	Differences in total talent management knowledge	
	T – Test	**P- value**
Preprogram	**Immediately post program**	
	16.72	.00*
	Three months post program	
	6.31	.00*
Immediately post program	**Three months post program**	
	4.1	.00*

  * Statistically significant at P value < 0.05

Table (2) showed that there were highly statistical significant differences during different periods of assessment (pre, immediately post program and three months post program implementation). It clear from the same table that the highly differences were between preprogram, immediately post program and three months post program implementation (T = 16.72, P = .00).

Table (3)Comparison of the total mean scores of nurse managers' talent management practices dimensions during different periods of assessments (pre, immediately post program and three months post program) (N = 55 × 3 = 165).

Talent Management practices dimensions	Pre program	Immediately post	Three months	F - Test	P- value

		program		post program			
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**		
1 – Displaying a talent management mindset	2.15	1.57	5.44	0.71	4.45	1.14	110.574	0.0001 *
2 – Attracting and recruiting talent	0.76	1.02	2.62	1.57	2.87	1.29	42.325	0.0001 *
3 – Identifying and differentiating talented nurses	4.18	1.70	5.38	0.71	5.31	0.86	18.094	0.0001 *
4 – Developing others	2.44	1.84	6.09	0.80	4.98	1.43	95.065	0.0001 *
5 – Building and maintaining the positive relationships	3.76	1.26	5.27	0.71	5.25	0.87	43.604	0.0001 *
6 – Providing meaningful and challenging work	2.22	1.73	5.67	1.26	5.60	1.21	106.257	0.0001 *
7 – Rewarding fairly	0.29	1.52	1.27	0.59	1.15	0.59	15.574	0.0001 *
8 – Managing work-life balance	2.00	1.14	4.11	0.81	3.84	1.23	62.737	0.0001 *
Talent management practices (Max. score = 44)	17.8	8.4	35.8	3.7	33.4	5.6	136.4	0.0001 *

* Statistically significant at Pvalue< **0.05**

Table (3) showed that there were a highly statistical significant difference in mean scores of all talent management practices dimensions during different periods of assessment (pre, immediately post program and three months post program implementation), which were reflected on the total mean scores respectively ($17.8 \pm 8.4 \pm 35.8 \pm 3.7 \pm 33.4 \pm 5.6$).

As noticed from the table that the highest practices was immediately post program for most of talent management practices dimensions. The mean scores were slightly decreased three months post program compared to immediately post program but still higher than preprogram period. All differences were statistically significant (F = 136.4, P = 0.0001).

Figure (2): Frequency distribution of nurse managers total talent management practices levels during different periods of assessment (pre, immediately post program and three months post program) (N = 55 × 3 = 165).
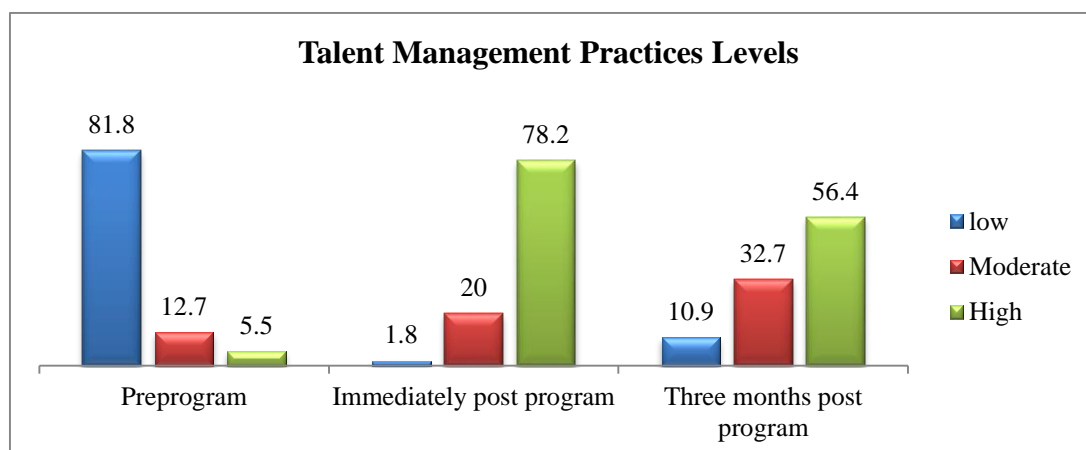
Data in Figure (2) shows that there were statistical significant differences in total talent management practices during different periods of assessment. As shown (81.8 %) of nurse managers scored low (< 60%) preprogram, while a marked improvement was seen immediately post program and three months post program as (78.2 %) were scored high (≥75%) immediately post program.

