

Effect of Ethical Leadership on Nurses' Voice Behavior at Zagazig University Hospitals

Dalia Ragab Mohamed Essawy ⁽¹⁾, Magda Atiya Gaber ⁽²⁾, and
Aisha ElSayed-ElAraby ⁽³⁾

⁽¹⁾ B.Sc. Nursing, Faculty of Nursing - Zagazig University

⁽²⁾ Professor of Nursing Administration, Faculty of Nursing - Zagazig University

⁽³⁾ Assist .Professor of Nursing Administration, Faculty of Nursing - Zagazig University

Abstract

Background: Ethical leaders show their values through their positive green behavior, and setting an example is a chance for managers to deliver value to subordinates. Ethical leadership is believed to work as support factor making nurses reciprocate in shape of ethical response and productive voice. **Aim of the study:** Assess the relationship between ethical leadership and nurses' voice behavior. **Subjects and Methods; Design:** A descriptive correlational design was used to conduct this study. **Setting:** The study was conducted at Zagazig University Hospitals. **Subjects:** Simple random sample was selected from nurses working at the above mentioned setting (n= 400). **Tools of data collection:** Two tools were used to collect these data, Ethical Leadership questionnaire and Nurses' voice behavior Scale. **Results:** One third of the nurses perceived that their leaders have high ethical leadership at work. In terms of voice behavior, small percent (22.2%) of nurses exhibited high level. Moreover, there were highly statistically significant positive correlations between nurses' perception of ethical leadership and nurses' voice behavior where p value less than 0.05. **Conclusion:** There were highly statistically significant positive correlations between nurses' perception of ethical leadership and their voice behavior. **Recommendations:** Conducting training programs and workshops for all managerial levels to clarify the concept of ethical leadership, and the extent to which the hospital and staff benefit from ethical leadership. Develop workplace green teams and senior medical leaders could behave more open to nurses' voice and respond adequately.

Key words: Ethical Leadership, Nurses, Voice Behavior.

Introduction:

The value of nurses to the hospital is not only reflected in the labor force they have, but also in their ability and courage to generate and speak up innovative ideas; nurses with high self-efficacy tend to implement voice behavior as a coping strategy to keep and acquire additional resources in stressful situations. The nurses' voice behavior has an important role in enriched organizational functioning ⁽¹⁾. Ethical leadership is the art of influencing people and guiding to make good decisions rooted in ethical values like fairness, morals, ethics, trust, honesty, accountability, equality, mutual respect, and honesty ⁽²⁾.

There are five major principles of ethical leadership which included

honesty; dishonest behavior will only create an environment of mistrust and disrespect. As a result, an ethical leader is honest and never even takes the liberty to misinterpret reality. The second principal is justice; prioritize equal treatment of all the nurses within the organization ⁽³⁾.

The third principal is respect; an ethical leader acts as a mentor to others in the organization and imparts the values and ethics within the organization. The fourth principal is community; ethical leaders behave altruistically and help build a community. Respect the values of both the individuals and the organization ⁽⁴⁾. The last principal is integrity, Ethical leaders bring out the

best in the people they work with and attract ethical hires. Integrity is a virtue that even investors value in a leader⁽⁵⁾.

Ethical leader is seen as the one who sees the greater good of organizations, nurses and stakeholders. Ethical leader provides an ethical framework which is reciprocated by followers in shape of positive outcomes. Being supervisees of ethical leader, followers are likely to receive more care and support, which is likely to be reciprocated by attitudes being valued by supervisors. Ethical leaders fetch positive response from followers in shape of behavior and performance by building interpersonal relations of mutual trust⁽⁶⁾.

On seeing ethical leaders' nurses become more confident in speaking up about ideas and concerns. This type of involvement through voice behavior gives nurses a sense of contribution where ideas and concerns have been listened to equally. That nurse's empowerment through voice enhances nurse's performance and increases well-being⁽⁷⁾. Voice behavior is socially based as promotes change by facilitating constructive change intentions. However, it is to share that challenging the status quo and raising voice for change create social risks. Therefore, there lies the need of organizational and management support to mitigate such risks and get best out of voice behavior⁽⁸⁾.

