

▪ **Basic Research****Effect of Supportive Leadership Training Program on Staff Nurses' Perception of Deviant Workplace Behavior**Howaida Moussa Elghannam¹, Dr. Doaa Ali Seliman Ali^{2**}

¹Lecturer of Nursing Administration, Faculty of Nursing, Modern University for Technology and Information (MTI). ²Lecturer of Nursing Administration, Technical Institute of Nursing, Faculty of medicine for Girls (Cairo), Al-Azhar University

Abstract

Background: Supportive nursing leadership is structured on the basis of staff nurses' well-being and motivation by nurturing a positive and empathetic healthcare environment that promotes personal and professional nursing growth. **Aim of the study:** examining the effect of supportive leadership training program on staff nurses' deviant behavior. **Design:** A quasi-experimental research design was utilized to achieve the aim of the study. **Subjects:** A total of 403 nursing personnel consisted of (18) nursing managers and (385) staff nurses were participated in the study. **Setting:** the study was conducted in " Alzahraa University Hospital" which is one of " Al-Azhar University hospitals". **Tools of data collection:** Three tools were used for data collection: Supportive Leadership Knowledge Questionnaire, Supportive Leadership Scale, and Deviant Behavior scale. **Results:** After implementing the program, there was a highly statistically significant improvement in supportive leadership knowledge, and performance levels ($p=0.001$) among nurse managers. Furthermore, supportive leadership training program positively correlated to staff nurses' perception of deviant behavior. **Conclusion:** Supportive leadership training program had a positive effect on the perception of deviant workplace behavior among staff nurses. **Recommendations:** healthcare organizations should apply supportive leadership training programs as a step to eliminate nursing deviant behavior.

Key words: Deviant behavior, Supportive leadership.

Introduction

Technological improvements aren't the most effective matter which can be remodeling how healthcare organizations are being run nowadays. While things like cloud services and statistics analytics can be taking tons of spotlight, there are various different modifications related to the brand-new technology of nursing personnel and healthcare employers. The present-day fashion of management differs from the conventional one. Turning into a not unusual place amongst nursing personnel, cooperation, coordination, and effective communication is supportive leadership (*Abdullah, et al., 2021*).

Supportive nursing leadership is characterized by a managerial approach that goes beyond merely assigning tasks and expecting outcomes. In this style, the nursing leader actively collaborates with staff nurses throughout the entire process until the task is finished. One significant advantage of supportive leadership is that it enables nursing leaders to guide staff nurses to a level of confidence and competence that allows them to perform tasks independently with little supervision in the future (*Ahmed, et al., 2024*).

Supportive nursing leadership can be operationalized as an administrative style where nursing leaders demonstrate authority in such ways that portray team encouragement, cooperation and respect. In this leadership style, staff nurses are treated as integral members of the healthcare team. In return for this staff nurses are expected to be creative and committed in their nursing practice. Supportive nursing leaders are not just assigning tasks to staff nurses, but simply assisting them through task accomplishment, show authenticity and genuine interest in their staff nurses, build trust, inspire, and assist them overcome the challenges they encounter (*Alluhaybi, et al., 2024*).

Supportive nursing leaders should be characterized by leadership intelligence that encompasses physical intelligence pronounced in valuing the health of self and followers, emotional intelligence characterized by self-awareness and self-management in addition awareness and management, pragmatic intelligence that is the combination of cognitive process and experience which can be found in problem-solving skills, clinical reasoning, and professional learning. The last one is communication intelligence that is concerned with the ability to truly connect to followers and build centaur relationships with them (*Alsadaan, et al., 2024*).

Furthermore, research in nursing leadership and management has announced that supportive leadership style could be influenced by followers' characteristics such as personal traits, past experience, educational level, and perception of control over their environment. Additionally, work environment, which is identified by organizational culture, available resources, and external pressures, could affect supportive leadership nursing practice. Supportive leaders have been proved to have a sense of loyalty and commitment while cultivating this sense among their staff nurses, which empowers them to eliminate deviant behaviors. In this respect, supportive leadership has been linked to organizational communication, empowerment, and motivation, which in turn lead to organizational success and excellence (*Cummings, et al., 2021*).

Deviant behavior among staff nurses is a voluntary wrong or counterproductive work behavior that violates organizational norms, policies and rules and threatens its effectiveness. It could also harm members of the healthcare team working in the organization. Deviant nurses' behavior could be categorized into two domains; first "organizational deviance" which is directed to harm the organization such as theft, sabotage, and putting low work productivity

level. This could bring bad effects to the organization by increasing related costs for organizational reform, in-service training, and supervision (*Badran & Akeel, 2022*).

Second domain is “interpersonal deviance” which is expressed by wrong interpersonal behaviors such as making fun of others, playing mean pranks, acting in a rude way, and arguing so much without accepted reasons. This will lead to poor communication, decreased motivation, frustration and intention to leave among organizational workers leading to prominent shortage. So, this study was implemented to examine the effect of supportive leadership training program on staff nurses' deviant behavior (*Hany, et al. , 2020*).

Research significance:

Egypt vision 2030 emphasized on sustainable development, and the nursing professional development pronounced in it. This vision ensures professional nursing practice, by empowering nursing leaders and supporting them with necessary resources. Egypt magnifies the necessity of a supporting healthcare environment that leads to quality and success which is good for future generations (*Badran & Akeel, 2022*).

Studying the effect of a Supportive Leadership Training Program on staff nurses' deviant behavior has been studied in various research, pronouncing its special relevance in nursing practice. Studies revealed that high levels of supportive leadership are associated with low levels of deviant behavior among staff nurses which benefits healthcare organizations (*Mog, et al., 2024*).

