



# Assessing the Relationship between Organizational Citizenship Behavior and Environmental Behavior in the Employees of Educational Hospitals of Yazd University of Medical Sciences-2022

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## Abstract

**Background:** Considering the fundamental role of organizational citizenship behavior and environmental behavior of hospital employees in the quality of services provided and the general health of society, the current research was conducted aiming to determine the relationship between organizational citizenship behavior and environmental behavior in the employees of educational hospitals of Yazd University of Medical Sciences.

**Methods:** The present analytic cross-sectional study was conducted in 2022 on 181 employees of educational hospitals of Yazd University of Medical Sciences. Participants were selected by multi-stage cluster sampling method. Data collection was conducted using the two standard questionnaires, including the Organizational Citizenship Behavior (OCB) Questionnaire and the Environmental Behaviors Scale. The descriptive and analytical statistical method of Pearson's correlation coefficient was used in SPSS 22 software for data analysis.

**Results:** The total mean score of organizational citizenship behavior was reported as 52.28 out of 75, and the conscience subscale gained the highest score (12.79) and the politeness and consideration subscale gained the lowest score (5.96). The total mean of environmental behavior was obtained at 106.26 out of 140, and the highest mean score was related to saving gas consumption (20.75%) and the lowest was related to the use of products with environmental standards (15.6%). A significant positive correlation was also observed between the total score of the use of products with environmental standards ( $r=0.031$ ;  $P=0.160$ ) and protection of natural resources ( $r=0.011$ ;  $P=0.190$ ).

**Conclusion:** Incorporating training into the curricula and in-service programs, encouraging a culture of appreciation, and also providing rewards are the keys to strengthening the synergistic association between these two behaviors.

**Keywords:** Citizenship, Environmental, Organizational behavior, Hospital employees

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## Introduction

In the early schools of management, individuals in organizations were evaluated by the behaviors that were expected from the employee in the job description and the conditions of job requirement, but now behaviors beyond that have been considered known as organizational citizenship. Nowadays, these behaviors are regarded as an integral part of performance management and have entered into various organizational aspects (1).

Organizational citizenship behavior is a pretty voluntary behavior (outside the obligatory job description), is not considered in the official reward system directly or officially, and generally promotes the effective performance of the organization (2).

Hospitals, as the principal center of providing health care, play a crucial role in achieving healthcare goals (3). Employee participation, as one of the principal effective elements for organizations to achieve their goals and



provide high-quality medical services, plays a pivotal role (4). One of the most crucial factors influencing employees' behaviors, attitudes, and interactions to provide the best possible service quality is organizational citizenship behavior. Organizational citizenship behavior is among the organizational behaviors of employees that can influence hospitals' productivity and efficiency (5,6). Organizational citizenship behavior is indeed the behavior conducted by the individuals of an organization due to a sense of belonging and cooperation and not coercion stemming from official job responsibilities.

Organizational citizenship behavior in medical centers simplifies the achievement of organizational goals and promotes organizational performance. Moreover, it culminates in increasing cooperation and managerial productivity, facilitating the coordination of activities among team members and work groups, increasing organizational performance, reducing variability in the performance of work units, and improving the organization's ability to adjust to environmental changes (7).

Given the role and importance of emerging organizational citizenship behaviors in employees, organizational citizenship behavior for the environment is among the most crucial citizenship behaviors that are of great importance due to limited resources and energy in organizations in today's societies. Today, in addition to economic factors, organizations should also focus on social and environmental factors to gain success in society and facilitate their profit-making (8). In recent decades, the incidence and increase of various environmental crises have indeed induced increasing concerns about human biological security, and many believe that the solution to environmental crises is to change human behaviors and lifestyles (9).

