

EFFECT OF NO BLAME CULTURE EDUCATIONAL PROGRAM ON HEAD NURSES' KNOWLEDGE AND STAFF NURSES' SATISFACTION AND ERRORS REPORTING

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Abstract

Introduction: No blame culture was introduced as a method to improve the quality of care and patient safety by learning from mistakes and make the errors a learning opportunity to make future improvements and minimize the potential of future errors. **Aim:** examine the effect of no-blame culture educational program on head nurses' knowledge, staff nurses' satisfaction, and error reporting. **Research design:** A quasi-experimental research design was utilized in this study. **Sample:** two sample used to collect data of study: a convenient sample of head nurses/charge nurses (no=30) and convenient sample of staff nurses working with head nurses (no=120). **Setting:** Study was conducted at all intensive care units (10 units) at new kasr Al-ainy teaching hospital. **Tools of data collection:** five tools as follows: First tool: head nurse personal characteristics data sheet, Second tool for head nurses: No blame culture knowledge questionnaire (pre-posttest) , Third tool: Staff nurses personal characteristics data sheet, Fourth tool for staff nurse: Staff nurses' satisfaction questionnaire, and Fifth tool for staff nurses: Staff nurses' errors reporting questionnaire. **Results:** There was a statistical significant difference between mean scores of knowledge regarding no blame culture of head nurses during different periods of testing (P=0.00), a highly statistical significant difference between staff nurses' satisfaction levels(X²=49.6, P=0.00)and a highly statistical significant difference between mean scores of all dimensions of staff nurses errors reporting (p=0.00) during different periods of testing (before program- immediately after program- 3 months after program) . **Conclusion:** there was an increase in total knowledge mean test scores of head nurses, an increase in the moderate job satisfaction level, and an increase in total mean percent of staff nurses' errors reporting after program implementation and 3 months after program compared to before program . **Recommendation:** Develop and apply policies of no blame culture, and provide no blame culture educational program for all managerial levels at different health care setting.

Key words: no blame culture, Satisfaction, errors reporting.

1. Introduction:

National Patient Safety Agency, (2021) suggested that patient safety is the avoidance of unintended or unexpected harm to people during the provision of health care and patients should be treated in a safe environment and protected from avoidable harm. Patient safety is a condition resulting from the modification of human behaviors or physical environment design to reduce risks and reducing and in the same time supports no blame culture to learn from errors (Kakemam, Albelbeisi, Davoodabadi, Ghafari, Dehghandar, & Raeissi, 2022).

No blame culture is considered as a branch of patient safety culture that nurses should be assured that no blame or liability of shame would be derived from errors reporting (Okpala, 2018). Also, it is a method to improve the quality of care and assure patient safety by learning from mistakes, putting safeguards in place to ensure errors will not occur again (Tramacere, Sardaro, Arcangeli, Maggialelli, Altini, Rubini, Rubini, Portaluri, & Asabella, 2021).

Simon, Joanne, van & Carlo, (2020), defined no blame culture as the attitudes of the employees which do not fear repercussion from risk taking or problem identification, where employees feel free to contribute to discussions and raise issues and it is as values, beliefs, and assumptions held by organizational members in order to promote teamwork that will lead to higher team effectiveness through learning from mistakes of others. Parker & Davies, (2020), defined it as a management approach to accept mistakes that may happen within the workplace and workers in order to encourage staff to report errors for their managers without the fear of blaming

No blame culture involves many benefits as enhancing openness and honesty, staff would be more likely to highlight issues rather than hide (Morris, 2021). Also, being aware of issues may provide an opportunity for a staff nurses to focus on actions that led to solutions to prevent further reoccurrences (Simon, Joanne, van & Carlo, 2020). This helps staff to be supported as they are part of the learning and development process, encouraging trust in a positive management attitude of a no blame culture. Also, no blame culture will affect positively nurses' satisfaction towards their organization (Okpala, 2018).

