

## Ethical Work Climate and its relation to Patients' Safety as Perceived by Staff Nurses

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### Abstract

**Background:** An ethical work climate represents the common perception employees have regarding the policies, practices and procedures which an organization awards, supports and expects in relation to ethics. Patient safety is the avoidance of unintended or unexpected harm to people during the provision of health care. **Aim of the study was** to assess the ethical work climate and its relation to patients' safety as perceived by staff nurses. **Study design:** Descriptive correlational design was used in the study. **Setting:** The study was conducted in all inpatients' units at medical and surgical departments at Benha University Hospital. **Study subjects:** A simple random sample of nurses including 327 nurses working in the same setting. **Tools of data collection:** Two tools were used; **Tool I:** Ethical work climate scale and **Tool II:** Patients' safety questionnaire. **Results:** About half of the studied staff nurses (47.4%) perceived that there was high level of ethical work climate and more than half of the studied staff nurses (57.8%) perceived that there was high level of patients' safety. **Conclusion:** There was a highly statistical significant positive correlation between total level of ethical work climate and total level of patients' safety as perceived by staff nurses. **Recommendations:** Conducting workshops in the organization to reinforce ethical work climate and keep the progress of patient safety.

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**Keywords:** Ethical work climate, Patient safety, Staff nurses.

### Introduction

Nurses' knowledge of ethical and legal aspects is the bone stone of nurses' ethical practice and competencies in managing patient care. Ethical and legal aspects of care are important for all nurses because they focus on the rights of patients, the quality of care they receive and the reduction of medical errors. Nursing ethical and legal aspects also provide a foundation for nursing practice and the basis for nurses' decisions on consideration of the consequences and of the universal moral principles when making clinical judgments. The nurse must learn to value, respect and seek out ethical and legal knowledge that regulates, impedes and facilitates professional nursing practice. Knowledge in both ethical and legal aspects helps professionals to justify what is or

is not correct and the appropriate professional practice to conduct care (Aly et al., 2020).

Ethical work climate affects nurses to imply service behaviors. According to the ethical work climate not only affects which issues organizational members consider to be ethics-related, but also plays a decisive role in the generation of moral standards that organization members can understand, weigh and solve these problems. On one hand, the ethical climate works through formal culture. Formal culture refers to the aspects such as leadership, structures, reward systems, policies, decision-making processes, and socialization mechanism. This, therefore, suggests that the ethical climate may play a role in facilitating

employees' in-role service behavior (**Zhang et al., 2021**).

Ethical work climate provides employees with a moral value and a social meaning for the work being done. This, in addition to developing and allowing greater autonomy, adheres the employees ideologically and motivates them intrinsically. In fact, ethical climate tends to inspire employees, who feel valued and safe, and instills a state of mind and a particular enthusiasm to create new and useful ideas. Undoubtedly, the responsibility transfer linked to ethical climate acts as an emotional reward providing employees motivation and curiosity to examine and adapt creative thinking towards innovative results (**Santiago-Turner, 2023**).

Patient safety is defined as the prevention of errors and adverse effects associated with healthcare. The global movement for patient safety was encouraged in 1999 by the report of the Institute of Medicine "To err is human". Although some progress has been made, patient harm is still a daily problem in healthcare systems around the world. While long-standing problems remain unresolved, new, serious threats are emerging. Patients are getting older, have more complex needs and are often affected by multiple chronic diseases; moreover, the new treatments, technologies and care practices, while having enormous potential, also offer new challenges. To guarantee the safety of care in this context, the involvement of all stakeholders, including both healthcare professionals and patients, is needed together with strong commitment from healthcare leadership at every level (**Kumar et al., 2021**).

Patient safety is still one of the major challenges for 21<sup>st</sup> century health institutions, whose main mission consists in providing good quality care. It is assumed that care provision is a risk activity due to its complexity, context and available resources, involving the

possibility of uncertain and undesirable events. Some studies show that a mean of 1 out of every 10 patients undergoes an adverse event in terms of receiving hospital care. Promoting patient safety is not a competitive mission for a single health system but a collaborative effort in which all systems must participate, and this collaboration considers a comparison of the safety culture across countries. A routine assessment of the safety culture with disclosing and dissemination of the results at the institution level, planning improvement actions with the leaders' and managers' support, multifaceted programs and training were interventions that allowed hospitals to improve their safety culture levels (**Bras et al., 2023**).