Theoretical Framework:

Social exchange theory (SET) states that trusting relationships are developed among members of the organization based on mutual experiences and norms of reciprocity. Those relations could be financial benefits and/or social networks. Ethical leadership (EL) is rooted in and aligned with SET in that EL behavior drives the ethically sound behavior of the employees. Therefore, leaders can support the values and norms of the organization and can even change the organizational culture. SET outcomes also include VB⁽⁹⁾.

Significance of the study:

Ethical leadership has been linked to favorable outcomes for nurses and healthcare organizations. Nurses who work for ethical leaders are committed, empowered, and do their best for their healthcare organizations. Nurses' voice behavior can thrive and flourish under ethical leaders⁽¹⁰⁾.

There are few international studies that assess the relation between ethical leadership and nurses' voice behavior⁽¹¹⁾.

There are no studies carried out in Egypt, researches in Faculty of Nursing Zagazig University that assess the relation between ethical leadership and nurses' voice behavior are rare so that, the current study was conducted to assess the relationship between ethical leadership and nurses' voice behavior.

Aim of the study:

To determine the effect of ethical leadership on nurses' voice behavior.

Research Questions:

1. What is the level of ethical leadership as perceived by nurses?
2. What is the level of nurses' voice behavior?
3. Is there relationship between ethical leadership and nurses' voice behavior?

Subjects and Method:

Research Design:

Descriptive correlational research design.

Study Setting:

The study was conducted at Zagazig University Hospitals, Al Sharqia, Egypt, which include two sectors involving nine teaching hospitals. The total bed capacity of the hospitals is 2074 beds.

Study Subjects:

A simple random sample was taken from nurses working at Zagazig University Hospitals according to the following

▪ **Inclusion criteria:**

1. Holding at least technical institute in nursing.
2. Having one year of work experience in the currently working unit.

Sample size:

The total population size is 2770 nurses working in the setting of the study, Sample size was calculated using a simplified formula ($n = N / (1 + N(e)^2)$). A 95% confidence level and $P = 0.05$ are assumed for Equation. Where "n" is sample size. "N" is Number of population (total number of nurses in all hospitals). "e" is Coefficient factor = 0.05. Then, the required number of nurses from each hospital was calculated with the following formula (number of nurses in each hospital \times required sample size / total number of nurses in all hospitals plus a dropout rate 10% { $375 + 10\% = 413$ }).

Sampling technique:

Simple random sample of nurses who agreed to participate (400). In total 413 questionnaires were distributed in the selected hospital, 400 properly filled questionnaires showing 97% response rate were obtained. Thus, sample size considered for present research was comprised of 400 nurses.

Tools of data collection:

To fulfill the purpose of this study, two tools were used for data collection as follows:

Tool I: Ethical Leadership at Work Questionnaire (ELW): It consists of two parts:

- **Part one: Personal characteristics of nurses,** which include the data about characteristics of the nurses such as age, gender, years of experience and educational qualifications.
- **Part two: Ethical Leadership at Work:** It was developed by **Kalshoven et al.** ⁽¹²⁾ to measure

level of ethical leadership as perceived by nurses. It consists of (38) items grouped under seven subscales as the following; Fairness (6 items), Integrity (4 items), People orientation (7 items), Role clarification (5 items), Power sharing (6 items), Ethical guidance (7 items), and Concern for sustainability (3 items).

Scoring system:

Staff nurses' are required to respond in a manner that most accurately reflects their perception of the frequency of their leader's behavior. Responses of nurses have measured on 5 points Likert scale ranged from one to five (strongly disagree to strongly agree). Thus, the minimum possible score was 38 and the maximum 190. The scores were converted into a percent score. Then the ethical leadership perception considered low if the percent score was less than 60%, moderate from 60% -<75% and high if 75% or more ⁽¹³⁾.

Tool II: Nurses' Voice Behavior

Scale to measure the level of nurses' voice behavior. This tool was developed by **Van Dyne and LePine** ⁽¹⁴⁾. It was consisting of six-item under single factor.

Scoring system:

Responses of nurses were measured on a 5-points Likert scale ranging from strongly disagree (1) to strongly agree (5) resulting in ordinal data. The scores of items were summed up and the total divided by the number of items. For the nurses' voice behavior, the total score ranges between 5 and 30. The total level of voice behavior among nurses considered; **Low** <50%; **Moderate** 50- < 75%, and **High** \geq 75% ⁽¹⁵⁾.

Content validity and reliability:

The tools of data collection were translated into Arabic, and then content and face validity was established by a jury of "five" experts specialized in nursing administration.