Vainieri, Seghieri, & Barchielli, (2020), found that there is a high level of satisfaction among nurses to speak about their mistakes or errors, and hospital support them to learn from errors and how to prevent reoccurrence. Hesselink, Branje, & Zegers, (2023), defined job satisfaction as the degree to which individuals feel positive or negative about their job. Huang, Chen, Kau, Tsai, & Tsay, (2023), mentioned it as a dynamic multidimensional concept that is comprised of nurses expectations, values, practice environment, and personal characteristics.

Soliman, (2023) described job satisfaction as a term that is used to describe an individual's overall contentment with their job to measure of how much an individual enjoys their job and the tasks associated with it. Nurses are considered as the most important determinants of the success of any hospital that nurses' job satisfaction can lead to beneficial consequences such as increased effectiveness, performance, productivity, decreased turnover and absenteeism at both the individual and organizational levels (Saputri, 2021). Adding that, Alshammari, Matesm, Alshammari, & Alshammari, (2022), considered job satisfaction in the nursing sector plays a critical role in determining the quality of health care provision and decrease errors or adverse events rates.

Nursing errors are any preventable adverse effect, whether or not it is evident or harmful to the patient. The most common nursing errors are: medication errors, catheter-associated urinary tract infection, central line-associated bloodstream infection, injury from falls and immobility, pressure ulcers, surgical site infections, ventilator-associated pneumonia (VAP), mistakes in patients identification, hands off communication, blood transfusion, hand hygiene, medication administration, documentation, and mistakes in assessment process.

Error reporting was defined as “the act of individuals communicating their errors to their managers or supervisors, either verbally or through formal error reporting systems (Vais, moradi, Vizcaya-Moreno, Jordan, Gare- Kymre, & Kangasniemi, 2020). Also, it were defined by Wolf, & Hughes, (2021), as recording and communicating issues to management that occurred either do or do not harm patients for; assessment of risks and harm; rectification; and interventions and practical strategies to improve patient safety and prevent its occurrence in the future.

Alrub, Amer, Titi, Charmaine, Shaikh & El-Jardali, (2021) found that punitive and blaming culture at hospitals are considered the main barriers for errors reporting . Therefore, the study aims to examine the effect of no-blame culture educational program on head nurses' knowledge and staff nurses' satisfaction and error reporting.

Significance of the study

Health care providers are often blamed for errors that are usually due to their inability, forgetfulness, inattention, or moral weakness. Blame culture leads to a punitive approach instead of supporting individuals to learn from their own and other individuals' errors. Also, it inhibits error reporting that prevents nurses and other health work teams to be open and honest about their mistakes (Lynne & Southern, 2018). In Egypt, a study was done by Araby, Eldesouky, Abed, (2018) found that many reasons do affect nurses reporting of errors as fear of punishment, fear of associated legal issues, and blaming after reporting. Another cause of unrevealing nursing errors for corrective actions is the perception of many nurses that errors are reflections of their incompetency.

Okpala, (2018) revealed that the frequency of errors occurring in a healthcare setting is up to 69.5% and can result in devastating effects on patients and about 28.8% of them result in lawsuits against healthcare organizations. However, most of these errors were committed by nurses who tried to do the right thing. In Egypt, few research studies were done concerning no blame culture and it was observed through the investigator's clinical practice that dissatisfaction and fear of blaming were the main causes of not reporting errors. So, it will be useful to conduct the research to explore how no blame culture will hopefully enhance satisfaction and increase the rate of error reporting which assure patient safety through learning from mistakes and preventing reoccurrence.

The results of the study may spotlight on adding no blame culture subject in different nursing courses for undergraduate students. In-service, the application of policies that support no blame culture, especially for newly appointed nurses and nurses who did not have adequate orientation or training may lead them to report errors that will reflect positively on patient safety and improve the quality of provided care. Therefore, the change to no blame culture will guide nursing managers to demonstrate openness to change, stimulate their creative and innovative thinking, foster teamwork, and communication, enhance staff satisfaction, increase error reporting, retain nurses, increase productivity, and improve patient safety.

Theoretical framework

Lewin's Change Theory: integrated to be used in the current study.