This research portrays approaches for healthcare organizations that encompass a supportive organizational culture obtained by the application of training interventions leading to less results in adverse effects such as the intention to quit work, absenteeism, frustration, abuse of materials and privileges, stealing, and bias (*Namathanga, et al.,2024*). Moreover, other research studies ensured that one in every five leaders exhibits supportive behavior which improved the wellbeing of both healthcare workers and the organization. Additionally, research results identified that deviant work behavior was negatively correlated to supportive leadership (*Niinihuhta, & Häggman-Laitila, 2022*).

Aim of the study:

This study aimed to examine the effect of supportive leadership training program on deviant behavior among staff nurses through the following objectives:

1. Assess nurse managers' supportive leadership knowledge level.
2. Identify nurse managers' supportive leadership performance level.
3. Design supportive leadership training program for nurse managers.
4. Implement the designed training program.
5. Explore deviant behavior perception level among staff nurses pre/post implementation of the training program.
6. Evaluate the effect of supportive leadership training programs for nurse managers on staff nurses' perception of deviant behavior.

Research Hypothesis

The current study hypothesized that supportive leadership training program for nurse managers will improve perception of deviant workplace behaviors among staff nurses.

Methods

Research design: One group pretest- posttest quasi experimental research design was used to carry out this study.

Research setting: The study was performed at all departments and critical care units at Alzahraa University hospital, which is operated by "Faculty of Medicine- female Branch, Al-Azhar University" Egypt.

Sampling: The G Power software was used to determine the sample size, which had a medium effect size, 0.04 alpha, and 0.97 power. The necessary sample size to carry out the present study was 15 nurse managers and increased to 18 out of 20 for the possibility of attrition with a response rate 100%. The sample included nursing director (N=1), vice nursing director (N=2) nursing supervisors (N= 5), head nurses (N= 10) and staff nurses (N= 385). A convenience sampling technique was utilized to involve participants from the previously mentioned settings.

Sample Criteria: Researchers included in the study all nurse managers and staff nurses with one year of experience in the current hospital, of both genders, and exclude those who attend previous training about supportive leadership or deviant behavior.

Instruments

Tool 1: Supportive leadership knowledge questionnaire. Which is comprised of two parts as illustrated:

Part I: Nurse Managers' Personal Data and Job Characteristics. This part portrayed information on nurse managers' demographic characteristics, including age, years of experience, level of nursing education, and administrative position distribution.

Part II: Supportive leadership knowledge questionnaire: Developed by the researchers after reviewing literature of previous studies (*Um-e-Rubbab et al.,2021; Namathanga, et al., 2023& Al Sabei, et al., 2024*). It encompasses (20) questions, including true or false (10 questions) and multiple-choice questions (10 questions). The topics covered the following domains: concepts of supportive leadership, process, pros and cons, and the role of supportive leaders in nursing practice.

Each question was scored as "2" for a correct answer and "1" for an incorrect response. The total score for the questionnaire was (40) points. The cutoff point was calculated using - Receiver Operating characteristic (ROC) Curve. The scoring system was categorized as follows: (less than 75%) were deemed unsatisfactory. (75% or higher) were considered satisfactory.

Tool 2: The Supportive Leadership Scale: It was designed by (*McGilton, 2004*). This tool aims to evaluate nurse managers' performance in demonstrating supportive leadership behaviors. It was composed of (15) items assessing supportive leadership skills, such as (My manager trusts my ability to provide quality care). Using a 5-point Likert scale, with 1 defining "never" and 2 "seldom", 3 denotes "occasionally," 4 denotes "often," and 5 denotes "always" The overall score falls between 15 and 75. Supportive leadership conducts to ensure equal spacing between levels, the mean score method was used to calculate the levels. Score 15-37 meant low supportive leadership behavior Level, 38-62 was considered a moderate level and 63-75 was a high supportive leadership behavior level.

Tool 3: Deviant Workplace Behaviors Scale: It was developed by (*Bennett & Robinson, 2000*). It identified nurses' perception level toward deviant workplace behaviors, and it contained 19 items under two main domains: interpersonal deviance (seven items) and organizational deviance (twelve items). participants' responses were calculated on three points Likert scale with (1) refers to " never", (2) defining " sometimes" and (3) considered as "always" Scores of each domain were gathered and converted into percent scores. The perception level toward deviant workplace behaviors was considered low if the total percent score was less than 60% and moderate if total score was ranged from 60-75% and high if the total scores were more than 75%.

Pilot study:

Before starting the main fieldwork, a pilot study involving 2 nurse managers and 38 staff nurses working at the study setting, which composed 10% of the total study sample. The pilot study aimed to assess the feasibility, practicality, and clarity of the language used in the tools of data collection. No modifications were required, so, the pilot study was included in the study.

Tool validity and reliability:

Initially, a certified bilingual translator independently translated the English tools into Arabic to create the initial Arabic versions. Subsequently, the first researcher re-translated these initial Arabic versions back into English and compared them with the original tools to ensure semantic equivalence. This rigorous process aimed to maintain the integrity of the translated versions while minimizing discrepancies between the original and translated tools.

Validity of tools was examined for face and content by panel of jury group. This group consisted of 3 professors and 2 assistant professors specialized in Nursing Administration working at Faculty of Nursing- Tanta University, Helwan University and Modern University for Technology and information. The jury group examined tools carefully to judge its clarity, comprehensiveness and accuracy. Their opinions were elicited about the tools layout, components and scoring system. According to jury opinions the researchers modified minor items from the tools such as rephrasing some items and rearranging some items to be more accurate and clearer.