### **Significance of study:**

The ethical climate is one of the major factors formalizing intra-organizational relationships and nurses' attitudes. Ethics is the ability to distinguish the good and the right and always to act accordingly. Climate is the method which operationalizes the routine behaviors and actions that are promoted and rewarded by the organization. Climate may vary within a company and organizations can have several climate types. Ethical climates were regarded as subsets of work climates. The ethical climate within an organization as the shared perceptions of what is ethically correct behavior and how ethical issues should be handled and the prevailing perceptions of typical organizational practices and procedures that have ethical content (**Acar et al., 2018**).

According to **World Health Organization, (2019)** patients' safety aims to prevent and reduce risks, errors and harm that occur to patients during provision of health care. A cornerstone of the discipline is continuous improvement based on learning from errors and adverse events. In recent years, researchers as well as practitioners have focused their attention on ethical work climate, considering its direct influence both on

individual, behaviors and organizational outcomes (Tersei et al., 2019).

Ethical work climate in the organization is very important to increase its effectiveness and productivity and improve the quality of management and performance. Although personal and professional factors influence the moral courage of nurses, but in organization, it seems that the organization's ethical climate can affect the ethical courage of nurses, reduce moral distress and improve nurses' behaviors toward organization (Abdeen and Atia, 2020). So, this study was conducted to assess the ethical work climate and its relation to patients' safety as perceived by staff nurses.

#### **Aim of the study:**

This study aimed to assess the ethical work climate and its relation to patients' safety as perceived by staff nurses.

#### **Research Questions:**

- 1-What are levels of the ethical work climate as perceived by staff nurses?
- 2-What are levels of patients' safety as perceived by staff nurses?
- 3-Is there a relation between staff nurses' perception of ethical work climate and patients' safety?

#### **Subject and Method:**

##### **Study Design:**

Descriptive correlational design was utilized to conduct this study.

##### **Study Setting:**

The study was conducted in all inpatients' units at medical and surgical departments at Benha University hospital distributed as follows: Medical building consisted of 8 departments including (14) units and its bed capacity (467), and surgical building consisted of 8 departments including (12) units and its bed capacity (439).

##### **Study subjects:**

It included simple random sample of total 327 staff nurses at the previously mentioned settings within inclusion criteria,

having at least two years of experience, accepted to participate in the study and were available at the time of data collection. The sample size was defined according to the following sample size equation;

$$n = \frac{N}{1 + N(e)^2}$$

"N" total number of staff nurses.

"N"=1793

"E" is coefficient factors = 0.05

"N" =Sample size was = 327 (Tejada and Punzalan, 2012).

#### **Tools of data collection:**

Data of the present study was collected by using the following two tools:

**Tool (I): Ethical Work Climate Scale:** It included two parts;

**Part I:** Personal data of staff nurses including; age, gender, work department, educational qualifications and years of experience.

**Part II: Ethical Work Climate Scale**

It was developed firstly by Victor and Cullen (1987), then was modified by Altuntas et al., (2021), and was adapted by the researcher to assess the level of ethical work climate as perceived by staff nurses. It included seven dimensions covering 24 items distributed as follows:

#### **Scoring system:**

Staff nurses' responses were measured by using three points Likert Scale, Always = (3), Sometimes = (2) and Never = (1).The score of each dimension was summed and converted into percent score. The total level of ethical work climate was determined as the following;

- High level of ethical work climate if the total score is >75% equals 54
- Moderate level of ethical work climate if the total score is from 60% to 75% equals 43-54
- Low level of ethical work climate if the total score is <60% equals 43 (Altuntas et al.,2021),

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### **Tool (II): Patients' Safety Questionnaire:**

Structured questionnaire was developed by **Fathi, (2019)** and was modified by the researcher to assess level of patients' safety as perceived by staff nurses. It included three dimensions covering 32 items distributed as follows:

#### **Scoring system:**

The items were measured by using three points Likert scale as follows; Always = (3), Sometimes = (2) and Never = (1). The score of each dimension was summed up and converted into percent score, the total score was determining as the following:

- High level of patients' safety if the total score is >75% equals 72
- Moderate level of patients' safety if the total score is from 60% to 75% equals 57-72
- Low level of patients' safety if the total score is <60% equals 57 (**Fathi, 2019**).