Operational definitions:

Knowledge: for the purpose of this study, the term knowledge referred to the head nurses information related to no blame culture that errors were a learning opportunity to make future improvements and minimize the potential of future mistakes that was assessed by (no blame culture knowledge questionnaire).

Staff nurses' satisfaction: for the purpose of this study referred to the staff nurses attitudes and feelings about their job that was assessed by (staff nurses' job satisfaction questionnaire).

Error reporting: was used for this study as factors that facilitate, and act as barriers to errors reporting, awareness and use of the errors incident reporting system, types of errors reported, nurses' attitudes towards errors reporting, and prevalence of nurses' errors that will be assessed by (staff nurse' error reporting questionnaire).

Aim of the study

This study aimed to examine the effect of no-blame culture educational program on head nurses' knowledge, and staff nurses' satisfaction, and error reporting.

Research Hypothesis:

H1: There will be a statistically significant difference between the knowledge mean test scores of head nurses immediately after the no blame culture educational program implementation compared to before and after three months.

H2: There will be a statistically significant difference between staff nurses' satisfaction level scores immediately after the program implementation compared to before and after three months.

H3: There will be a statistically significant difference between the mean test scores of staff nurses errors reporting immediately after the program implementation compared to before and after three months.

2.Methods

Research Design: A quasi-experimental (one-group pretest/posttest) design utilized in this study.

Setting: The study conducted at all intensive care units (10 units) at new kasr Al-ainy teaching hospital, which is affiliated to Cairo University.

Sample: A convenient sample of head nurses/charge nurses (no=30) and convenient sample of staff nurses working with head nurses (no=120).

Tools of data collection: Five tools for data collection were utilized as follows::

1.First tool: head nurse personal characteristics data sheet: that was developed by the investigator: It includes code, age, gender, working units, educational level, years of experience in the nursing profession, years of experience at the unit, working shift, , having no blame culture courses, numbers of incident report/6 months, and reaction towards employees who report errors.

2. Second tool for head nurses: No blame culture knowledge questionnaire (pre-posttest): It was designed by the investigator based on a literature review (Brborovi Brborovi,Nola, & Milosevi,2019) &

(Albashayreh, Al Sabei, Al-Rawajfah & Al-Awaisi, 2019) to assess head nurses/charge nurses' knowledge regarding no blame culture. It is in the form of 30 multiple choice questions; 10 (MCQ), 10 true-false, and 10 matching. It was administered before program and immediate after-program and 3 months program-program implementation.

Scoring system: Subjects' responses were rated as the following: the correct answer was given score (1) and the incorrect answer was given score (0) score and the total number of items is (30), 21 considered 70% and 24 considered 80%. Total knowledge scores were summed up and categorized as follows : unsatisfactory level was less than 70%, satisfactory level from 70% to 80% and highly satisfactory level from 81 to 100%. The previously mentioned categories were developed by expert statistician. Items of :questionnaire were presented in table as follows no blame culture ,clinical risks , errors reporting and job satisfaction.

3.Third tool: Staff nurses personal characteristics data sheet: It includes code, gender, age, working unit, educational level, and years of experience in the nursing profession, years of experience at the working unit.

4.Fourth tool for staff nurses: Staff nurses' satisfaction questionnaire: It was developed by the investigator based on an extensive literature review (Zaghloul, Al-Hussaini, & Bassam, 2008), (Albashayreh, Al Sabei, Al-Rawajfah, & Al-Awaisi, 2019), & (National Association of County and City Health Officials, 2020) .It was used to assess staff nurses' job satisfaction. It includes 7 dimensions with a total of 39 items subdivided as follows: Work and workplace (13 items), Supervisors (4 items), benefits and rewards (7 items), recognition (3 items), communication (4 items), support colleagues towards errors (3 items) and organizational support towards errors (5 items).

Scoring system: All items were rated on a five-point Likert-type scale as follows: very dissatisfied=1; dissatisfied=2 neither=3; satisfied=4; and very satisfied=5. The items were summed up and categorized as follows: unsatisfactory level was less than 46%, moderate satisfactory level from 46 % to 73 % and highly satisfactory level from 74 to 100 %.The previously categories were developed by an expert statistician.