Data collection tools were assessed with its reliability through measuring its internal consistency by using Cronbach's Alpha Coefficient test. The values obtained were 0.89 for the supportive leadership knowledge questionnaire, 0.91 for the supportive leadership scale, and 0.90 for the deviant work behavior scale. According to (10), Cronbach's alpha values exceeding 0.7 are deemed acceptable for demonstrating internal consistency reliability.

Ethical considerations:

The Research Ethics Committee (REC) at the Faculty of Nursing, Modern University for Technology and Information (MTI), granted approval for the study FAN /159/2024 (May/20/2024). Also, an official letter outlining the study's title and objectives was sent from the Dean of the Faculty of Nursing to the directors of Alzahraa University Hospital to secure authorization from the hospital administrators for data collection. Additionally, written consent for participation was obtained from the nurse managers and staff nurses after providing comprehensive information about the study.

Fieldwork:

The main data collection for the study took place between June 2024 and Feb. 2025. The research process encompassed various phases including assessment, planning, implementation, evaluation, and follow-up to ensure a comprehensive data collection and analysis. The study was carried out in the following phases.

Phase I (Assessment Phase): During the assessment phase, the initial step involved administering pretests to assess nurse managers' knowledge about supportive leadership, using "tool I". Tool II was administered to them to assess their supportive leadership behavior. Then Tool III was distributed to staff nurses to identify their perception level of deviant behavior. Data collection occurred during participants' morning and afternoon shifts, but not in the night shifts as permitted by the hospital authority because of little staff numbers at night shifts. Researchers were available to offer guidance and clarification as needed and gathered the completed tools immediately after their completion. Completion time for questionnaire sheets ranged from 15 to 20 minutes for tools I and II, and around 30 to 35 minutes for tools III.

Phase II (Planning): The planning phase was prepared based on an analysis of the assessment phase results and relevant literature. Prior to commencing the study, the content validity of the program was assessed by estimating the content validity index (CVI). A panel of five experts, comprising three nursing academics and two nursing managers holding doctorates, participated in the validation process. The experts evaluated the clarity and relevance of the study tools and offered recommendations to enhance their quality. The resulting CVI for the study program was determined to be 0.95, indicating strong content validity. The research team crafted a training program tailored to address the specific needs identified among nurse managers. The program's content and teaching methods were meticulously chosen following a thorough assessment of these needs. Additionally, the researchers designed the time schedule, teaching sessions, and selected appropriate media for instruction. The teaching methods encompassed lectures, group discussions, and real-life examples drawn from work situations, supplemented by visual aids such as data shows and handouts. This phase of program development was completed within a span of two weeks.

Phase III (The educational program implementation): the researchers applied for the training program. All nurse managers attended three sessions, with each session lasting one hour in the morning and afternoon shift. They perceived the program contents using teaching strategies and handouts. Various teaching methods were used, including lectures, group discussions, and brainstorming. Instructional materials consisted of program booklet prepared by the researchers and distributed to all participants on the first day of the program's implementation, in addition to PowerPoint presentation for program sessions. The program addressed key topics related to supportive leadership, including definition, principles, basic concepts, aim and objectives, process, methods, advantages and disadvantages, strategies, and the skills utilized by nurse managers. Program sessions were performed at the conference room during the last two hours of the nurse managers' shifts, allowing them to participate after completing their work. The training sessions lasted for three months, running from the beginning of June to the end of Augst 2024.

Phase IV (Evaluation phase): In the evaluation phase, Tool I was employed directly after the application of the program to assess nurse managers' knowledge levels about supportive leadership. Tools II, was then distributed to conduct the post-program sessions' conduction to measure the nurse managers' supportive leadership behaviors. Tool III was used to assess staff nurses' perception level of deviant behavior. During the follow-up phase, the identical process was replicated three months later to assess the nurse managers' progress over time.

Phase V (follow- up phase): At the follow-up time, a similar step as in the evaluation phase was applied three months later to reassess the nurse managers' progress and retention of knowledge and skills. This comprehensive evaluation encompassed the administration of the same assessment tools utilized post-program implementation. The aim was to identify any sustained changes in nurse managers' knowledge, and supportive leadership performance, in addition to staff nurses' perception of deviant behavior over time. This follow-up assessment period also extended for one month,

Statistical Analysis:

The data collected were thoroughly revised, coded, and organized prior to entry into IBM SPSS Statistics software (version 26.0). For parametric numerical data, we calculated the mean, and standard deviation (\pm SD). Frequencies and percentages were also computed to summarize nurse managers' knowledge and performance related to supportive leadership across three program phases: pre-program, post-program, and follow-up. Chi-square tests (X^2) were utilized to assess differences in knowledge and performance between two phases. Significant differences were indicated by p-values, with $p \leq 0.05$ considered significant and $p \leq 0.01$ regarded as highly significant. Linear regressions were performed to reveal the effect of supportive leadership training program on deviant behavior perception among staff nurses. The reliability of the study's tools was evaluated using Cronbach's alpha coefficient, to identify internal consistency.

Results

Distribution of study subjects according to their Personal Data and Job Characteristics.

Table 1 explains that the study sample consisted of 18 nurse managers and 385 staff nurses. Around half of nurse managers (55.6% & 50.0%) aged between 25 to less than 35 with a mean \pm SD (30.95 ± 6.54) and had a bachelor's or master's degree respectively, also less than two thirds (61.1%) of them had more than 5 to 10 years of experience with a mean \pm SD (17.28 ± 7.89). Additionally, more than one third 35.1% of staff nurses aged less than 25 years with a mean \pm SD (24.88 ± 3.97), more than half 53.0% had a bachelor's degree while less than half 45.2% had more than 5 to less than 10 years of experience with a mean \pm SD (14.00 ± 4.09).