Environmental organizational citizenship behaviors are individuals' voluntary behaviors that help improve the environment. These behaviors are not emphasized regarding the organizational job description and organizational requirements and are not rewarded at all but contribute to the sustainability of organizations and the environment (10). As a part of organizational citizenship behavior, environmental citizenship behavior is effective on the individual behavior of employees toward the environment. All of these behaviors are a type of sense of citizenship with a shared theme, namely all individuals should spare no pains in their responsibility, capital, time, and energy outside of the organizational official requirements, as individuals' voluntary effort and additional willingness and effort toward extra-organization (11). Environmental citizenship behavior encompasses various behaviors, such as reducing waste, recycling, saving energy, and encouraging colleagues to pro-environment behaviors in the workplace (12).

Considering that hospitals are service-provider

organizations aiming at treating and controlling diseases and maintaining health, compliance with environmental standards is of great importance. The concept of environmental citizenship behavior is more salient in hospitals, due to reasons such as excessive use of heating, cooling, and ventilation equipment, continuous operation of the installation, the high number of medical equipment, and hospital waste (7).

Given the importance of compliance with organizational citizenship behaviors and its role in the occurrence of environmental behaviors, the present research was conducted aiming to assess the relationship between organizational citizenship behavior and environmental behavior in the employees of educational hospitals of Yazd University of Medical Sciences.

## Methods

The current descriptive-correlational was conducted in 2022 in three educational hospitals in the city of Yazd (Afshar, Shahid Sadouqi, and Shahid Rahnamoun hospitals). The statistical population was determined to be 170 people, taking into account  $\alpha=0.05$ ,  $Z_{1-\alpha/2}=1.96$ ,  $\beta=0.9$ ,  $Z_{1-\beta}=1.28$ ,  $r=0.3$  (1), and the intra-cluster correlation coefficient of 1.5. Due to the possibility of samples dropping, the number of 200 people was considered, and finally, 181 people, selected from the hospital employees, participated in the study.

Samples were selected using a multi-stage cluster sampling method. The inclusion criterion included working in the support, paraclinical, and clinical units with at least one year of work experience in the hospital.

The data collection tools in this study were the Organizational Citizenship Behavior (OCB) Questionnaire and the Environmental Behaviors Scale. Oregon and Kanoski's OCB contains 5 dimensions, including altruism (3 items), conscience (3 items), chivalry (4 items), civil behavior (3 items), and politeness and consideration (2 items). A 5-point Likert scale (1 = completely disagree to 5 = completely agree) was used to respond to the questionnaire items. The reverse method was used to score questions 7, 8, 9, and 12. The minimum and maximum scores considered for this questionnaire were 15 and 75, respectively. This questionnaire has been assessed in a domestic study and its validity and reliability have been confirmed. In Hamidi' study, the internal reliability of the OCB questionnaire was obtained using Cronbach's alpha of 0.76 (2).

The 28-item Environmental Behavior Scale was employed to measure environmental behaviors. These items were measured by a 5-point Likert scale (always, often, sometimes, rarely, never). The items were scored from 1 to 5 (always = 5 and never = 1). The dimensions of this questionnaire included gas consumption (5 items), electricity consumption (4 items), water consumption (4 items), the use of products with environmental standards

(4 items), protection of natural resources (5 items), and the use of recycled items (5 items) (3). The minimum and maximum scores of this questionnaire were calculated to be 28 and 140, respectively. Cronbach's alpha was used to measure the reliability of the current research with a value of 0.845.

The data obtained from the questionnaire were collected in SPSS 22 software and were analyzed using the descriptive statistics of mean and standard deviation and Pearson's correlation coefficient.

## Results

According to the analysis of the participant demographic characteristics, 64.1% (n=116) of the participants were female and 35.9% (n=65) were male. The mean age of the employees was reported to be  $36.8 \pm 4.36$  years. Among the participants, 77.9% (n=141) were married, and regarding education, 17.1% (n=32) had a master's degree. Regarding occupational status, 59.7% (n=108) were working in clinical wards and 40.3% (n=73) were working in non-clinical wards (Table 1).