The scores were slightly decreased three months post program as (56.4 %) of them had high scores. All differences were statistically significant (X^2 = 105.2, P = 0.0001).

Table (4): Comparison of the total mean scores of nurse managers' leadership effectiveness practices dimensions during different periods of assessments (pre, immediately post program and three months post program) (N = 55 × 3 = 165).

Leadership effectiveness practice dimensions	Pre program		Immediately post program		Three months post program		F – Test	P – value
	Mean	SD	Mean	SD	Mean	SD		
1 – Envisioning	1.80	2.26	6.15	1.80	6.29	1.62	97.849	0.0001*
2 – Energizing	4.25	2.76	8.22	1.10	8.56	1.08	94.359	0.0001*
3 – Designing and aligning	3.09	2.15	6.84	1.08	6.80	1.38	98.984	0.0001*
4 – Rewarding and Feedback	4.69	2.12	9.29	1.17	9.04	1.36	143.512	0.0001*
5 – Team building	4.56	3.22	11.58	2.71	11.75	2.76	109.699	0.0001*
6 – Empowering	3.07	1.64	6.62	1.47	6.40	1.84	78.891	0.0001*
Total Leadership Effectiveness Practices (Max. score = 58)	21.4	12.1	48.6	7.2	48.8	8.1	154.0	0.0001*

* Statistically significant at Pvalue< **0.05**

It is clear from table (4)that there were highly statistical significant differences in mean scores of nurse managers' concerningall dimensions of leadership effectiveness practices during different periods of assessment (pre,

immediately post program and three months post program implementation), which were reflected on the total mean scores respectively (21.4 ± 12.1 ± 48.6 ± 7.2 ± 48.8 ± 8.1), (F = 154.0, P = 0.0001).

Figure (3): Frequency distribution of nurse managers total leadership effectiveness practices levels during different periods of assessment (pre, immediately post program and three months post program) (N = 55 × 3 = 165).

Data in Figure (3) shows that there were statistical significant differences in total leadership effectiveness practices scores during different periods of assessment. As shown (92.7%) of nurse managers scored low (< 60%) preprogram. While, a marked improvement

was seen immediately post program and three months post program as (78.2 %) were scored high (≥75%) in immediately post program, with further increased during three months post program as (80 %) of them had high scores.

Table (5): Correlation among study variables (talent management knowledge, practices and leadership effectiveness practice)

Study variables	Talent management knowledge		Talent management practices		Leadership effectiveness practices	
	Pearson (r)	P – value	Pearson (r)	P – value	Pearson (r)	P – value
Talent management knowledge	1	---	0.61	0.0001*	0.61	0.0001*
Talent management practices	0.61	0.0001*	1	---	0.65	0.0001*
Leadership effectiveness practices	0.61	0.0001*	0.65	0.0001*	1	---

* Statistically significant difference at P< **0.05**

Data in table (5) Showed that there was statistical significant positive correlation between talent management knowledge, talent management practices (r = 0.61, P = 0.0001), and between talent management knowledge and leadership effectiveness (r = 0.61, P = 0.0001) and between talent management practices and leadership effectiveness (r = 0.65, P = 0.0001).

As well as, it is noticed that there were a positive correlation among the study variables.

DISCUSSION

Talent management has become a global challenge, as the organizations compete to manage the same pool of talent in terms of acquisition and retaining in order to sustain their businesses. Most importantly, the human capital skills are gradually replacing technology and products as key assets of transformation and the management or organizational needs. The goal of talent management is to create a high-performance, sustainable organization that meets its strategic and operational goals and objectives **(Alanazi, 2022).**

Talent management is known as a systematic approach to attract, screen, select the right talent, engage, develop, deploy, lead and retain high potential and performer employees to ensure a continuous feeding of the organization with talent employees aimed at increasing the productivity **(Thunnissen and Buttiens 2017, El Dahshan, et. al., 2018).**

Leadership has the power to influence and accomplish goals. Leadership is therefore the ability of a person to persuade a group of people to take an expressive action toward them **(Baker and Zomorodi, 2018).** Effective leadership has been recognized as crucial in affecting organizational culture and driving the implementation of reforms in health care sector.

The current study was based on the hypothesis that there will be a difference in knowledge test scores of nurse managers' talent management after the program implementation compared to before. The results of the study support the research hypotheses, as the current findings of this study revealed that there were statistically significant differences in mean scores of nurse managers regarding talent management knowledge during different periods of assessment.