Percentage distribution of nurse managers studied according to their administrative positions

Figure 1 shows that more than half (55.5%) of studied nurse managers were head nurses, while only (5.5%) were nursing directors.

Relation between study variables

Nurse managers' knowledge about supportive leadership throughout the program phases.

As illustrated in table (2) prior to program implementation, only (11.1%) of nurse managers studied had satisfactory total knowledge regarding supportive leadership. However, following the program and at the follow-up phase, the majority (94.4%) had a high total satisfactory knowledge level. There was a significant and positive improvement in their knowledge levels related to all dimensions and total supportive leadership compared to pre-program levels ($P < 0.001$).

Nurse managers' supportive leadership behavior throughout the program phases.

Table (3) describes that high percent (83.3%) had low total supportive performance level preprogram, post program there was (61.1) had a high level while in the follow up improved

to 83.3%. Additionally, it verifies a statistically significant improvement in participants' supportive leadership behavior post program and in the follow up phases ($P < 0.001$).

Total staff nurses' perception of workplace deviant behavior throughout the program phases.

Table 4 depicts a notable and statistically significant improvement in staff nurses' perception of workplace deviant behavior (p value 0.000**), but non statistical significance in the follow-up (p value 0.81).

Table 5 portrays that there was a statistically significant positive predictor from nurse managers' knowledge about supportive leadership and total staff nurses' perception of workplace deviant behavior at ($p = < 0.00$).

Table 6 clarifies that there was high significant statistical positive predictor from nurse managers' performance about supportive leadership and total staff nurses' perception of workplace deviant behavior at ($p = < 0.01$).

Table (1): Personal data of studied subjects (n=403)

Personal data items	Nurse managers (n ₁ = 18)		Staff Nurses (n ₂ = 385)	
	No.	%	No.	%
Age in years				
< 25	0	0.0	135	35.1
25 < 35	10	55.6	106	27.5
35 ≤ 45	6	33.3	100	26.0
>45	2	11.1	44	11.4
Mean±SD	30.95±6.45		24.88±3.97	
Level of education in nursing				
Diploma	0	0.0	169	43.9
Technical Nursing institute	0	0.0	10	2.6
Bachelor’s degree	9	50.0	204	53.0
Master’s degree	9	50.0	2	0.5
Years of experience in nursing				
≥ 1-5	0	0.0	140	36.4
>5-10	11	61.1	174	45.2
>10-20	5	27.8	29	7.5
>20	2	11.1	42	10.9
Mean±SD	17.28±7.89		14.00±4.09	