The research findings regarding organizational citizenship behavior demonstrated that the highest mean score was related to the dimension of conscience (12.79) and the lowest to the dimension of politeness and consideration (5.96). Moreover, regarding environmental behaviors, the highest mean score was related to gas consumption (20.75) and the lowest to the use of products with environmental standards (15.6) (Table 2).

The statistical test results to determine the association between the dimensions of organizational citizenship behavior and environmental behavior indicated that altruism is significantly associated with gas consumption ( $P=0.043$ ,  $r=0.150$ ) and the use of products with environmental standards ( $P=0.007$ ,

$r=0.200$ ) and conscience is significantly associated with gas consumption ( $r=0.217$ ), electricity consumption ( $r=0.266$ ), water consumption ( $r=0.286$ ), the use of products with environmental standards ( $P<0.001$ ,  $r=-0.319$ ), and protection of natural resources ( $P=0.022$ ,  $r=0.171$ ). Furthermore, chivalry was observed to be significantly related to gas consumption ( $P=0.006$ ,  $r=-0.204$ ) and electricity consumption ( $P=0.015$ ,  $r=-0.181$ ), and politeness and consideration was significantly associated with protection of natural resources ( $P=0.047$ ,  $r=0.148$ ). Also, the total score of citizenship behavior was significantly and positively correlated with the use of products with environmental standards ( $P=0.031$ ,  $r=0.160$ ), and protection of natural resources ( $P=0.011$ ,  $r=0.190$ ) (Table 3).

## Discussion

The present study was conducted aiming to assess the relationship between organizational citizenship behavior and environmental behavior in the employees of educational hospitals of Yazd University of Medical Sciences in 2022. According to the results, the total mean score of citizenship behavior was 52.28 out of 75 (higher than the moderate level), while the studies conducted in Yazd and Hasheminejad hospital in Tehran during 2011 and 2014 reported the organizational citizenship behavior of nurses as moderate (4,5). It can be concluded from these discrepant results that the hospital's exposure to the crisis stemming from the coronavirus outbreak has led to more organizational citizenship behaviors in the employees in order to be resilient against emergencies. However, the mean score of organizational citizenship behavior in a hospital in Thailand was reported to be high (4.29 out of 5, equivalent to 85.8%) (6).

Organizational citizenship behavior is indeed an extra-role behavior that influences an organization's effectiveness, organizational performance, and service

**Table 1.** Frequency distribution of demographic variables in the investigated individuals

Variables	Frequency	Percent	
Age	20-29	41	22.7
	30-39	82	45.3
	40-49	44	24.3
	50 and above	14	7.7
Gender	Male	116	64.1
	Female	65	35.9
Marital status	Single	40	22.1
	Married	141	77.9
Education	Illiterate	1	0.55
	Diploma	28	15.46
	Bachelor	118	65.20
	Master and Ph.D.	34	18.79
Ward/unit	Clinical	108	59.7
	Non-clinical	73	40.3

**Table 2.** The mean and standard deviation of the dimensions of citizenship behavior and environmental behavior in investigated individuals

Scale/Dimensions	Subscale	Mean	Standard Deviation
Citizenship behavior	Altruism	12.5	1.72
	Conscience	12.79	1.90
	Chivalry	11.51	2.61
	Civil behavior	9.45	1.88
	Politeness and consideration	5.96	2.02
Environmental behavior	Gas consumption	20.75	3.55
	Electricity consumption	16.90	3.11
	Water consumption	19.94	3.87
	Use of products with environmental standards	15.60	3.09
	Protection of natural resources	16.77	3.58
	Use of recycled items	16.30	4.11

**Table 3.** Correlation coefficient between citizenship behavior variables and environmental behaviors in the investigated individuals