5.Fifth tool for staff nurses: Staff nurse' error reporting questionnaire:

It was developed by the investigator based on an extensive relevant literature review (Bayazidi, Zarezadeh, Zamanzadeh, & Parvan, 2012), (Yung, Yu, Chu, Hou, & Tang, 2016), (Araby, Eldesouky, & Abed, 2018), & (Mansouri, Mohammadi, Adib, Lili, & Soodmand, 2019). It was used to assess nurses' error reporting and it was composed of a total of (60 items) under 6 dimensions as factors that facilitate error reporting (9 items), barriers of error reporting (15 items), awareness and use of the incident/error reporting system (7 items), nurses' attitudes towards errors reporting (13 items), frequency of reported errors (10 items), the prevalence of nursing errors (6 items).

Scoring system: Four dimensions under name of factors that facilitate error reporting, barriers of error reporting, awareness and use of the incident/error reporting system, nurses' attitudes towards errors reporting, items were rated on a five-point Likert-type scale as follows: Strongly disagree=1, Disagree=2, Uncertain=3, Agree=4, Strongly agree=5. While dimension of frequency of reported errors, items will be rated on three-point Likert-type scale as Never=1, occasional=2, always=3. Dimension of the prevalence of nursing errors, items will be rated as the: yes answer will take score =1 and no answer will take score (0). According to statistician expert, the total score was summed up and errors reporting considered low with scores less than 50%, moderate level from 50% to 70%, and high level from 70% to 100 %.

Content validity and reliability

Five experts were consulted regarding the content validity of the five tools: three professors in nursing administration at the faculty of nursing at Cairo University and two nursing supervisors in the intensive care unit at the new Kasr Al-Ainy teaching hospital. The experts were asked to assess the tools' content coverage, clarity, wording, length, format, and overall appearance. Minor modifications were done according to experts' comments.

Ethical consideration

A primary and final official approval was obtained from the research ethical committee, Faculty of nursing Cairo University, to conduct the proposed study. Also an official permission from the administrative personnel in the selected hospital was obtained to carry out the study.

Data collection procedure:

Data were collected before program implementation and immediately after program and after 3 months within 6 months starting from August 2022 to January 2023. The procedure was carried out in three phases:-

The first phase (Unfreezing):

In this phase, the investigator explained the benefits of the no blame culture educational program to gain the maximum cooperation of head nurses. A meeting was conducted by the researcher with the participants to explain the objectives of the study as well as to obtain a written consent to participate in the study and a registration form to get on the study;. Then the investigator assessed the head nurses' knowledge regarding no blame culture using pre-test (no blame culture questionnaire) during morning and afternoon shift. Then the researcher reviewed the questionnaire to ensure that there are no missing data / items. It takes about fifteen minutes for each head nurse to fill the pre-test (no blame culture questionnaire).

The second phase (Change):

The program was implemented for head nurses according to program plan in (New EL Kaser EL Ainy teaching hospital). The educational program contents were covered in 16 hours with total of 8 sessions, offered in one session per week (Sunday day). Duration of each session was 2 hours for ICUs head nurses that were informed by the education department at the hospital to be present on one fixed day/week from 12-2 pm every week in a lecture room at the hospital for 8 weeks. At the beginning of first session, the investigator explained the program plan, objectives, schedule and content outlines, and necessary instructions.

The third phase (Refreezing):

In this phase, after 3-months later of the program implementation, the investigator evaluated the effect of the program using the (post-test no blame culture questionnaire) for head nurses and for staff nurses the (job satisfaction and errors reporting questionnaire).

3.Results

Table (1) showed that all studied sample of head nurses were females, and around two thirds (63.3%) of them were in the age group more than 40 years old, (96.7%) of them had bachelor degree in nursing, more than half (53.3%) of them working in medical ICUs, nearly half (46%) of them had more than 15 years of experience in nursing profession at intensive care units and all head nurses (100%) did not attend courses about no blame culture.