#### **Administrative Design:**

An official permission was issued from Dean of the Faculty of Nursing to the Director of Benha University Hospital for taking permission to conduct the study, and seek their support. The researcher met the nurses of each department/unit to determine suitable time to collect data.

#### **Operational Design:**

The operational design for this study included a description of preparatory phase, pilot study and field work.

#### **Preparatory phase:**

This phase started from April to May 2022. It included the following; reviewing the national and international related literature using journal, text books and theoretical knowledge of the various aspects concerning the topic of the study.

#### **Validity of the tools:**

Face and content validity were tested by a panel of five experts on field of nursing administration at Faculty of Nursing as

following, two Professors from Tanta University, one Professor from Menoufia University, one Professor from Zagazig University, and one Assistant Professor from Benha University. The period taken by the Jury group lasted from March to April 2022. Necessary modifications were done according to Jury comments that were related to grammatical language and rephrasing of some sentences.

#### **Reliability of tools:**

- Reliability of tools tested by Cronbach's Alpha
- Ethical Work Climate was = 0.796
- Patients' Safety was = 0.804

#### **Ethical considerations:**

Before conducting the study, the respondents' rights were protected by ensuring voluntary participation, so the informed oral consent obtained from each participant after explaining the aim of the study, its potential benefits, methods for filling data collection tools and expected outcomes. The respondents' rights to withdraw from the study at any time were assured. Confidentiality of data obtained was protected by allocation code number to the questionnaire sheets. Subjects were informed that the content of the tools used for the study purpose only. An official written acceptance was obtained from Scientific Research Ethical Committee (SREC) to conduct this study

#### **Pilot study:**

A pilot study was carried out in June 2022 to ascertain the clarity and applicability of the study tools. The pilot study included 32 nurses representing 10% of total study subjects. It has also served in estimating the time needed for filling the tools. It ranged between 15 -20 minutes. No modifications were needed. So, the pilot study subjects were included in the final study subjects.

**Field work:**

- Data collection took about month and a half, started from the beginning of July to the mid of August 2022.
- The researcher met staff nurses and explained the aim, the nature of the study, the method of filling questionnaire and this was done individually or through group meetings.
- The researcher distributed the questionnaire sheets to the participated staff nurses to fill it at their suitable times in morning and afternoon shifts
- The number of collected questionnaire from staff nurses per day ranged from 15 to 20 sheets. It took from 15 to 20 minutes to complete the questionnaire sheet.
- Data collected three days per week in (Saturday, Monday and Thursday) from (10 A.M. to 1 P.M.) in the presence of the researcher to clarify any ambiguity.

**Statistical analysis:**

Data were collected, tabulated and statistically analyzed using an IBM personal computer with statistical package of social science (SPSS) version 22 where the following statistics were applied

- Descriptive statistics: in which quantitative data were present in the form of mean, standard deviation (SD), frequency, and percentage distribution.
- Analytical statistics: used to find out possible association between studied variables. The used tests of significance included; Chi-square ( $\chi^2$ ) test was used to detect the relation between two qualitative variables and association between dependent and independent variables. In addition, correlation coefficient (r) test was used to estimate the closeness association between variables.
- A significance level value was considered when  $p\text{-value} \leq 0.05$  and a highly

significance level was considered when  $p\text{-value} \leq 0.001$ , while  $p\text{-value} > 0.05$  indicated non-significance results.

**Results:**

**Table (1)** shows that, more than half of the studied staff nurses (52.6%) aged between 20 -< 30 years, with Mean  $\pm$  SD (32.16 $\pm$ 6.40). Also, the majority of them (86.9%) were females. Considering the department, more than three fifths of staff nurses (64.2%) were working at medical unit. Regarding the educational qualifications, nearly half of staff nurses (48.0%) had Bachelor of Nursing Science. Considering years of experience, about two fifths of staff nurses (38.5%) had 2-<5 years, with Mean  $\pm$  SD (8.83 $\pm$ 5.47%).

**Figure (1)** shows that, about half of the studied staff nurses (47.4%) perceived that there was high level of ethical work climate.

**Table (2)** displays that, the highest mean score and standard deviation of ethical work climate dimensions was (10.40 $\pm$ 1.43) for "social responsibility" which represents (86.7%). While, the lowest mean score and standard deviation was (4.91 $\pm$ 1.71) for "self-interest" which represents (54.6%).

**Figure (2)** shows that, more than half of studied staff nurses (57.8%) perceived that there was high level of patients' safety.