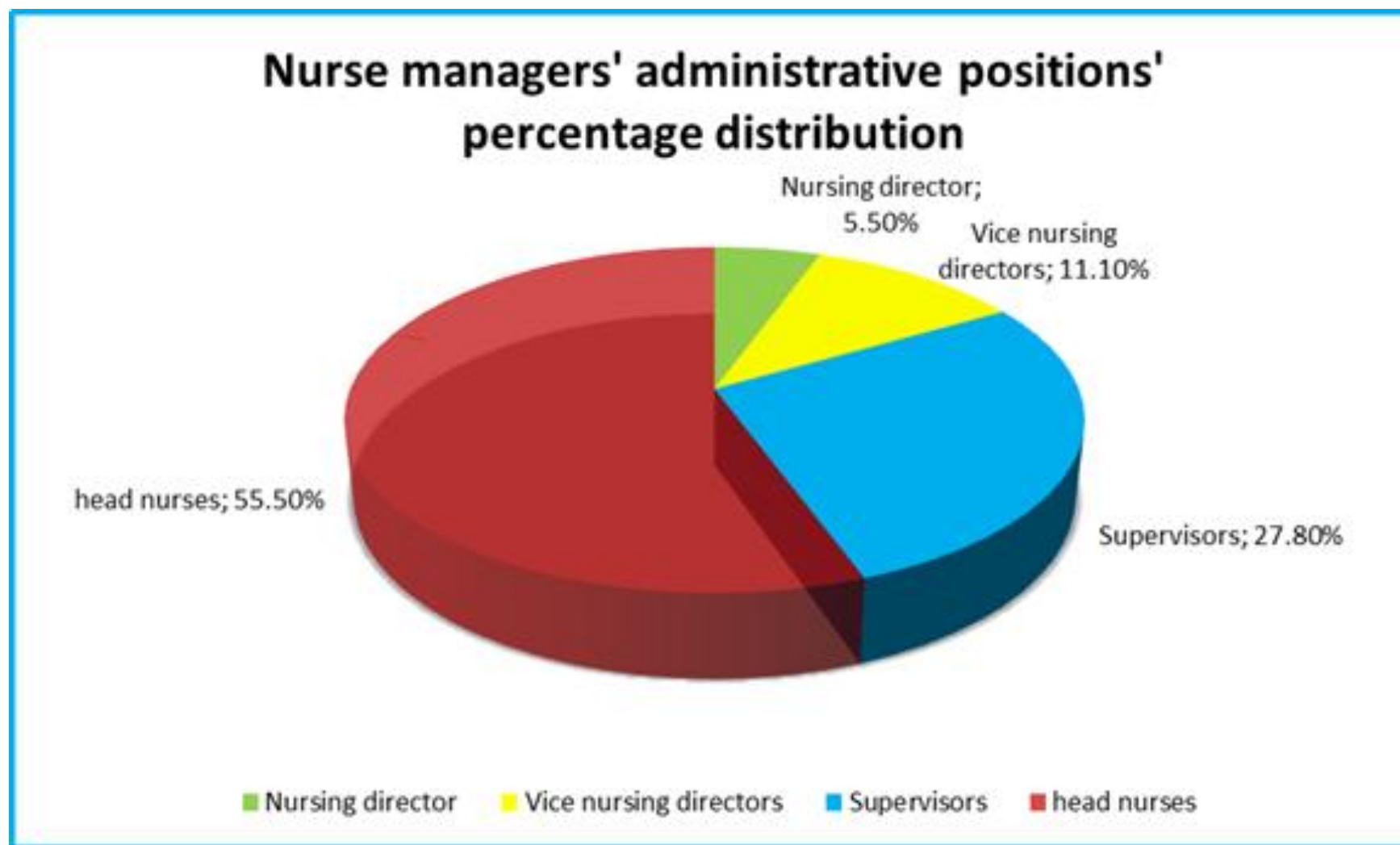


Figure (1) Studied nurse managers' administrative positions' distribution (n₁= 18).

Table (2): Nurse managers' supportive leadership knowledge level throughout program phases (n₁= 18).

Supportive Leadership Knowledge Dimensions	Satisfactory knowledge (≥ 75%)												Pre -post		Pre-Follow up	
	Pre- program				Post program				Follow up				χ ²	P-value	χ ²	P-value
	No.	%	No.	%	No	%	No	%	No	%	No	%				
Supportive Leadership concepts	4	22.2	14	77.8	17	94.4	1	5.6	16	88.9	2	11.1	20.68	0.000**	26.11	0.000**
Supportive Leadership process	3	16.7	15	83.3	16	88.9	2	11.1	15	83.3	3	16.7	14.49	0.001**	27.77	0.000**
Prose and cones of Supportive Leadership	1	5.6	17	94.6	18	100	0	0.0	18	100	0	0.0	18.99	0.001**	20.27	0.000**
Role of supportive Leaders in nursing practice	2	11.1	16	88.9	17	94.4	1	5.6	17	94.4	1	5.6	20.22	0.000**	23.21	0.000**
Total supportive leadership knowledge level	2	11.1	16	88.9	17	94.4	1	5.6	17	94.4	1	5.6	18.59	0.001**	24.34	0.000**

*Significant at $p < 0.05$ **highly significant at $p < 0.01$.

Table (3): Nurse managers' supportive leadership performance level throughout program phases (n₁= 18).

Supportive Leadership Performance Items	Nurse managers' supportive leadership performance (n1= 18).																		Pre -post	Pre-Follow up
	Pre- program						Post program						Follow up						χ ²	χ ²
	High		Moderate		Low		High		Moderate		Low		High		Moderate		Low			
	No.	%	No.	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	P-value	P-value
1. My manager trusts my ability to provide quality care.	1	5.6	2	11.1	15	83.3	9	50	7	38.9	2	11.1	8	44.4	8	44.4	2	11.1	20.36*** 0.001	18.26*** 0.001
2. My manager makes efforts to supply my needs.	1	5.6	3	16.7	14	77.8	13	72.2	4	22.2	1	5.6	12	66.7	5	27.8	1	5.6	9.898* 0.001	8.756* 0.001
3. My manager realizes my concerns about resident care.	1	5.6	1	5.6	16	88.8	8	44.4	8	44.4	2	11.1	15	83.3	3	16.7	0	0.0	19.507* 0.001	17.417* 0.001
4. My manager respects my work opinions.	2	11.1	1	5.6	15	83.3	10	55.6	7	38.9	1	5.6	14	77.8	2	11.1	2	11.1	7.42* 0.024	6.32* 0.024
5. My manager informs me about patients' care expectations.	3	16.7	1	5.6	14	77.8	14	77.8	2	11.1	2	11.1	13	72.2	3	16.7	2	11.1	14.44** 0.001	12.40** 0.001
6. My manager provides help to me when at work things are not going well.	1	5.6	2	11.1	15	83.3	13	72.2	3	16.7	2	11.1	12	66.7	5	27.8	1	5.6	12.50** 0.001	10.49** 0.001
7. My manager informs me about any environmental or organizational changes.	1	5.6	1	5.6	16	88.8	11	61.1	5	27.8	2	11.1	11	61.1	5	27.8	2	11.1	9.02* 0.001	7.34* 0.001
8. My manager is open to any remarks I make to him/her.	0	0.0	0	0.0	18	100	9	50	8	44.4	1	5.6	8	44.4	9	50	1	5.6	20.36*** 0.001	18.26*** 0.001
9. My manager informs me about work decisions.	1	5.6	1	5.6	16	88.8	10	55.5	5	27.8	3	16.7	9	50	8	44.4	1	5.6	9.898* 0.001	8.756* 0.001
10. My manager keeps balance between my concerns and clients/ families’ ones.	2	11.1	2	11.1	14	77.8	11	61.1	6	33.3	1	5.6	12	66.7	4	22.2	2	11.1	19.507* 0.001	17.417* 0.001
11. My manager motivates me even in hard times.	3	16.7	1	5.6	14	77.8	14	77.8	1	5.6	3	16.7	12	66.7	4	22.2	2	11.1	7.42* 0.024	6.32* 0.024
12. My manager portrays appreciation for my work efforts.	1	5.6	3	16.7	14	77.8	12	66.7	4	22.2	2	11.1	11	61.1	5	27.8	2	11.1	14.44** 0.001	12.40** 0.001
13. My manager respects me as a human being.	0	0.0	2	11.1	16	88.9	8	44.4	7	38.9	3	16.7	15	83.3	1	5.6	2	11.1	12.50** 0.001	10.49** 0.001
14. My manager carefully listens to me.	2	11.1	1	5.6	15	83.3	13	72.2	2	11.1	3	16.7	12	66.6	3	16.7	3	16.7	9.02* 0.001	7.34* 0.001
15. My manager realizes my strength and weakness areas.	0	0.0	3	16.7	15	83.3	10	55.6	6	33.3	2	11.1	9	50	7	38.9	2	11.1	12.50** 0.001	10.49** 0.001
Total supportive leadership performance level	1	5.6	2	11.1	15	83.3	11	61.1	5	27.8	2	11.1	11	83.3	5	27.8	2	11.1	9.02* 0.001	7.34* 0.001