Table (2) showed that the majority (82.5%) of staff nurses were female, near half (41.7%) of them had associate technical diploma in nursing. While, the least percentage (34.2%, 24.1%) had diploma and bachelor in nursing respectively. the majority (60.8%) of them were in the age group (20-<30) years old, around half (46.7%) of them working in medical ICUs. Also, around third (36.7%) of them had more than 15 years of experience in nursing at intensive care units.

Table (3) showed a statistical significant difference between mean scores knowledge and an improvement in total mean percent of head nurses during different periods of testing (before program-immediately after program- 3 months after program) regarding dimensions of no blame culture, clinical risks, errors reporting and job satisfaction ($P=0.00$).

Table (4) showed a highly statistical significant difference between staff nurses' satisfaction levels($X^2=49.6$, $P=0.00$) and staff nurses moderate job satisfaction level enhanced (79.2%, 99.17%&100%) during different periods of testing (before program- immediately after program-3 months after program respectively).

Table (5) showed a highly statistical significant difference between mean scores of all dimensions of staff nurses errors reporting ($p=0.00$) and the total mean percent of staff nurses errors reporting increased (53.65%,72.67%. &73.28%) during different periods of testing (before program- immediately after program- 3 months after program respectively).

Figure (1) showed that there was an increase in numbers of errors reported to head nurses, the percent of '10-15 reported errors 'increased from 13.3% to 40% before program and immediately after program respectively and the percent of 'more than 15 reported errors ' increased from 6.7% to 60% to 90 % before program, immediately after program and 3 months after program respectively.

Figure (2) showed an improvement in reactions of head nurses to errors reported on the item "Do not blame but focus on causes and solutions" (53.3%,90%, 93.3%) before program –immediately after program -3 months after program respectively. Also, there was a decrease in the head nurses reaction regarding the item of 'blame only' (30%,0%,0%) before program –immediately after program - 3 months after program respectively.

Table (1): Frequency distribution of head nurses according to their personal characteristics data ($n=30$)

Personal data	Values	No.	%
Gender	Female	30	100
	Male	0	0
Age	30-<40	11	36.7
	40+	19	63.3
Work area	Medical ICUs	16	53.3
	Intermediate ICUs	9	30
	Neurology ICUs	5	16.7
Educational background	Master degree in nursing.	1	3.3
	Bachelor degree in nursing.	29	96.7
Experience in current unit	<5	1	3.3
	5 - <10	7	23.3
	10-<15	8	26.7
	15+	14	46.7
Experience in nursing profession	10-<15	9	30
	15+	21	70
Courses about no blame culture	No	30	100.0
	Yes	0	0

Table (2): Frequency distribution of staff nurses' according to their personal characteristics data (n=120)

Personal data	Values	No.	%
Gender	Female	99	82.5
	Male	21	17.5
Age	20-<30	73	60.8
	30-<40	8	6.7
	40+	39	32.5
Work area	Medical ICUs	56	46.7
	Intermediate ICUs	36	30
	Neurology ICUs	28	23.3
Educational background	Bachelor	29	24.1
	Associate technical	50	41.7
	Diploma in nursing	41	34.2
Experience in nursing profession	<5	34	28.3
	5-<10	31	25.8
	10 - <15	11	9.2
	15+	44	36.7
Experience in unit work	<5	38	31.6
	5-<10	31	25.8
	10-<15	11	9.2
	15+	40	33.4

Table (3): Mean test scores difference regarding no blame culture knowledge dimensions and total of head nurses during different periods of testing (before program-immediately after program- 3 months after program) (n=30)

Knowledge	Before program		Immediately after program		3 months after program		ANOVA	p
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD		
No blame culture	0.48	0.45	0.97	0.14	0.99	0.03	33.14	0.00*
Clinical risks	0.57	0.50	0.98	0.12	0.93	0.26	13.92	0.00*
Errors reporting	0.20	0.35	0.97	0.09	0.95	0.18	102.72	0.00*
Job satisfaction	0.28	0.31	0.94	0.19	0.96	0.19	106.26	0.00*
Total mean	10.52	4.82	28.9	1.93	28.73	2.66	63.5	0.00*
Mean %	35.06%		96.50%		95.75%			