They were asked to express their comments on the tools for clarity, applicability, comprehensiveness, understanding, any suggestions for any additional or omissions of items and ease for implementation. According to their opinions, all recommended modifications are performing by the researcher. Internal consistency reliability was using Cronbach's alpha coefficients were 0.745 for Ethical Leadership at Work Questionnaire (ELW), 0.812 for Nurses' Voice Behavior.

Pilot study:

A pilot study was performed on 40 nurse (10% of the sample) to check the clarity and applicability of this study tool and to estimate the time required to complete the tools of data collection for each participant. It was conducted in May 2022. Data obtained from the pilot study was analyzed and no modifications were done, so pilot study sample was included to the main study sample.

Field work:

The researcher introduced herself to nurses then explained the aim of the study to nurses and invited them to participate. Those who gave their verbal consent to participate were handed the tool form. The researcher was present during the data collection period (from June 2023 to October 2023) to explain how to filling the questionnaires, clarify any ambiguity and answer any questions then the researcher checked each filled questionnaire sheet scale to ensure its completion.

Administrative and Ethical considerations:

An official permission was obtained from the Dean of Faculty of Nursing, Zagazig University. This letter included the aim of the study and photocopy from data collection tools in order to get the permission and help for collection of data. An oral consent was obtained from each participant.

The study was approved by Research Ethics committee (REC) of

the faculty of nursing, Zagazig University; approval to conduct the study was obtained from the medical and nursing directors of Zagazig University Hospital. The agreement for participation of the study was taken after fully explanation of the aim of the study. Participants were given the opportunity to refuse the participation, and they were notified that they could withdraw at any time. Also, they were assured that the information would be confidential and used for the research purpose only.

Participants were informed about the purpose of the study and their participation was voluntary.

Statistical analysis:

Data collected from the studied sample was revised, coded and entered using Personal Computer (PC). Computerized data entry and statistical analysis were fulfilled using the Statistical Package for Social Sciences (SPSS) version 22. Data were presented using descriptive statistics in the form of frequencies, frequency's and Mean SD. A correlation coefficient "Pearson correlation" is a numerical measure of some type of correlation, meaning a statistical relationship between two variables. Chi-square is a statistical test that examines the differences between qualitative data. Linear regression analysis is used to predict the value of a variable based on the value of another variable.

Results:

Table (1) shows that (49.2%) of the nurses studied were aged between 25 and less than 35 years, with a mean age of 37.61 ± 3.54 . Most of the nurses (70.0%) were female, and 64% of them held a bachelor's degree in nursing. Furthermore, more than one third (38.7%) of the nurses had 5 to 10 years of experience, with a mean experience of 7.85 ± 1.76 years. (25.8%) of the nurses worked in the surgical departments.

Table (2) presents the levels of ethical leadership behaviors as

perceived by studied nurses. The results shows that less than half of nurses perceived their leaders having ethical leadership with high level regarding ethical guidance (49.0%) ($M=3.75 \pm 1.04$). While the lowest percentage was related to power sharing (20.0 %) ($M=3.36 \pm 1.03$).

Figure (1) This figure shows that less than half of nurses (41%) perceived that their nurse leaders have an ethical leadership in high level, while one third (33%) of nurses perceived that their nurse leaders have an ethical leadership in low level, with total mean score = 3.24 ± 0.739 .

Figure (2) displays that more than one third of nurses (35%) have good voice behavior while (37%) of nurses have week voice behavior, with total mean score = 4.16 ± 0.49 .

Table (3) illustrates that there are positive statistically significant correlations between ethical leadership and nurses' voice ($r= 0.841$ at p value 0.000).

Table (4) displays that total ethical leadership has statistically significant relationships with nurses' age, gender, education and years of experience at p value < 0.05 . As it is evident in the table 80.6% of nurses who aged from 25-35 years old, 85.5% of female nurses and 66.1% of them who had bachelor in nursing perceived high level of ethical leadership.

Table (5) clarifies that studied nurses' total voice behavior has significant relations with nurses' age, gender, education and years of experience at p value < 0.05 . As it is obvious in the table 52.5% of nurses who aged from 25-35 years old, 68.4% of female nurses and 70.9% of them who had bachelor in nursing, all of them had good level of voice behavior.