**Table (3)** shows that, the highest mean score and standard deviation of patients' safety dimensions was (18.15 $\pm$ 2.00) for "Factors to attain current level of patients' safety " which represents (86.4%), while the lowest mean score and standard deviation patients' safety dimensions was (29.41 $\pm$ 3.53) for "Factors to increase patients' safety in the future " which represents (81.7%).

**Table (4)** clarifies that, there were statistically significant relations between ethical work climate with staff nurses' age and educational qualifications. Also, there was highly statistically significant relation

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between ethical work climate and their gender. While, there were no statistically significant relations between ethical work climate with staff nurses' department and years of experience.

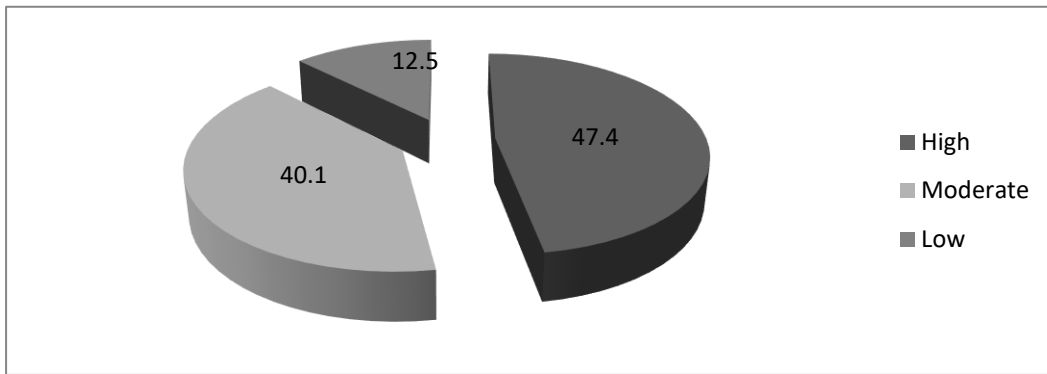
**Table (5)** displays that, there were no statistically significant relations between patients' safety and their age, department and years of experience. Also, there was highly statistically significant relation between patients' safety and their gender. While, there

was statistically significant relation between patients' safety and staff nurses' educational qualifications

**Table (6)** shows that, there was highly statistically significant positive correlation between total level of ethical work climate and total level of patients' safety as perceived by staff nurses with p-value (0.000).

**Table (1): Frequency distribution of studied staff nurses regarding their personal data at study setting (n=327)**

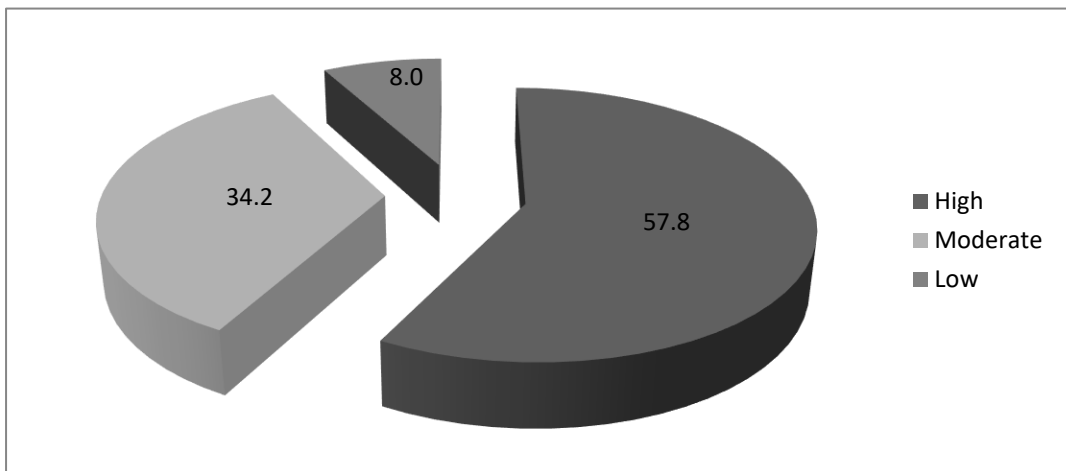
Personal data	No.	%
<b>Age (in years)</b>		
(20-30)	<b>172</b>	<b>52.6</b>
(31-40)	119	36.4
(41-50)	33	10.1
(51-60)	3	.9
Min –Max	(23-52)	
Mean ±SD	<b>32.16±6.40</b>	
<b>Gender</b>		
Male	43	13.1
Female	<b>284</b>	<b>86.9</b>
<b>Department</b>		
Medical	<b>210</b>	<b>64.2</b>
Surgical	117	35.8
<b>Educational qualifications</b>		
Diploma in Nursing	29	8.9
Associated degree in nursing	101	30.9
Bachelor of Nursing	<b>157</b>	<b>48.0</b>
Master in nursing	40	12.2
<b>Years of experience</b>		
2-5	<b>126</b>	<b>38.5</b>
6-10	101	30.9
11-15	59	18.0
16-20	31	9.5
<20	10	3.1
Min –Max	(3-35)	
Mean ±SD	<b>8.83±5.47</b>	



