Research Article

Relationship Between Ethical Leadership Behavior and Work Motivation in Intensive Care Nurses: A Cross-sectional Study

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Abstract
Aim: Affecting the attitudes and the behaviors of the employees, leaders' ethical focused behavior is one of the most important factors affecting employee work motivation. The study was conducted with the aim of examining the relationship between ethical leadership behavior and the work motivation of Intensive Care Nurses (ICNs).
Material and Methods: The study adopted a cross-sectional and descriptive design and was performed between August and October 2018 with 98 ICNs at a university hospital in Turkey. A Nurses' Description Form, the Ethical Leadership Scale, and the Nurses' Work Motivation Scale were used to collect data. Since the data were found to be normally distributed, to compare the total scores of ethical leadership scale and nurses' work motivation scale for demographic information of the nurses independent t-test and analysis of variance (ANOVA) test were used. Pearson correlation analysis was used to determine the relationship between ethical leadership and work satisfaction.
Results: A statistically significant positive correlation was found between the mean total score of the Ethical Leadership Scale and the mean total score of the Nurses' Work Motivation Scale ($p < 0.001$). A statistically significant difference was found between the mean total score of the ELS and the number of patients for whom daily nursing care was provided ($p < 0.05$).
Conclusions: It was concluded from this study that the perceptions of ICNs concerning ethical leadership behavior and their work motivation were at a medium level. In addition, it was found that the nurses' ethical leadership behavior had a positive effect on their work motivation. Nursing leaders should therefore endeavor to maintain their ethical behavioral integrity in order to promote nurses' work motivation.

Keywords
ethical leadership; work motivation; nursing

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Problem statement and analysis of the latest research

Intensive care units (ICN) are defined as clinics where critically ill patients are monitored, and where a multidisciplinary team supports the life functions of its patients [1]. One active member of this team is the intensive care nurse, whose job it is to detect changes in the patient's condition, and to make rapid decisions within the team during emergent situations [2]. Based on the types of patients that ICNs work with or the nature of the interventions relating

to the patientcare provided in these units, ethical problems may be encountered more frequently than in other areas of the nursing profession [3, 4]. Some of these ethical problems directly concern the unit or its senior management, while others appear indirectly related to the unit or its senior management as a result of being acquired through events experienced by nurses [3].

Methods employed to resolve ethical problems experienced by nurses have been reported to include following ethical principles (28.19%) and consultation with other members of the team (18.79%) [5]. In a qualitative study by Yönt *et al.*, (2011) to determine ethical problems related to ICNs, it was found that the nurses consulted with other members of the team in order to resolve the ethical problems they most frequently have encountered [4]. This shows a necessity for leaders who can lead the way when nurses encounter ethical problems which they feel unable to resolve, and who could suggest solutions in a way which everyone could accept.

Ethical leadership has entailed to the fore with the existence of different generations and intercultural care within the healthcare environment [6, 7]. Ethical leadership requires a combination of interpersonal skills in trying to propagate good, respecting the personal qualities of others, exhibiting the traits of honesty, reliability, credibility and compassion, with the skills of supporting democratic decision-making and participation, whilst being understanding and courteous [8]. Ethical leader not only has to display ethical behaviors, but also to encourage others to adopt such behaviors [9].

The performance of health institutions is closely related to the performance of its nursing staff, who generally constitute the most significant part of the workforce [10]. Among the most significant factors found to increase the work motivation of nurses are internal and personal reasons such as lifestyle and income level, as well as direct external factors such as relations with work colleagues and working conditions [11]. Therefore, ethical leadership behavior can have a positive effect on nursing staff's sense of connection to and membership within the team, and also on their work satisfaction [6]. Examining previous studies on the topic, it can be seen that when the ethical climate of an institution is perceived by its workers as negative, the work performance, work motivation, and team cooperation of individuals can also be negatively affected [11, 12, 13]. Similarly, a negative leadership style is known to increase workers' fatigue and their insensitivity to and intolerance of others [14]. In addition, the ethical leadership qualities of managers can affect workers' perceptions of justice and their sense of attachment to the profession [6]. However, few studies on this topic exist in the literature, hence the current study aims to contribute to the literature in this area.