Discussion:

Ethical leadership can have a positive impact on nurses' voice and green behavior in the workplace. The concept of ethical leadership has received increasing attention from

researchers, particularly those interested in the moral crises identified in several organizational contexts; ethical leaders care about ethical conduct and also incorporate it in the surrounding environment ⁽¹⁶⁾. Ethical leaders create an environment where nurses feel safe and supported to speak up and provide valuable input on issues that affect patient care and the work environment.

Staff nurses' perception of ethical leadership

The results of the present study found that the highest proportion of studied nurses had high level of ethical leadership. From researchers' point of view, this might be attributed to factors that affected the development of ethical leadership as work experience, type of nursing environment, educational level achieved, adherence to professionalism, critical thinking, and personal factors.

On the other hand, the different principles of ethical leadership that each staff nurse perceives affect nurses' perception of ethical leadership. These results are supported by **Mahran et al.** ⁽¹⁷⁾ who studied the effect of ethical leadership on nurses' job performance in Sohag University Hospital, Egypt and revealed that less than half of them perceived high levels of ethical leadership behavior, while more than half of participants had low levels of ethical leadership behavior.

In agreement with these results, **Badran and Akeel** ⁽¹³⁾ studied ethical leadership behavior and organizational cronyism among staff nurses at Obstetrics and Gynecological Hospital affiliated to Ain-Shams University Hospitals, they reported that slightly less than three quarters of studied staff nurses' perception regarding ethical leadership behavior was at moderate level.

In the same context, **Elsayed et al.** ⁽¹⁸⁾ who study the relationship between nurses' perception of ethical leadership and anti-social behavior

through ethical climate as a mediating factor and revealed that less than half of participants perceived high levels of ethical leadership behavior. **Sharifabad and Mirjalili** ⁽¹⁹⁾ Who assessed ethical leadership, nursing error and error reporting from the nurses' perspective and demonstrated that the level of nursing managers' ethical leadership was moderate from the nurses' point of view. Additionally, the study of **Lemoine and Hartnell** ⁽²⁰⁾ on nursing managers at the operational, intermediate, and strategic level in Finland, found that the ethical profile of nursing managers was at a high level.

Regarding participants' perception of ethical leadership domains; the highest level was related to ethical guidance domain, people orientation and role clarification while the lowest was for power sharing. Ethical guidance is a major part of ethical leadership that is formed based on an individual development process in society and the structures of personal, educational, and functional values.

Nursing profession was built on ethics. Furthermore, nurses require a high level of ethical guidance because of the prevalence of violence, anxiety, work discontent, discomfort, and ethical conflicts in the practice of nursing. High ethical competency can support nurses in giving morally sound medical care in a demanding hospital setting.

Different tools have been used to assess the ethical leadership in previous studies. Similarly, in previous studies, the highest domain has been reported in a study carried out in Malaysia by **Vikaraman et al.** ⁽²¹⁾ to assess ethical leadership practices and trust among public school leaders. They found that the level of ethical leadership practiced the highest mean score was for ethical guidance followed by role clarification but fairness has the least mean score. Also, **Basoro and Nidaw** ⁽²²⁾ who studied ethical leadership practices and factors affecting it in south Addis

Ababa district commercial bank of Ethiopia reported that high levels of ethical leadership were related to role clarification and ethical guidance.

In the same line, **Asnake and Mekonnen** ⁽²³⁾ reported that role clarification had the highest mean while fairness dimension had the lowest perception level of ethical leadership behaviors.

Contrary to these results, **Mahran et al.** ⁽¹⁷⁾ found that more than two thirds of participants reported high levels at fairness dimension and more than one third reported high levels of power sharing dimension and mentioned that ethical leaders are place importance on being fair, just and eliminating biased treatment and sharing power tend to lead to better outcomes, building loyalty and respect which in turn create positive relationships. From the research investigator point of view, differences in these findings may be due to the different conditions and skills of the nurses studied

Staff nurses' level of voice behavior:

In relation to level of nurses' voice behavior; the current study results demonstrate that the highest percentage of participants reported weak voice behavior and about one third reported good voice behavior. These results are best explained that voice behavior is inspired by many factors such as conscientious, extraverted and had high cognition ability, self-efficacy and team-based self-esteem. Also, these results may be related to that hospital administrators don't promote staff nurses' voice behavior and don't give them chances to provide suggestions to solve organizational problems.