*significant at p-value<0.05

Table(4): Frequency distribution of staff nurses' job satisfaction levels during different periods of testing (before program- immediately after program-3 months after program):(n=120)

Levels of job satisfaction	Pre program		Immediate post program		3 months post program		Chi-square	p-value
	No.	%	No.	%	No.	%		
Low	25	20.8	1	0.83	0	0.0	49.6	0.00*
Moderate	95	79.2	119	99.17	120	100.0		
High	0	0.0	0	0.0	0	0.0		

*significant at p-value<0.05

Table (5) : Comparison of total mean scores regarding all dimensions of staff nurses' errors reporting during different periods of testing (before program- immediately after program- 3 months after program)(n=120):

Dimensions of errors reporting	before program		Immediately after program		3 months after program		ANOVA	P
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD		
1.Factors that facilitate errors reporting	2.30	0.80	3.51	0.18	3.71	0.10	520.9	0.00*
2. Barriers of errors reporting.	4.09	0.78	2.69	0.96	2.67	0.77	200.9	0.00*
3. Awareness and use of the error reporting system:	2.63	0.63	4.63	0.67	4.28	1.31	164.0	0.00*
4. Nurses' attitudes towards errors reporting.	2.16	0.41	4.31	1.00	4.19	0.46	672.2	0.00*
5. Frequency of reported errors	1.30	0.48	1.95	0.39	1.88	0.46	110.2	0.00*
6. Prevalence of error reporting	0.23	0.38	0.78	0.41	0.91	0.26	139.4	0.00*
Total Mean	137.36	8.89	186.04	11.25	187.61	10.06	382.70	0.00*
Mean %	53.65%		72.67 %		73.28%			