As they had the highest mean scores immediately post-program and three months later compared to before program implantation. Moreover, statistically, significant differences and marked improvement in nurse

managers' total mean scores in talent management knowledge as the highest percentage of nurse managers had high mean scores immediately post-program, and three months post-program compared to preprogram.

The current study result was supported by **Mostafa, Mahfouz, and Ebraheem (2021)**who found that there was highly significant and a significant improvement in knowledge among study sample after attending the talent management training program.

Moreover, **Elhanafy and El Hessewi (2021)** revealed that there was a highly statistically significant improvement in head nurses' knowledge concerning talent management in the post phase and follow up phase in comparison with their pre-intervention phase.

These results were also supported by result of **Abdrabou and Ghonem (2020)**who reported that there was a highly statistically significant improvement in nurse managers' knowledge regarding talent management in the post and follow up phases compared with their pre intervention phase.

Moreover, **Ali, et al. (2022)** indicated that there was a marked improvement in talent management knowledge attainment from the pretest, immediate, and three months post-tests, as well as, there were statistically significant differences between pretest and the other periods of measurements followed implementing the educational program.

From the researcher's point of view this marked improvement in nurse managers' knowledge after the implementation of the training program might be due to the participants' interest in the concept and content during the training program, this program contained a lot of real work situational examples, concepts, and knowledge, the participants' discussion was opened, this was an advanced and new strategy which stimulated participants could have attributed to utilizing creative teaching approaches that facilitated the interactions and collaboration in the learning process. Also, nurse managers were interested to participating in the learning process, self-directed learning, reasoning skills, and learning in context.

The current study was based on another hypothesis, that there will be difference in mean scores of nurse managers' talent management practices after the program implementation and three months later compared to before program implementation. The results of the current study supported the research hypotheses as there was a highly statistically significant difference in mean scores of nurse managers' talent management practices during (immediate post program implementation) compared to preprogram.

Concerning nurse managers' practice regarding talent management, the current study revealed that there is a highly statistically significant improvement in nurse managers' practice regarding talent management in the immediately post program and three months post program implementation compared with their preprogram implementation. These results might be because of the comprehensive and concise application of talent management through instructional tutoring, which was grounded on the results of the pretest and the use of illustrative media as PowerPoints and pictures in addition to the head nurses' commitment to attend such training courses about talent management.

As well as, the researcher was linking knowledge and practice during the program and the discussions were opened which stimulated nurse managers to share their experiences. Also, this might be due to the attractiveness of the program, and knowledge retention.So the training program helps them to improve their talent management practices to be exercised through, the nurse managers being interested in the demonstration of talent management skills such as searching, creating, collaborating and other skills gained also, the program contained a lot of practical examples and real work situations and indicate positive effect of talent management training program on nurse managers' practices

This result was supported by **Abd El Rahman, and Farghaly, (2019)**, who found that the majority of head nurses had improvement regarding their talent management practicesimmediately post program and three months post program implementation, as their talent management model application was unsatisfactory preprogram.

 Moreover, there was a statistically significant difference gained and progressed gradually up to the latest session. From the researcher's point of view, this might be due to the nurse managers being interested in the demonstration of talent management skills such as searching, creating, collaborating and other skills gained also, the program contained a lot of practical examples and real work situations.

As well as, this result supported with **Elhanafy and El Hessewi, (2021)**, revealed that there was a highly statistically significant improvement in head nurses' practice related talent management in the post phase and follow up phase in comparison with their pre intervention phase. Moreover, this result was in the same line

with **Thomas et al., (2016),** who found that a highly practice improvement was achieved after the educational program.

Furthermore, similar results were found in the study of **Taie (2015), Obeidat, Yousef, Yassin, and Masa'deh, (2018), Ogabari, Onasanya, Ogunnaike, and Kehinede, (2018)**, who reported that there was positive significant improvements in talent management practice among all participants immediately post training interventions learning sessions and at follow-up period.

Additionally, **Mohammed, Sliman, and Mohamed, (2020)** and **Aly, El-Shanawany, Ghanem, and Lotfy, (2023),** were in the same line with the results of current study, that there was affirmative statistically significant improvement in participants' practices related to talent management in the post and follow up phase in comparison with their preprogram phase.