*Significant at $p < 0.05$ **highly significant at $p < 0.01$.

Table (4): Total staff nurses' perception level of workplace deviant behavior throughout program phases (n₂ = 385)

Dimensions of workplace deviant behavior	Pre-program						Post-program						Follow-up						Pre- post	Pre-follow up
	High		Moderate		Low		High		Moderate		Low		High		Moderate		Low		χ^2 p value	χ^2 p value
	N.	%	No.	%	N.	%	N.	%	N	%	N	%	N.	%	N.	%	N.	%		
1.Personal deviance.	251	65.2	74	19.2	60	15.6	259	67.3	75	19.5	51	13.2	252	65.5	70	18.2	63	16.3	30.94 0.0001**	0.56 0.45
2. Organizational deviance.	220	57.1	60	15.6	105	27.3	280	72	70	18.9	35	9.1	275	71.5	64	16.6	46	11.9	46.78 0.0001**	0.58 0.75
Total	236	61.3	67	17.4	82	21.3	270	70.1	72	18.7	43	11.2	264	68.6	67	17.4	54	14	42.87 0.0001**	0.43 0.81

Table (5): Simple linear regression for the effect of Total supportive leadership knowledge on staff nurses' perception of workplace deviant behavior throughout program phases (n1=18, n2=385).

Model	Staff nurses' perception of Workplace deviant Behavior														
	Pre-program					Post program					Follow up program				
	Liner regression					Liner regression					Liner regression				
(Constant) Total supportive leadership knowledge among nurse managers	B	r	R ²	Std. Error	t(sig)	B	r	R ²	Std. Error	t(sig)	B	r	R ²	Std. Error	t(sig)
	.227	.226	.09	.129	2.962 (.03*)	.66	.91	.83	.043	0.667 (.000**)	.67	.93	.87	.037	5.833 (.000**)

Table (6): Simple linear regression for the effect of Total supportive leadership performance on staff nurses' perception of workplace deviant behavior throughout program phases (n1=18, n2=385).

Model	Staff nurses' perception of Workplace deviant Behavior														
	Pre-program					Post program					Follow up program				
	Liner regression					Liner regression					Liner regression				
(Constant) Total supportive leadership performance among nurse managers	B	r	R ²	Std. Error	t(sig)	B	R	R ²	Std. Error	t(sig)	B	r	R ²	Std. Error	t(sig)
	.131	.103	.07	.179	1.275 (.03*)	.264	.77	.20	.043	3.409 (.001**)	.233	.78	.18	.039	2.973 (.003**)

Discussion

Nursing leadership is considered the corner stone that empowers staff nurses and ensure supportive healthcare environment (*Al Sabei, et al., 2024*). Previous researches high lightened supportive leadership as a significant part of nurse managers' formal role that could results in the decrease of workplace deviant behaviors (*Pattali, et al., 2024*). The present research explored the effect of supportive leadership training program on deviant behavior among staff nurses. Present results suggested a significant positive improvement in studied nurse managers' knowledge levels related to all dimensions and total supportive leadership at post program and follow up phases compared to pre-program levels ($P < 0.001$). From the researchers' point of view, this result was encouraging and ensured the importance of nurse managers' supportive training program to the wellbeing of healthcare organization.

Al Sabei, et al., (2024) supported present results in their study titled "A Study of the Supportive Nursing Leadership Environment". They found that a significant improvement in nurse managers' knowledge post program resulted in higher levels of quality and productivity. Also, the study conducted by (*Namathanga, et al., 2023*) entitled " Effect of a supportive leadership initiative on nurse leaders' work performance in Malawi: A presentation of qualitative findings" supported present study results and declared that the majority of nurse managers had a high total satisfactory knowledge level post program implementation resulting in a significant improvement in their work performance.

Supportive leadership performance among nurse managers could help in creating positive healthcare environments and contribute to increased job satisfaction among staff nurses. Present study results verified a statistically significant improvement in nurse managers' supportive leadership behavior post program and in the follow-up phases ($P < 0.001$). From the researchers' opinion, hospital work environment permits this supportive leadership behavior which allows for leaders' self-organization and permits them to perform self-accountability to their leadership actions leading to equity and loyalty to healthcare organization. Present results were in the same line with the results of (*Um-e-Rubbab, et al., 2021*) in their study about " Impact of Supportive Leadership During Covid-19 on Nurses' Well-Being: The Mediating Role of Psychological Capital" they reported that nurse managers' supportive leadership performance had improved significantly post training and is positively correlated to the well-being of staff nurses.