Objective: The objective of the research was to investigate the relationship between ethical leadership behavior and the work motivation of intensive care nurses.

1. Materials and Methods

1.1 Type of Research
The research was planned as a descriptive, cross-sectional study.

1.2 Population and Sample of the Research
The study was conducted between August and October 2018. The population of the study included 120 nurses working in various intensive care units of Bursa Uludağ University Hospital located in the Marmara region of Turkey. Since all the population was intended to be reached, no sampling method was determined or applied. The research sample consisted of 98 ICNs who were available on the dates when the study was performed and who voluntarily accepted to take part in the study (Participation rate: %81.6).

1.3 Data Collection Instruments
A Nurses' Description Form, the Ethical Leadership Scale (ELS), and the Nurses' Work Motivation Scale (NWMS) were used to collect the data in this study.

Nurses' Description Form
This Nurses' Description Form was prepared by the researchers and consisted of seven questions in order to determine the participant nurses' sociodemographic characteristics, as well as characteristics

relating to their working life.

Ethical Leadership Scale

Nurses' perception of the ethical leadership behavior of their superior/immediate authority figure was measured with the Ethical Leadership Scale. The Ethical Leadership Scale was developed by Brown *et al.* (2005) [9] with the basic aim of measuring ethical leadership practices and providing a structural and experimental characterization of ethical leadership. Turkish validity and reliability of the scale was performed by Tuna and Bircan (2012) [15]. The scale consists of 10 items, structured as 5-point, Likert-type: (1) "I strongly disagree, " (2) "I disagree, " (3) "I have no opinion, " (4) "I agree, " and (5) "I strongly agree." The minimum score obtainable on the scale is 10 and the maximum is 50. The higher scores indicate that greater ethical leadership behaviour. In a previous study conducted in Turkey, the Cronbach's alpha was found to be 0.92 for The Ethical Leadership Scale [15]. The Cronbach alpha coefficient in the current study was 0.94 ($N = 98$).

Nurses' Work Motivation Scale

The Nurses' Work Motivation Scale is a 27-item scale that was developed by Engin and Çam (2016) [16]. It was prepared as a 3-point, Likert-type scale. Each item is scored as (1) "I strongly disagree," (2) "I partially agree," or (3) "I agree." The minimum score obtainable on the scale is 25 and the maximum is 75. The higher scores indicate that greater work motivation. In a previous study conducted with Turkish nurses, the Cronbach's alpha was found to be.84 for The Ethical Leadership Scale [16]. The Cronbach alpha coefficient in the current study was 0.89 ($N = 98$).

1.4 Ethical Aspect of the Study

Written permission was obtained by email from the developers of both the ELS and NWMS scales and from the authors of the Turkish validity and reliability study of the ELS scale in order to conduct the research. The necessary legal permissions were also obtained from the Ethics Committee of Bursa Uludag University (Ethics Committee #: 2018-15/24) and from the nurses who voluntarily participated in the research.

1.5 Data Collection Process

The researcher distributed the questionnaire forms to the participant nurses and asked them to respond to each of the questions. After the participants had finished completing the forms, they were collected by the researcher. A maximum of 30 minutes was calculated as the total time required for completion of the questionnaires. This process was conducted so as not to detrimentally affect the participant nurses' working time.

1.6 Data Analysis

In evaluating the research data, IBM's Statistical Package for Social Science (SPSS, Version 22.0) was employed. While continuous variables were presented as median (min–max), categorical variables were described with frequencies and percentages. Cronbach's alpha was calculated for the ethical leadership scale and nurses' work motivation scale. Shapiro-Wilk normality test was used to examine whether the numerical data were distributed normally. Since the data were found to be normally distributed, to compare the total scores of ethical leadership scale and nurses' work motivation scale for demographic information of the nurses independent *t*-test and analysis of variance (ANOVA) test were used. Pearson correlation analysis was used to determine the relationship between ethical leadership and work satisfaction.