**Figure (1): Ethical work climate as perceived by staff nurses (n=327)**

**Table (2): Mean and standard deviation of ethical work climate dimensions as perceived by staff nurses (n=327).**

Total ethical work climate dimensions	Min	Max	Mean $\pm$ SD	% score	Ranking
Efficiency	4	12	10.24 $\pm$ 1.49	85.3	2
Self-interest	3	9	<b>4.91<math>\pm</math>1.71</b>	<b>54.6</b>	7
Friendship	3	9	6.72 $\pm$ 1.10	74.7	6
Social Responsibility	4	12	<b>10.40<math>\pm</math>1.43</b>	<b>86.7</b>	1
Professional rules	3	9	7.34 $\pm$ 1.01	81.6	3
Personal Morality	4	12	9.22 $\pm$ 1.54	76.8	5
Organization Profit	3	9	7.23 $\pm$ 1.18	80.3	4
<b>Total ethical work climate</b>	<b>24</b>	<b>72</b>	<b>56.08<math>\pm</math>4.47</b>	<b>77.9</b>	



**Figure (2): Patients' safety as perceived by staff nurses (n=327)**

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**Table (3): Mean and standard deviation of patients' safety dimensions as perceived by staff nurses (n=327).**

Total patients' safety dimensions	Min	Max	Mean ±SD	% score	Ranking
-Condition for the hospital patients' safety work	9	27	22.42± 2.29	83.0	2
-Factors to attain current level of patients' safety	7	21	<b>18.15±2.00</b>	<b>86.4</b>	1
-Factors to increase patients' safety in the future.	12	36	<b>29.41±3.53</b>	<b>81.7</b>	3
<b>Total patients' safety</b>	<b>24</b>	<b>72</b>	<b>59.99±6.43</b>	<b>83.3</b>	

**Table (4): Relation between personal data of studied staff nurses and ethical work climate (n=327)**

Personal data	Total ethical work climate						X <sup>2</sup>	p-value
	Low (n=41)		Moderate (n= 131)		High (n=155)			
	No.	%	No.	%	No.	%		
<b>Age(in years)</b>								
(20<30)	25	61.0	70	53.4	77	49.7	13.697	0.033*
(30<40)	12	29.3	50	38.2	57	36.8		
(41-60)	4	9.8	11	8.4	21	13.5		
<b>Gender</b>								
Male	7	17.1	6	4.6	30	19.4	14.202	0.001**
Female	34	82.9	125	95.4	125	80.6		
<b>Department</b>								
Medical	29	70.7	81	61.8	100	64.5	1.088	0.581
Surgical	12	29.3	50	38.2	55	35.5		
<b>Educational qualifications</b>								
Diploma in Nursing	6	14.6	8	6.1	15	9.7	18.09	0.006*
Associated degree in nursing	16	39.0	48	36.6	37	23.9		
Bachelor of Nursing	11	26.8	57	43.5	89	57.4		
Master in nursing	8	19.5	18	13.7	14	9.0		
<b>Years of experience</b>								
2-5	16	39.0	47	35.9	63	40.6	5.253	0.73
6-10	14	34.1	45	34.4	42	27.1		
11-15	8	19.5	20	15.3	31	20.0		
16-20	3	7.3	15	11.5	13	8.4		
<20	0	0.0	4	3.1	6	3.9		