The above-mentioned results are consistent with **Rubbab et al.** ⁽²⁴⁾ who conducted a study entitled employee voice behavior as a critical factor for organizational sustainability and **Li et al.** ⁽²⁵⁾ who studied the impact of paradoxical leadership on employee

voice behavior; they stated that clinical nurses' voice practices were mild to moderate.

On the contrary, the results of the current study are inconsistent with some previous researches such as **Atalla et al.** ⁽²⁶⁾ who conducted a study to assess relationship between staff nurses' core competencies and their voice behaviors at Alexandria University hospital, revealed that staff nurses had high levels of voice behaviors. **Ross et al.** ⁽²⁷⁾ and **Church et al.** ⁽²⁸⁾ who stated that working long shift hours having detrimental impact on nurses' voice behavior. Additionally, **Wong et al.** ⁽²⁹⁾ studied authentic leadership and nurses' voice behavior and perceptions of care quality, and reported that voice behavior was rated moderately high. From the research investigator point of view, differences in these findings may be due to the different conditions and environment.

Correlation between studied nurses' perceptions of ethical leadership and nurses' voice behavior:

The results indicate there are positive statistically significant correlations between ethical leadership with and nurses' voice behavior. There are two main reasons for leadership behavior affecting the followers' voice behavior. Firstly, speaking up comprises sharing ideas and thoughts with superiors/ leaders for assumed allocation of resources to the identified concerns. Secondly, leaders have control over followers' appraisals, duties, and promotions. Ethical leaders provide a voice to their followers. They express high ethical standards, encouraging the employees to express their views on the existing situations and propose new ideas of improvement on ethical matters, work contexts, and processes.

In the same line, **Islam et al.** ⁽³⁰⁾ found that ethical leadership was positively and significantly related to employee voice behavior.

Additionally, **Sagnak** ⁽³¹⁾ investigated ethical leadership and

teachers' voice behavior, reported that the ethical leadership influence on voice behavior. Also, **Jian** ⁽³²⁾ studied ethical leadership and Employee Voice, reported the same results. **Zahra and Waheed** ⁽³³⁾ investigated the impact of ethical leadership on employees' voice behavior and innovative work behavior, mentioned that ethical leadership is positively and significantly relates to voice behavior of followers.

Relation between personal characteristics of studied staff nurses and their perception of ethical leadership:

The results of the current study revealed that there was highly significant difference with personal and job characteristics of nurses that include (nurses' age, gender, education and years of experience) with their perception of ethical leadership. Conversely, there was no significant relationship between their department and perception of ethical leadership. The possible clarification for these results could be related to that age, years of experience and education play important role among staff nurses that helped them understand and recognize qualities of ethical leadership.

Accordingly, these results are consistent with **Mahran et al.** ⁽¹⁷⁾ revealed that there was highly significant difference with demographic data include (sex, years of experience in nursing, experience in current working place and working place) with participants' perception of ethical leadership. On the contrary, **Mahran et al.** ⁽¹⁷⁾ said that there were no significant differences between demographic data include (age, marital status and number of children) and participants perception of ethical leadership.

The previous results were incompatible with study conducted by **Wibawa and Takahashi** ⁽³⁴⁾ they study the effect of ethical leadership on work engagement and workaholism:

examining self-efficacy as a moderator and found that gender, marital status, and workplace experience, show insignificant results. Also, they were incompatible with **Wibawa and Takahashi** ⁽³⁴⁾ they found that age was significantly different.

Relation between personal characteristics of studied staff nurses and their level of voice behavior:

The results of the current study revealed that there was highly significant difference with personal and job characteristics of nurses that include (nurses' age, gender, education and years of experience) with their level of voice behavior. Conversely, there was no significant relationship between their department and their level of voice behavior. These results may be attributed to that older nurses who have bachelor in nursing and more experience are more non-traditional and creative than other nurses, more effective in making decisions and solving work related problems which promote nurses' voice behaviors.

Concerning gender; the nursing profession is feminist in nature; therefore, the females have higher greater chance of communication of work-related ideas and issues.