*significant at p-value<0.05

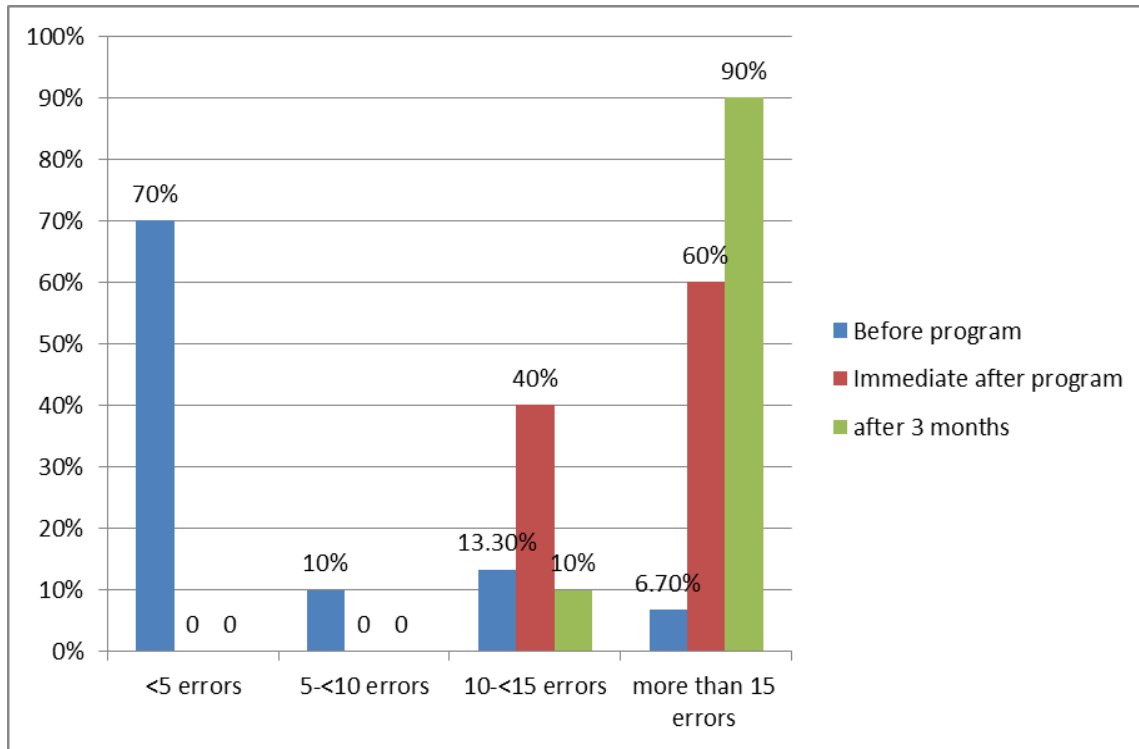


Figure (1) Frequency distribution of errors reported to head nurses before program-immediately after program implementation - 3 months after program) (n=30).

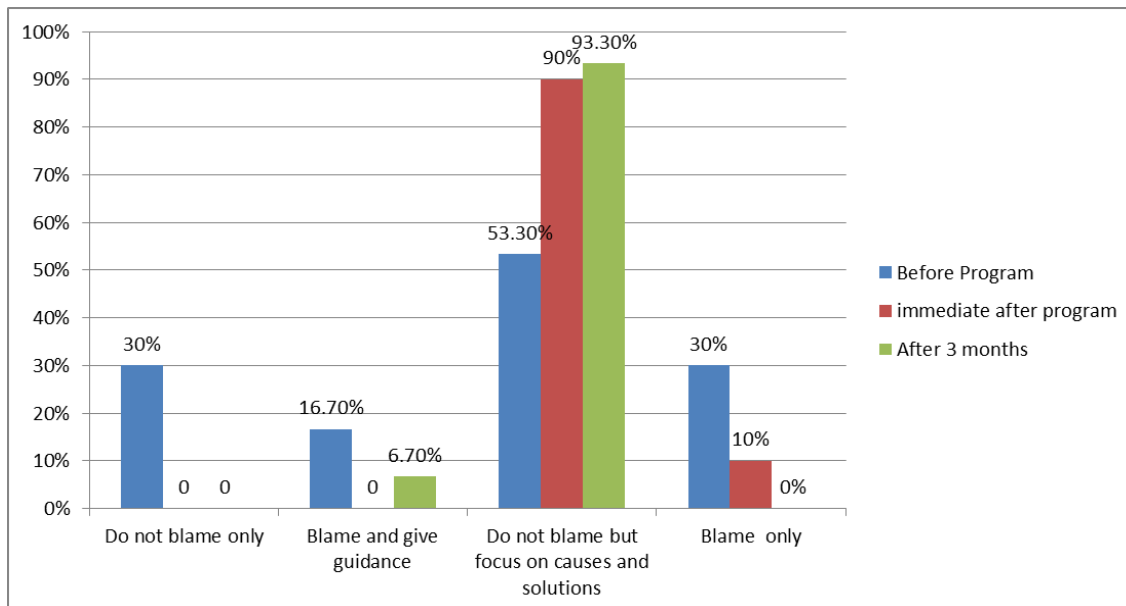


Figure (2) Frequency distribution of head nurses according to their reactions to reported errors (before program-immediately after program- 3 months after program) (n=30).

4. Discussion

Concerning no blame culture knowledge of head nurses, the findings of this study revealed that there was a statistically significant difference between the mean test scores of knowledge during different periods of testing (before program-immediately after program- 3 months after program implementation) related to no blame culture, clinical risks, errors reporting and job satisfaction dimensions. The results may be due to impact of the no blame culture educational program which considered a new concept for majority of head nurses. Also, head nurses were interested in acquire knowledge about no blame culture and wanted to apply it. Although, the handout of program was given to head nurses by the researcher, but there was slightly decrease in the mean score of knowledge after 3 months of program implementation, that may be due to head nurses forgetting and no time for revision of the handout.