**No significant at p > 0.05.      \*Significant at p < 0.05.      \*\*Highly significant at p < 0.01.**



**Table (5): Relation between personal data of studied staff nurses and patients' safety (n=327)**

Personal data	Total Patient safety						X <sup>2</sup>	P-value
	Low (n=26)		Moderate (n=112)		High (n=189)			
	No.	%	No.	%	No.	%		
<b>Age(in years)</b>								
(20<30)	17	65.4	64	57.1	91	48.1	6.68	0.351
(30<40)	8	30.8	37	33.0	74	39.2		
(41-60)	1	3.8	11	9.8	24	12.7		
<b>Gender</b>								
Male	10	38.5	8	7.1	25	13.2	18.12	0.000**
Female	16	61.5	104	92.9	164	86.8		
<b>Department</b>								
Medical	14	53.8	77	68.8	119	63.0	2.348	0.309
Surgical	12	46.2	35	31.3	70	37.0		
<b>Educational qualifications</b>								
Diploma in Nursing	5	19.2	10	8.9	14	7.4	16.912	0.010*
Associated degree in nursing	8	30.8	34	30.4	59	31.2		
Bachelor of Nursing	5	19.2	58	51.8	94	49.7		
Master in nursing	8	30.8	10	8.9	22	11.6		
<b>Years of experience</b>								
2-5	13	50.0	44	39.3	69	36.5	10.578	0.227
6-10	6	23.1	37	33.0	58	30.7		
11-15	6	23.1	19	17.0	34	18.0		
16-20	1	3.8	12	10.7	18	9.5		
<20	0	0.0	0	0.0	10	5.3		

No significant at  $p > 0.05$ . \*Significant at  $p < 0.05$ . \*\*Highly significant at  $p < 0.01$

**Table (6): Correlation between total level of ethical work climate and total level of patients' safety**

Variable	Total level of patients' safety	
	r	p-value
Total level of ethical work climate	0.491	0.000**

r= correlation coefficient test. P= p-value \*\*Highly statistically significant at  $p < 0.01$ .

### Discussion

The ethical climate is closely related to moral distress. Moral distress negatively affects nurse and patient outcomes and is tight with the ethical work climate. Newly, the significance of structural and organizational factors that configure the contact with nurses' moral distress in the workplace has been emphasized and therefore, researchers have highlighted organizational factors, including ethical climate, to avert and minimize moral distress and its rejection consequences. Nurses' perception of ethical climate is inversely related to moral distress (**Klieb et al., 2023**).

Nurses and nursing managers have a critical role in ensuring patient safety. The safety culture of health care organizations is the most fundamental obstacle to improve the safety of patient care. An assessment of safety culture in health care organizations makes clear aspects of patient safety that need more attention and allows hospitals to identify strengths and weaknesses of their safety culture (**Alotaibi et al., 2020**).

Regarding personal data of the studied nurses, the current study revealed that, more than half of the studied staff nurses aged between 20 to less than 30 years old, with Mean  $\pm$  SD= 32.16 $\pm$ 6.40 years. Also, the majority of them were females. Considering the department, more than three fifths of staff nurses were working at medical unit. Regarding their educational qualifications, nearly half of staff nurses had bachelor degree of nursing science. Considering years of experience, about two fifths of staff nurses had 2 to less than 5 years with Mean  $\pm$  SD= 8.83 $\pm$ 5.47 years.

The current study demonstrated that, about half of the studied staff nurses perceived that there was high level of total ethical work climate. This result may be due to the studied nurses' educational level and years of work

experience that affected their level of perception regarding ethical work climate and the interest of Benha University hospital to apply practices, procedures and methods that define what is considered right and wrong and what is expected of workers in the organization as well as showing and explaining the ethical statuses of organizations.

This result was congruent with **Aloustani et al., (2020)**, about "Association between ethical leadership, ethical climate and organizational citizenship behavior from nurses' perspective" and reported that the total level of ethical climate as perceived by nurses is at a desirable level. On contrary, **Gilvari et al., (2019)** who carried out study entitled "Relationship of the Hospital Ethical Climate with Nurses' Attitude to Inter-professional Collaboration" and indicated an unfavorable level of understanding of the ethical climate among the nurses.

Related to mean score and standard deviation of ethical work climate dimensions as perceived by staff nurses, the current study reflected that the highest mean score and standard deviation of ethical work climate dimensions was "social responsibility" which represents most of the studied nurses, while the lowest mean score and standard deviation was "self-interest" which represents more than half of them. From investigator's point of view, this result may be due their sense of responsibility towards patients and society, and the existence of cooperation between nurses with each other.