2. Results

The mean age of the participant nurses included in the research was 30.89 ± 5.91 years. In addition, 35.7% worked in the anesthesia and rehabilitation intensive care unit, 90.8% held a bachelor's degree, 75.5% were female, and 58.2% were married. The mean length of time that they had worked in the nursing profession was 6.64 ± 5.60 years, they worked for 43.52 ± 3.34 hours per week, and 80.6% of them cared for between one and four patients each shift (Table 1).

The mean total score from the Ethical Leadership Scale of the nurses included in the study was found to be 30.96 ± 8.69, and their mean total score from the Nurses' Work Motivation Scale was cal-

Table 1. Nurses' Descriptive Characteristics ($N = 98$)

Characteristics	Number (n)	Percentage (%)
Age (years):	30.89 ± 5.91	
Gender		
Female	74	75.5
Male	24	24.5
Marital status		
Married	57	58.2
Single	41	41.8
Education level		
Health Vocational High School	2	2
Associate degree	1	1
Bachelor's degree	89	90.8
Postgraduate degree	6	6.2
Mean years of work:	6.64 ± 5.60	
Place of work (intensive care unit)		
Neurosurgery	7	7.1
Cardiovascular	10	10.2
General Surgery	16	16.3
Coronary	9	9.2
Anesthesia	35	35.7
Pediatric	8	8.2
Pediatric Surgery	5	5.1
Neonatal	8	8.2
Number of patients cared for daily		
1-4	79	80.7
5-10	17	17.3
11-20	2	2
TOTAL	98	100

culated as 60.74 ± 8.24. No statistically significant difference was found between the variable of the nurses' gender, education level, place of work, or number of patients cared for per shift and the mean total scores of either the Ethical Leadership Scale or the Nurses' Work Motivation Scale ($p > 0.05$). However, a statistically significant difference was found between the number of patients the nurses cared for each shift and the mean total score of the Ethical Leadership Scale ($p < 0.05$) (Table 2).

The correlation between the intensive care nurses' mean total score obtained from the Ethical Leadership Scale and the Nurses' Work Motivation Scale was examined. According to the results of the sta-

tistical analysis, a statistically significant positive correlation was found between the mean total score of the Ethical Leadership Scale and the Nurses' Work Motivation Scale ($p = 0.001$) (Table 3).

3. Discussion

This study was conducted with the aim of examining the relationship between the ethical leadership behaviors of intensive care nurses and their work motivation. Few similar studies were found to exist in the literature, and the findings obtained from the current study are discussed against the findings of the existing literature.

Table 2. Distribution of Nurses' Descriptive Characteristics and Total Score Means on Scales ($N = 98$)

Characteristic	ELS total score (Mean ± SD)	Statistical Test	p	NWMS total score (Mean ± SD)	Statistical Test	p
Gender						
Female	31.31 ± 8.53	t = 0.357	0.498	60.94 ± 7.95	t = 0.851	0.422
Male	29.91 ± 9.30			60.12 ± 9.22		
Education level						
Health Vocational High School	28.50 ± 7.77	F = 0.846	0.682	69.50 ± 0.70	F = 1.749	0.084
Assoc. degree	39.00 ± 0.20			61.00 ± 0.81		
Bachelor's degree	31.05 ± 8.57			60.52 ± 8.28		
Postgrad. degree	29.16 ± 11.85			61.00 ± 8.87		
Service of work (ICU)						
Neurosurgery	34.57 ± 8.26			61.14 ± 5.87		
Cardiovascular	25.70 ± 10.84			53.40 ± 13.17		
General surgery	32.25 ± 8.48			59.31 ± 8.82		
Coronary	31.77 ± 12.11	F = 0.785	0.759	63.77 ± 4.20	F = 1.492	0.09
Anesthesia	31.65 ± 7.34			62.14 ± 7.61		
Pediatrics	26.62 ± 6.02			59.00 ± 5.23		
Pediatric surgery	33.40 ± 7.19			65.40 ± 6.50		
Neonatal	30.75 ± 10.18			61.75 ± 6.60		
No of patients cared for daily						
1-4	30.56 ± 8.56	F = 2.081	0.007	60.56 ± 8.35	F = 0.818	0.722
5-10	31.52 ± 9.45			60.88 ± 8.16		
11-20	42.00 ± 0.20			65.50 ± 0.70		

Notes. t: Independent t-test, F: ANOVA (one-way) test.