The result was in agreement with a study conducted by Hanifi, Yazdanshenas, Namadian, & Motamed, (2018), who found that there a significant difference in the knowledge mean scores and it was improved after receiving educational program regarding aspects of organization of no blame culture, management support for patient safety, errors reporting, job satisfaction, communication openness and clinical risks. In the same context, finding was in harmony with a study conducted by Xie, Ding, Zhong, Zeng, Qin, Yi, Gong, & Zhou, (2017) who found that a significant difference in the nurse managers' knowledge mean scores after six months of program implementation about patient safety culture and no blame culture compared to before program implementation. Adding that, results was in same line with a study revealed the effect of training program related to patient safety on head nurses by Mostafa, Faisal, & Fathy, (2023) who revealed that was a statistically significant difference at no blame culture aspects from pre to post intervention phase of the program.

Study results revealed that there was a highly statistical significant difference among total nurses job satisfaction levels and data added that high percent of staff nurses at moderate level of job satisfaction was increased immediately after program implementation and 3 months after program implementation compared to before program implementation. These results could be explained as staff nurses may be still not satisfied with certain aspects in the work environment as workload, and policy of punishment. In contrast with by Bofo, (2018) adding to Naiem, Abdel-Latif, & Saleh, (2020) who found low level of nurses job satisfaction level were due to potential stress from the workload, stressful job and negative effects of workplace disrespect and blaming of nurses. Study results were in an agreement with Niskala, Kanste, Tomietto, Miettunen, Tuomikoski, Kyngas, & Mikkonen, (2020) who found a significantly difference and improved at nurses' job satisfaction level after educational sessions of job satisfaction.

After implementation of the program, a significant difference and improve was observed regarding all factors that facilitate errors reporting, staff nurses awareness and use of the error reporting system, nurses' attitudes towards errors reporting, frequency of reported errors, and prevalence of error reporting among staff nurses. While significant differences and decreased mean scores regarding barriers of errors reporting during different periods of testing. The changes may be due to head nurses conviction to apply no blame culture and pushing staff nurses to compliance with errors reporting. In agreement with a study done by Hanifi, Yazdanshenas, Namadian, & Motamed, (2018), who found a significant difference among aspects of errors reporting between post program and before program implementation of patient safety culture. In addition to that a study done by Gurkova, Zelenikova, Friganovic, Uchmanowicz, Jarosova, Papastavrou, & Ziakova, (2020), who found a Significant differences among staff nurse perspective towards errors reporting aspects.

In relation to errors reported numbers to head nurses, there was a significant increase in number of errors reported to head nurses during different periods of testing. The results could be explained by change in head nurses behaviors by avoiding nurse's blame to errors and providing constructive support

to staff nurses. In contrast by a study from Qatar by Hassan, Singh, & George, (2021) who found errors reporting numbers among nurses was very low because nurses fear of blaming. According to their reaction to whom reported errors, study results revealed that reaction to errors reported as “Do not blame but focus on causes and solutions” item increased immediately after program and 3 months after program compared to before program, while decreased in the head nurses reaction regarding ‘blame only’ item during different periods of testing. The change in head nurses reaction may be due to effective application of head nurses to no blame culture knowledge that taken during the educational program.

Conclusion

Based on the findings of this study, there was a statistical significant difference between no blame culture knowledge of head nurses and an increase in total knowledge mean test scores of head nurses, an increase in moderate job satisfaction level and an increase in the total mean percent of errors reporting among staff nurses during different periods of testing (before program- immediately after program- 3 months after program). There was an increase in the numbers of errors reported to head nurses, and an improvement in the reactions of head nurses to errors reported on item of “Do not blame but focus on causes and solutions” during different periods of testing (before program- immediately after program- 3 months after program).

6.Recommendations:

For administration and management:

- Develop and apply policies that create no blame culture and disseminate this policy all over the hospital.
- Support and encourage nurses to report errors.
- Share errors feedback to all units to learn from errors.
- Designing a simple, anonymous, and easy-to fill errors reporting forms.

For training and education:

- Educational program for all managerial levels about no blame culture and errors reporting system to update their knowledge.
- Provide no blame culture educational program as orientation for newly appointed staff nurses.
- Adding no blame culture course in different nursing courses for undergraduate students.

Further researches:

- Replication of the research on a large probability sample to determine the effect of the educational program on all managerial levels.
- Assessment of hospital's commitment to no blame culture policy.

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