This result was in agreement with **Vryonides et al., (2018)** who carried out a study about "Ethical climate and missed nursing care in cancer care units", it showed that "social responsibility" was rated the highest in nurses' perception. Conversely, **Constantina et al., (2019)** who carried out a study entitled "Cancer nurses' perceptions of ethical climate in Greece and Cyprus" and mentioned that in terms of "Professional rules"

dimension the studied nurses had the highest mean score.

Concerning levels of patients' safety as perceived by staff nurses, the current study portrayed that more than half of staff nurses perceived that there was high level of patients' safety. From investigator's point of view, this result may be due to the studied nurses' years of experience that affecting their level of perception regarding patient safety and the interest of Benha university hospital to apply patients safety measures and infection control through continuous observation and follow up of staff for applying these measures.

Likewise, this result matched with **Rajalatchumi et al., (2018)** who studied "Perception of patient safety culture among health-care providers in a tertiary care hospital, South India", and found that more than half of staff nurses had a high perception level of patient safety. On contrary, **Rebeschi, (2020)** who carried out a study about "perceived patient safety competence of baccalaureate nursing students" and reported that the participants had low level of perception regarding patients 'safety.

Regarding mean and standard deviation of patients' safety dimensions as perceived by staff nurses, the present study displayed that the highest mean score and standard deviation of patients' safety dimensions was for "Factors to attain current level of patients' safety". While, the lowest mean score and standard deviation of patients' safety dimensions was for "Factors to increase patients' safety in the future ". From the research investigator's point of view, this can be explained as improvement in organizational culture and increasing education and training about issues related to patient safety has a significant effect on achieving patient safety.

This result matched with **Ree and Wiig, (2019)**, who carried out a study entitled "Employees' perceptions of patient safety

culture in Norwegian nursing homes and home care services", and stated that the highest patients' safety dimension was "factors to increase patients' safety in the future" as perceived by nurses. Also, this result was in accordance with a study performed by **Davati et al., (2018)** entitled "Assessment of patient safety culture at Shahid Mostafa Khomeini Hospital: nurses' perspective" and stated that "factors to attain current level of patients' safety" is the lowest dimension of patient safety as perceived by nurses.

Regarding relation between personal data of studied staff nurses and ethical work climate, the present study results reflected that there were statistically significant relations between ethical work climate and staff nurses' age and educational qualifications. From investigator's point of view, this can be interpreted as older nurses and nurses with higher education levels have higher level of perception regarding ethical work climate. Parallel to these findings, a study was conducted by **Faramarzpour et al., (2021)** who found that there was a significant relation between ethical work climate and age and educational qualifications of the studied staff nurses.

Also, the present study represented that there was highly statistically significant relation between ethical work climate and the studied nurses' gender. While, there were no statistically significant relations between ethical work climate with staff nurses' department and years of experience. This may be due to the largest proportion in the nursing profession is females.

Conversely, this result disagreed with a study was conducted by **Turkan Karaca et al., (2018)** who demonstrated that there wasn't a significant difference in the level of nurses' perception of ethical work climate regard to nurses' gender. Moreover, a study was carried out by **Lemmenes et al., (2018)** who found that there was a statistically significant relation

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between ethical work climate and nurses' years of experience and department.

Concerning the relation between personal data of studied staff nurses and patients' safety, the present study reflected that there were no statistically significant relations between patients' safety and their age, department and years of experience. While, there was highly statistically significant relation between patients' safety and their gender. This may be due to the greater fraction of the nurses in Egypt was female and may also related to the studying of nursing in Egyptian universities and institutions were exclusive for females only till few years ago.

Somewhat parallel to this result, a study carried out by **Salih et al., (2021)** who found that, the main associated factors were age and experience which had a high effect on nurses' perception regarding patient safety ( $p$ -value  $< 0.01$ ), while gender and working unit had no significant relationship ( $p$ -value  $> 0.05$ ).

In the opposite line, this result disagreed with a study was conducted by **Aboufour and Subbarayalu, (2022)** who demonstrated that there wasn't a significant relation between level of nurses' perception about patient safety and their gender.

Additionally, the present study demonstrated that there was statistically significant relation between patients' safety and staff nurses' educational qualifications. This can be interpreted as nurses with high educational qualifications seem to have high level of perception regarding patient safety.