Staff nurses are important members of the health care team who provide direct patient care leading to patients' satisfaction. Deviant work behavior among staff nurses that violates organizational policies, norms and rules may lead to a cost related problem to healthcare organization. Present results depicted a notable and statistically significant improvement in staff nurses' perception of workplace deviant behavior post-program (p value 0.000**), but non statistical significance in the follow-up (p value 0.81). From the researchers' opinion, this may be related to the instructions and explanations of nurse managers to staff nurses about deviant work behavior as a part of their supportive leadership role. Staff nurses who participated in the study were informed by nurse managers in their continued in-service training sessions post supportive leadership program implementation about deviant workplace behavior concepts, characteristics, consequences, and opportunities for improvement.

Previous study performed by *Zaki , & Elsayed , (2021)* entitled "Toxic Leadership and its Relation to Nurses' Absenteeism and Their Deviant Behaviors" supported present study results. They found that staff nurses' perception of deviant workplace behavior was high and positively correlated to their absenteeism. Also, (*Ahmed et al., 2024*) in their study titled "The effect of toxic leadership on workplace deviance: the mediating effect of emotional exhaustion, and the moderating effect of organizational cynicism" reported statistically significant improvement in

staff nurses' perception of workplace deviant behavior post implementation of toxic leadership training program. Additionally, (*Abdullah, et al.,2021*) in their study about "The Relationship between personality traits, deviant behavior, and workplace incivility" declared that (70%) of staff nurses studied had high perception related to workplace deviant behavior which is the same (70.1) post program in current research results.

Present results portrayed that there was a statistically significant positive predictor from nurse managers' knowledge and performance related to supportive leadership and total staff nurses' perception of workplace deviant behavior at ($p = <0.00$). *Sharma, & Chillakuri, (2023)* in a study titled ""Positive deviance at work: a systematic review and directions for future research" reported the same results but, the interaction effect on workplace deviant behavior perception was introduced and treated as an independent variable. Their results showed that the supportive leadership of a nurse manager has a positive and significant relationship with workplace deviant behavior perception of staff nurses. On the other hand, (*Tran, 2021*) who conducted a study about "Organizational culture, leadership behavior and job satisfaction in the Vietnam context" contrasted present study results when found that supportive leadership style becomes statistically insignificant with an increase in the R-square by 0.067 ($p < 0.001$).

Conclusion

In the light of present research findings, it can be concluded that there was a significant and positive improvement in nursing managers' knowledge and performance levels related to all dimensions and total supportive leadership compared to pre-program levels ($P<0.001$). Finally, the study findings revealed that supportive leadership training program had a positive effect on the perception of deviant workplace behavior among staff nurses.

Recommendations

Based on the current study findings, the following recommendations were suggested:
Healthcare organizations should:

- Provide nurse managers with training programs about supportive leadership and workplace deviant behavior to promote organizational development.
- Afford adequate resources and financial support to nursing personnel for their education and development to eliminate any of their deviant work behaviors.

Nursing managers should:

- Perform with fairness and resilience to their staff nurses, which results in organizational well-being.
- Promote shared decision making to ensure nurses' loyalty and decrease workplace deviant behaviors.

Staff nurses should:

- Be aware of workplace deviant behaviors and practice their roles without any of it.
- Participate in seminars and conferences to improve their nursing knowledge, and nursing practice.

Educational organizations should:

- Introduce supportive leadership and workplace deviant behaviors into undergraduate nursing education.

Furthers studies:

- Supportive leadership as a mediator between occupational stress and psychological Capital among nurses.

Acknowledgements

The authors thank all nurse managers and staff nurses who agreed to participate in this study.