These results go in the same line with **Atalla et al.** ⁽²⁶⁾ who found a strong positive statistically significant relationship between total nurses' voice behavior and all nurses' demographic characteristics. This result is also consistent with previous results as that of **Church** ⁽²⁸⁾ stated that working long shift hours having detrimental impact on nurses' voice behavior. **Duan et al.** ⁽³⁵⁾ assessed transformational leadership and employee voice behavior, and **Guo et al.** ⁽³⁶⁾ who studied influence of core competence on voice behavior of clinical nurses, all these studies revealed that nurses with longer years of experience, who have higher educational qualifications, and higher

organizational positions have more confidence to engage in voice behaviors.

Conclusion:

In the light of the main study results; it can be concluded that more than one third of studied nurses perceived high ethical leadership and had good voice behaviors. Moreover, there were highly statistical significant positive correlations between nurses' perception of ethical leadership and voice behavior of nurses.

Recommendations:

Based on the results of this study, the following recommendation can be suggested:

1. Nurse leaders should:

- Clarify priorities to her staff.
- Delegate challenging responsibilities
- Speak up with ideas for new projects or changes in procedures at work.

2. Conducting training programs and workshops for all managerial levels to clarify the concept of ethical leadership, and the extent to which the hospital and staff benefit from ethical leadership.

3. Motivate ethical leaders to become role models fostering cooperation integrity and treat fairly with employee which affects their performance.

4. Senior medical leaders could behave more open to nurses' voice and respond adequately- even if not endorsing their suggestion- to foster subsequent nurses' voice.

5. Future researches: in the future, research should consider the following:

- Future voice behavior research should focus on behavioral observation to examine natural communication behavior, for instance behavior during simulated acute care situations as well as during real acute care situation.

Table (1): Personal and job characteristics of studied nurses (n=400)

Personal information	No	%
Age		
25 - <35	197	49.2
35 - <45	103	25.8
45 - <55	60	15
55 – 60	40	10
Mean ± SD	37.61±3.54	
Gender		
Male	120	30.0
Female	280	70
Educational Qualification		
Technical institute	144	36
Bachelor's degree of Nursing	256	64
Years of experience		
1 - <5	117	29.3
5 – 10	155	38.7
>10	128	32
Mean ± SD	7.85±1.76	
Department of Work		
Medical department	97	24.3
Surgical department	103	25.8
Intensive care unit	63	15.7
Emergency medicine	69	17.2
Pediatric department	36	9
Gynecology department	32	8

Table (2): Levels of ethical leadership behaviors subscales as perceived by studied staff nurses (n=400)

Items	High		Moderate		Low		Mean ± SD
	No	%	No	%	No	%	
1. Fairness	132	33	122	30.5	146	36.5	3.47± 0.09
2. Integrity	137	34.3	83	20.7	180	45.0	3.53±1.02
3. People orientation	145	36.3	95	23.7	160	40.0	3.60 ± 1.00
4. Role clarification	148	37	140	35	112	28.0	3.55± 1.04
5. Power sharing	80	20.0	132	33.0	183	47	3.36± 1.03
6. Ethical guidance	196	49.0	120	30	84	21	3.75± 1.04
7. Concern for sustainability	152	38	106	26.5	142	35.5	3.66±1.01



Figure (1): Total levels of ethical leadership as perceived by studied nurses (n= 400)