Table 3. Correlation between Scores Obtained by Nurses on Scales

Scales	N	Min-Max	M ± SD	Statistical evaluation
Ethical Leadership Scale	98	10-49	30.96 ± 8.69	R = 0.319*
Nurses' Work Motivation Scale	98	32-75	60.74 ± 8.24	

Note: * $p < 0.01$.

A statistically significant positive correlation was found between the mean total score of the Ethical Leadership Scale and the mean total score of the Nurses' Work Motivation Scale for the nurses who participated in the current research study. A positive correlation was found between the mean total score from the Ethical Leadership Scale and the work motivation of nurses in a study conducted by Özden *et al.* (2017) [17]. Similarly, Baek *et al.* (2019) reported a positive effect of leadership behavior and a positive perception of institutional climate on job satisfaction [18]. The basis of social learning theory is learning by observing others [19]. In the same vein, a positive correlation was also found between Bandura's Social Learning Theory and ethical leadership behaviors by Brown *et al.* (2005) [9]. The

results of the studies mentioned here also support the findings of the current study.

The ethical leadership of nurses can be affected by various individual and institutional factors. According to the findings of the current study, no statistically significant difference was found between the nurses' gender and their mean total score of either the Ethical Leadership Scale or the Nurses' Work Motivation Scale ($p > 0.05$). Goldman and Tabak (2010), Karagözoğlu *et al.* (2014), and Özden *et al.* (2017) each reported no difference found between gender and scores on ethical climate and ethical leadership [2, 17, 20]. A large proportion (75.5%) of the nurses participating in the current study were female, as is generally the case in the nursing profession throughout Turkey, and therefore this result could be said as to reflect the general situation.

According to the findings of the current study, there was no statistically significant difference found between the nurses' education level and their mean total score from either the Ethical Leadership Scale or the Nurses' Work Motivation Scale ($p > 0.05$). In other studies, Goldman and Tabak (2010) and also Özden *et al.* (2017) found significant differences between nurses' educational status and their perception of ethical climate and work satisfaction [17, 20]. In results which did not conform to the literature, Karagözoğlu *et al.* (2014) reported that education level and nurses' perception of ethical climate were negatively correlated [2]. From this finding it may be commented that as education levels increase, the expectation of ethical behavior from institution managers may also increase. No statistically significant difference was found between the mean total score of either the Ethical Leadership Scale or the Nurses' Work Motivation Scale and the variable of the intensive care unit in which the participant nurses worked ($p > 0.05$). No other studies were found in the literature which examined the correlation between the unit in which nurses worked and ethical leadership and work motivation. Özden *et al.* (2017) found that the mean scores for ethical leadership and the perception of ethical climate of nurses working in internal medicine clinics were higher than those working in intensive care or surgical clinics [17]. In the current study, nurses working within intensive care units where the mean total score from the Ethical Leadership Scale was the highest, also had the highest mean scores from the Nurses' Work Motivation Scale, although this did not reach a level of statistical significance.

A statistically significant difference was found between the number of patients the nurses cared for each shift and their mean total score from the Ethical Leadership Scale. It is thought that the number of patients allocated to each nurse in a shift may affect the care process in terms of their ethical sensitivity. Other studies also reported finding a positive correlation between nurses' work dissatisfaction and an inadequacy in the number of nurses on duty [21, 22, 23]. In addition, a deficiency in nursing manpower creates a lack of motivation in nurses [22, 23]. These findings support the results of the current research.

4. Conclusions

The findings determined that the nurses' perceptions of ethical leadership behavior and their work motivation were at a medium level. Also, it was found that the ethical leadership behaviors of nurses working in intensive care units had a positive effect on their work motivation. These results show that when nurses work with leaders who provide ethical leadership, their work motivation correspondingly increases. Therefore, nursing staff who are neither managers nor in a leadership position should be supported in terms of ethical leadership.

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Conflict of Interest

No conflicts of interest relevant to this article were reported.

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