This result was in accordance with, a study was conducted by **Alotaibi et al., (2020)** about "Saudi Nurses Perception regarding Patient Safety in a Major Tertiary Hospital" who demonstrated that there was a significant difference in the mean level of nurses' perception of patient safety with regard to nurses' educational qualifications. On contrary,

a study by **Mansour and Sharour, (2021)** who carried out a study about "Results of survey on perception of patient safety culture among emergency nurses in Jordan" they found that was no significant relation between nurses' perception of patient safety and their educational level.

Pertaining to Correlation between total level of ethical work climate and total level of patients' safety, the present study highlighted that there was highly statistically significant positive correlation between total level of ethical work climate as perceived by staff nurses and total level of patients' safety. From investigator's point of view, this result may be due to nurses' perception regarding ethical work climate had increased the level of patient safety increased and vice versa and may be also due to the ethical work climate is very essential for patients' safety because it's effect in nursing care plan and procedures. Also, in health care settings patients' safety associated with some factors that may have positive impact on quality of care, these factors include conditions for organization's patients' safety work.

This finding was in agreement with **Lotfi et al., (2018)** who reported that, there was a positive correlation between ethical work climate and level of patients' safety and concluded that the ethical leadership by administrators and managers in hospitals could improve the nurses' performance in terms of patient safety.

### **Conclusion:**

According to results of the present study, it could be concluded that, the total levels of ethical work climate and patients' safety at Benha University Hospital were high as perceived by staff nurses. In addition, there was a highly statistical significant positive correlation between total level of ethical work climate and total level of patients' safety.

**Recommendations:**

In the light of the findings obtained from the present study, the following points were recommended:

**At organization level:**

- Conducting workshops in the organization to reinforce ethical work climate and keep the progress of patient safety.
- Creating a motivating work environment and keeping open lines of communication through periodical staff meeting and seeking opinions.
- Development of a cooperative system considers nurse's ideas leads to cooperation and commitment toward the organization.
- Clarification of standard of nursing care to perform according to the standards.

**At educational level:**

- Conducting educational programs on an ongoing basis for developing patient safety in nursing practice.
- Availability of library within the hospital to help staff nurses revise their knowledge about patient care certified books.
- Developing creative nursing program for career development of diploma nurses.

**Further research:**

- In the future, Replication of the study on large sample size and different health care setting.
- Conducting a study about strategies for improving patient safety
- Studying factors that facilitate and hinder implementation of patient safety in the health care setting.

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## مناخ العمل الأخلاقي وعلاقته بسلامة المرضى كما يدركها الممرضين

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يمثل مناخ العمل الأخلاقي التصور المشترك لدى الممرضين فيما يتعلق بالسياسات والممارسات والإجراءات التي تمنحها المنظمة وتدعمها وتتوقعها فيما يتعلق بالأخلاقيات. سلامة المرضى هي تجنب الأذى غير المقصود أو غير المتوقع للأشخاص أثناء تقديم الرعاية الصحية. الهدف من الدراسة: هدفت هذه الدراسة إلى تقييم مناخ العمل الأخلاقي وعلاقته بسلامة المرضى من وجهة نظر الممرضين العاملين. تصميم الدراسة: تم استخدام التصميم الارتباطي الوصفي في الدراسة. مكان البحث: أجريت الدراسة في جميع أقسام وحدات الباطنه والجراحه بمستشفى بنها الجامعي. عينة البحث: تكونت الدراسة من عينة عشوائية بسيطة من الممرضات تضم 327 ممرضًا وممرضة يعملون في نفس المكان. أدوات جمع البيانات: تم استخدام أداتين لجمع البيانات: الأولى: مقياس مناخ العمل الأخلاقي و الثانية: استبيان سلامة المرضى. النتائج: أظهرت النتائج أن حوالي نصف الممرضات (47.4%) الذين شملتهم الدراسة أدركوا أن هناك مستوى عال من مناخ العمل الأخلاقي وأكثر من نصف الممرضات الذين شملتهم الدراسة (57.8%) أدركوا أن هناك مستوى عال من سلامة المرضى. الاستنتاج: خلصت الدراسة أن هناك علاقة إيجابية ذات دلالة إحصائية عالية بين المستوى الكلي لمناخ العمل الأخلاقي والمستوى الكلي لسلامة المرضى كما يراها الممرضون العاملون. التوصيات: أوصت الدراسة بعقد ورش عمل في المؤسسة لتعزيز مناخ العمل الأخلاقي والحفاظ على تقدم سلامة المرضى.