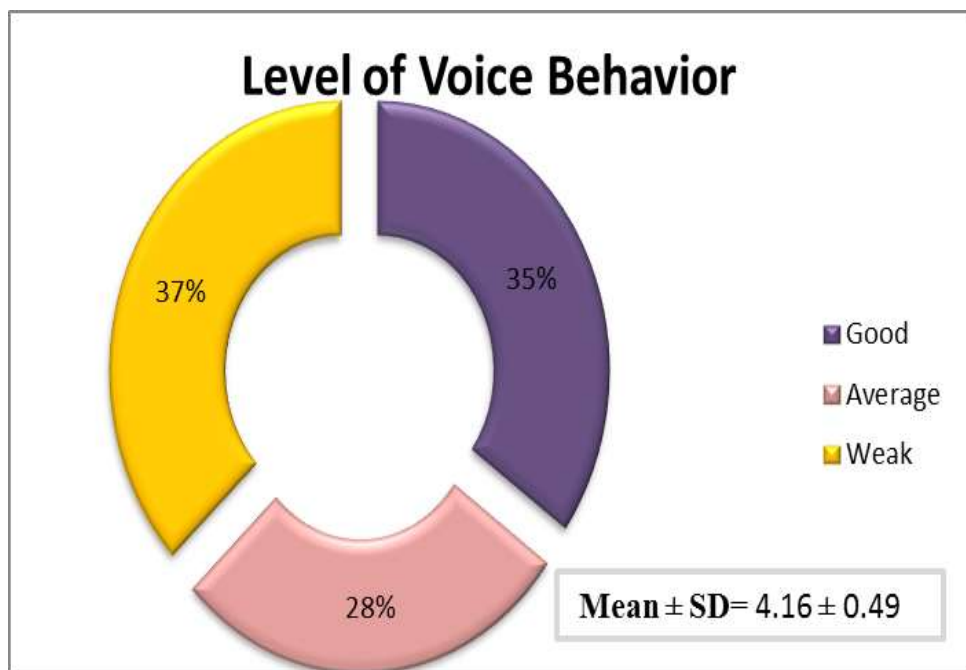


Figure (2): Levels of nurses' voice behavior (n= 400)

Table (3): Correlation between ethical leadership, nurses' voice behavior and green behavior (n=400)

Items	Nurses' voice behavior	
	R	P
Ethical leadership	0.841	0.000**
Nurses' voice behavior	-	-

(**) Statistically significant at p < 0.01

Table (4): Relationship between personal and job characteristics of studied nurses' and their total ethical leadership (n=400)

Items		Total ethical leadership						X ²	P-Value
		High N=164		Moderate N=104		Low N=132			
		No	%	No	%	No	%		
Age	25 - <35	132	80.5	33	31.7	28	21.2	6.810	0.009**
	35 - <45	12	7.3	49	47.1	36	27.3		
	45 - <55	12	7.3	13	12.5	38	28.8		
	55 - 60	8	4.9	9	8.7	30	22.7		
Gender	Male	24	14.6	13	12.5	68	51.5	8.947	0.005**
	Female	140	85.4	91	87.5	64	48.5		
Education	Technical institute	56	34.1	40	38.5	47	35.6	4.204	0.027*
	Bachelor	108	65.9	64	61.5	85	64.4		
Years of experience	1 - <5	47	28.6	31	29.8	40	30.3	4.345	0.021*
	5 - 10	77	47	40	38.5	34	25.7		
	>10	40	24.4	33	31.7	58	44		
Department	Medical department	49	29.9	21	20.2	28	21.2	1.196	0.089
	Surgical department	44	26.8	25	24.0	35	26.5		
	Intensive care unit	22	13.4	19	18.3	21	16		
	Emergency medicine	26	15.8	20	19.2	23	17.4		
	Pediatric department	13	8.0	11	10.6	11	8.3		
	Gynecology department	10	6.1	8	7.7	14	10.6		

*Significant at p <0.05. **Highly significant at p <0.01. Not significant at p>0.05

Table (5): Relationship between personal and job characteristics of studied nurses' and their total voice behavior (n=400)

Items		Total voice behavior scale						X ²	P-Value
		High N= 140		Moderate N= 112		Low No= 148			
		No	%	No	%	No	%		
Age	25 - <35	73	52.1	44	39.3	80	54.1	3.598	0.032*
	35 - <45	35	25	26	23.2	34	23		
	45 - <55	21	15	15	13.4	24	16.2		
	55 - 60	11	7.9	27	24.1	10	6.7		
Gender	Male	41	31.4	35	31.3	59	40.0	9.457	0.003**
	Female	99	68.6	77	68.7	89	60.0		
Education	Technical institute	41	29.3	29	25.9	50	33.8	9.801	0.002**
	Bachelor	99	70.7	83	74.1	98	66.2		
Years of experience	1 - <5	40	28.6	30	26.8	48	32.4	4.461	0.012*
	5 - 10	57	40.7	35	31.3	62	41.9		
	>10	43	30.7	47	41.9	38	25.7		
Department	Medical department	35	25	26	23.2	35	23.6	1.162	0.061
	Surgical department	37	26.4	27	24.1	39	26.3		
	Intensive care unit	20	14.3	18	16.1	25	16.9		
	Emergency medicine	23	16.4	20	17.9	26	17.6		
	Pediatric department	14	10	12	10.7	10	6.8		
	Gynecology department	11	7.9	9	8.0	13	8.8		

*Significant at p < 0.05 **Highly significant at p < 0.01 Not significant at p>0.05

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