The current study revealed that there was a statistically significant difference in the mean score of nurse managers regarding talent management immediately post program implementation compared to preprogram for most of items, this result might be due to the positive effect of the program on nurse managers' practices. On the same line**Ali et al. (2022)**, found that overall nurse managers had negatively awareness and mindfulness before talent management practices introduction, but after the talent management training program the majority of them showed a strong positive response and improvement in their practices and, it was significantly increased. As well as, a positive note is that the levels of talent management practices among the head nurses have been elevated with statistically significant improvement from pretest to post-test measures because of the reinforcement and understanding provided within the training program.

The current study was based on another hypothesis that there will be a difference in mean scores of nurse managers' leadership effectiveness practices after program implementation and three months later compared to before program implementation. The results of the current study supported the research hypotheses as there was a statistically significant difference in total mean scores of nurse managers' leadership effectiveness practices during different periods of assessment regarding all leadership effectiveness dimensions practices.

The current study revealed statistically significant differences in mean scores of nurse managers' regarding their leadership effectiveness practices immediately post program and three months post program implementation compared to preprogram for most items. From the researcher's point of view the talent management training program not only had a positive effect on nurse managers' talent management knowledge, and practices which they gained during the training program, but also helped them to improve their leadership effectiveness practices.

As nurse managers had the highest mean scores immediately post-program implementation and three months post program implementation relative to preprogram. This result proved that the talent management program has a positive effect on nurse managers' leadership effectiveness. From the researcher point of view this result might be due to the applicability of improving nurse managers' leadership effectiveness and readiness of them to apply the effective leadership approaches.

This result is consistent with the result **of Abdrabou and Ghonem (2020)**who revealed that there was a highly statistically significant improvement regarding nurse managers' leadership effectiveness. Also, they reported that there was a highly statistically significant improvement in nurse managers' leadership effectiveness in the post and follow up phases compared with their pre intervention phase. As well as, this result is in congruent with the study done by **Hariyati and Ungsianik (2018), Bakshawan, Ahmed, Shaban, EL-Shaikh,and ELSayed, (2016)**who stated that more than two thirds of head nurses reported high leadership effectiveness level after applying active learning approaches.

In the same line, **Elhanafy and El Hessewi (2021)** stated that there is a highly statistically significant improvement in head nurses' leadership effectiveness in the post phase and follow up phase compared with pre intervention. Also, **Ali, et al. (2022)**who found that head nurses' leadership effectiveness shows significantly improvement between the post- and follow-up test measures compared to the pretest measure.

Finding of the present study revealed statistically significant correlation between talent management knowledge and practices and leadership effectiveness practices during different periods of assessment pre, immediately post program and three months post program implementation. This result wasconsistent with the result of **Ali, et al. (2022)**who found that there were a highly statistically significant positive correlation

between head nurses' knowledge and practices about talent management and leadership effectiveness practices during immediately post-program implementation.

This result wasconsistentwith the result of **Elhanafy and El Hessewi (2021)**who found that there was a statistically significant positive relationship between participants' talent management knowledge and practice skills scores after talent management training program implementation. On the same line, **Khalil, Mostafa, and Ebrahim, (2022)** found that there was a highly statistically significant positive correlation between total talent management knowledge, total talent management practice in the immediate post and follow up program phases compared to the pre-program phase.

CONCLUSION

There was a statistical significant difference in knowledge test scores as well as in mean scores of talent management practices among nurse managers during different periods of assessment. A statistical significant difference in leadershipeffectiveness practices nursing care scores among nurse managers during different periods of assessment. It could be concluded that there was a positive effect of a talent managementtraining programon nurse managers' leadership effectiveness practices.

RECOMMENDATIONS

Based on the findings obtained from the present study, the following recommendations are deduced.

- The hospital administrators should create and develop a system that makes talent development part of the hospital culture.
- Hospital administrators should utilize talent management process to get experienced and qualified nurses and introduce talent management strategies into their strategic planning to remain competitive in today's healthcare market.
- Set clear roles and responsibilities for both nurse managers and human resources through a constructive talent management policies and procedures.
- Hospital administration should provide adequate talent management programs training and workshops for newly first line nurse managers.
- Encourage complete involvement of nurses and other health care providers to provide their varied talent on the supportive journey to talent-advantage.
- Hospital administration should encourage a high performance culture and continuous performance management.
- Executives should create a talent management framework, set up a talent management process and focus on most impactful talent management practices.
- Replication of the current study in other and hospitals or other healthcare organizations.
- Replication of the current study and addressing talent management practices with other variables such as nurse managers' empowerment, nursing staff engagement and satisfaction.
- Incorporate talent management course in nursing administration spiecislityat the faculties of nursing.

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