References

1. **Abdullah, N., Nasruddin, A., and Mokhtar ,D. (2021):** "The Relationship between personality traits, deviant behavior, and workplace incivility", *International Journal of Academic Research in Business and Social Sciences*, 11(3), 169-184.
2. **Ahmed, A.K., Atta, M.H.R., El-Monshed, A.H. et al. (2024).** "The effect of toxic leadership on workplace deviance: the mediating effect of emotional exhaustion, and the moderating effect of organizational cynicism", *BMC Nursing* 23, 669. <https://doi.org/10.1186/s12912-024-02308-x>
3. **Alluhaybi A, Wilson A, Usher K, Durkin J. (2023).** Impact of Nurse Manager Leadership styles on Work Engagement: a systematic literature review. *J Nurs Adm Manag.* <https://doi.org/10.1155/2023/5090276>.
4. **Alsadaan N, Salameh B, Reshia FAAE, Alruwaili RF, Alruwaili M, Awad Ali SA, Jones LK. (2023):** "Impact of nurse leaders' behaviors on nursing staff performance: a systematic literature review". *INQUIRY: J Health Care Organ Provis Financing*, 60,66. <https://doi.org/10.1177/00469580231178528>.
5. **Al Sabei, Sulaiman, Ross, Amy Miner, Al Yahyaei, Asma, Labrague, Leodoro, Al-Rwajfah, Omar, Deterding, Kylee, Motivation to Lead (2024):** "A Study of the Supportive Nursing Leadership Environment", *Journal of Nursing Management*, 2024, 2652746, 10 pages. <https://doi.org/10.1155/2024/2652746>
6. **Badran F. M., Akeel A.F., (2022):** " Perceived Abusive Supervision and Its Influence on Counterproductive Work Behavior among Staff Nurses" " *Egyptian journal of nursing science*. Vol 3, Issue 2, pp: (158-182), https://ejnhs.journals.ekb.eg/article_261791.html
7. **Bennett R, Robinson S. (2000):**" Development of a measure of workplace deviance", *Journal of Applied Psychology*, 85(3):349-360.
8. **Cummings, G., Lee, S., Tate, K., Penconek, T., Micaroni, S., Paananen, T., & Chatterhee, G. (2021).** The essentials of nursing leadership: A systematic review of factors and educational interventions influencing nursing leadership, *International Journal of Nursing Studies*, Volume 115 ,103842, ISSN 0020-7489, <https://doi.org/10.1016/j.ijnurstu.2020.103842>.
9. **Hany SH, Hassan RM, Badran FM. (2020):** Relation between organizational justice and workplace deviance behavior among staff Nurses. *Egyptian Journal of Health Care*, 2020;11(1):248-259. https://ejhc.journals.ekb.eg/article_74788_c60a6d2443a8eff5de470db99c8082.pdf
10. **McGilton K. S. (2010):**" Development and Psychometric Evaluation of Supportive Leadership Scales", *Journal of Nursing Scholarship*, 2010; 42:2, 223–232. <https://www.researchgate.net/publication/8900818>
12. **Mog A., Pierre C., Moriarty H., Sullivan S., Battaglia C. (2024):** "Looking back to move forward: Creating a blueprint for success for nurse scientists in the Veterans Health Administration", *Applied Nursing Research*, Volume 75,151-764, ISSN 0897-1897. <https://www.sciencedirect.com/science/article/pii/S0897189724000028>
13. **Namathanga, A., Odiyo, W. J., & Ouma , C. (2023).** Effect of a supportive leadership initiative on nurse leaders' work performance in Malawi: A presentation of qualitative findings. *International Health Trends and Perspectives*, 3(3), 336–351. <https://doi.org/10.32920/ihtp.v3i3.1890>
14. **Niinihuhta, M., & Häggman-Laitila, A. (2022).** A systematic review of the relationships between nurse leaders' leadership styles and nurses' work-related well-being. *International Journal of Nursing Practice*, 28(5), e13040. <https://doi.org/10.1111/ijn.13040>
15. **Pattali, S., Sankar, J.P., Al Qahtani, H. et al. (2024):** Effect of leadership styles on turnover intention among staff nurses in private hospitals: the moderating effect of perceived organizational support. *BMC Health Serv Res* 24, 199. <https://doi.org/10.1186/s12913-024-10674-0>.
16. **Sharma, N. and Chillakuri, B.K. (2023).** "Positive deviance at work: a systematic review and directions for future research", *Personnel Review*, Vol. 52 No. 4, pp. 933-954. <https://doi.org/10.1108/PR-05-2020-0360>
17. **Tran, Q.H.N. (2021).** "Organizational culture, leadership behavior and job satisfaction in the Vietnam context", *International Journal of Organizational Analysis*, Vol. 29 No. 1, pp. 136-154. <https://doi.org/10.1108/IJOA-10-2019-1919>
18. **Um-e-Rubbab, Farid Tahir, Iqbal Sadaf , Saeed Imran , Irfan Shahid , Akhtar Tanvir (2021).** Impact of Supportive Leadership During Covid-19 on Nurses' Well-Being: The Mediating Role of Psychological Capital, *Frontiers in Psychology*, VOL 12, 1-11 <https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2021.695091>
19. **Usman, M., Ghani, U., Cheng, J., Farid, T., and Iqbal, S. (2021).** Does Participative leadership matters in employees' outcomes during COVID-19? Role of Leader Behavioral Integrity. *Front. Psychol.* 12:646442. doi: 10.3389/fpsyg.2021.646442
20. **Zaki A., Elsayed H., (2021):** "Toxic Leadership and its Relation to Nurses' Absenteeism and Their Deviant Behaviors". *Egyptian Journal of Health Care*, 2021 EJHC Vol 12. no.4, 1305-1322.

الملخص العربي

تأثير البرنامج التدريبي للقيادة الداعمة على إدراك السلوك المنحرف لدى الممرضين

مقدمه: يتم تنظيم القيادة التمريضية الداعمة على أساس رفاهية الممرضين وتحفيزهم من خلال توفير بيئة رعاية صحية إيجابية وعاطفية تعزز نمو التمريض الشخصي والمهني.

الهدف: أجري هذا البحث لاستكشاف تقييم أثر برنامج تدريب القيادة الداعمة على إدراك السلوك المنحرف لدى الممرضين.

التصميم: تم استخدام تصميم البحث شبه التجريبي لتحقيق هدف الدراسة.

العينة: شارك في الدراسة 403 من هيئة التمريض مكونين من (18) مدير تمريض و (385) ممرض.

مكان الدراسة: أجريت الدراسة في "مستشفى الزهراء الجامعي" وهو أحد مستشفيات "جامعة الأزهر".

الأدوات: قام الباحثون بجمع البيانات باستخدام استبيان المعرفة القيادية الداعمة، ومقياس القيادة الداعمة، ومقياس السلوك المنحرف.

النتائج: بعد تنفيذ البرنامج، كان هناك تحسن ذو دلالة إحصائية عالية في المعرفة القيادية الداعمة، ومستويات الأداء ($P = 0.001$) بين مديري التمريض. علاوة على ذلك، ارتبط برنامج التدريب على القيادة الداعمة سلبًا بالسلوك المنحرف للممرضات.

الخلاصة: كان لبرنامج التدريب على القيادة الداعمة تأثير إيجابي على السلوك المنحرف لدى العاملين في التمريض.

التوصيات: يجب على مؤسسات الرعاية الصحية تطبيق برامج تدريب القيادة الداعمة لتعزيز الممارسة التمريضية المهنية، بالإضافة إلى اتخاذ الإجراءات اللازمة للقضاء على السلوك التمريضي المنحرف.

الكلمات المفتاحية: القيادة الداعمة، السلوك المنحرف.