Variable		Gas Consumption	Electricity Consumption	Water Consumption	Use of products with environmental standards	Protection of natural resources	Use of recycled items
Altruism	Correlation coefficient	0.150	0.018	0.053	0.200	0.037	0.005
	Significance	0.043	0.815	0.480	0.007	0.626	0.945
Conscience	Correlation coefficient	0.217	0.266	0.286	0.319	0.171	0.066
	Significance	0.003	<0.001	<0.001	<0.001	0.022	0.376
Chivalry	Correlation coefficient	-0.204	-0.181	0.143	-0.045	0.084	0.109
	Significance	0.006	0.015	0.055	0.548	0.261	0.145
Civil behavior	Correlation coefficient	-0.121	0.016	0.047	-0.021	0.097	0.079
	Significance	0.172	0.828	0.534	0.776	0.192	0.289
Politeness & consideration	Correlation coefficient	-0.029	0.050	0.068	0.063	0.148	0.035
	Significance	0.697	0.500	0.361	0.398	0.047	0.642
Total score	Correlation coefficient	-0.020	0.034	0.054	0.160	0.190	0.111
	Significance	0.787	0.652	0.470	0.031	0.011	0.136

Significance level:  $P < 0.05$ 

quality (7-10). Any organization can be successful and effective if its staff not only perform their duties but also perform extra-role behaviors or “organizational citizenship behavior” (6). Organizational citizenship behavior is even positively linked to employee job satisfaction as well (6,7,11). Employees with higher job satisfaction show better behaviors in reaction to some positive behaviors such as organizational citizenship behaviors that are in line with the benefits of the organization (7). Hence, the organization management can promote favorable behaviors, such as organizational citizenship behavior, to improve the performance of the organization by developing proper policies to increase employee work participation and also the organization’s support for them.

In the current research, among the dimensions of organizational citizenship behavior, the conscience scale scored the highest (12.79) and the politeness and consideration subscale scored the lowest (5.96), which is matched with the results of Jafari and colleagues’ study (5); similarly, in Bahrami and colleagues’ study, the lowest score belonged to politeness and consideration (12). According to a study in Thailand, conscientiousness (conscience) gained the highest mean score (6). Work ethics means that employees show conscientiousness; for example, they are always punctual, their lunch or rest times are never long, and follow the rules, regulations, and routines of the organization, even under the condition that no one is watching (6). Therefore, by periodically identifying and introducing employees with high work ethics and appreciating them, the senior managers of the hospital can encourage other employees to show citizenship behavior. Rewards can vary from a simple appreciation to public introductions and even providing incentives such as gift cards or incentive leave.

On the other hand, the investigations indicated that the total mean score of environmental behavior in the

investigated hospitals is 106.26 out of 140 (equivalent to 75.9%, i.e., at a relatively high level). Similarly, in Mohammadzadeh and Soleimanpour Omran’s study, this mean score was equal to 28.99, which is higher than the moderate level (equivalent to 70.09%) (13). According to Salehi and Firozjaeiyan’s report in 2012, the participants showed relatively high environmental behaviors (3.91 out of 5, equivalent to 78.2%) (3). However, promoting the level of pro-environmental behavior is necessary for the general health of society; in this regard, studies demonstrate the role of leaders and senior managers in improving such behaviors (14,15) because leaders are role models for employees (14), i.e., ethical and pro-environmental behaviors of heads can encourage employees to participate in voluntary activities to prevent the detrimental effects of the organization on the natural setting. Organizations are able to improve environmental behaviors (recycling, energy saving, and waste reduction) through ethical leadership and employee awareness by giving overt signals to employees about the importance of environmental sustainability goals in the workplace. In this regard, organizations should hold regular training sessions for their employees on the subject of the best ways to show pro-environmental behavior and how their measures can positively impact the hospital and the environment. Moreover, they should evaluate individuals based on environmental behavior criteria in the recruitment processes. Ultimately, by increasing the employees’ participation in the environmental policies of the organization, it is possible to improve their pro-environmental behaviors.

According to the present findings, among the environmental behavior subscales, the highest mean score belonged to saving gas consumption (20.75%) and the lowest to the use of products with environmental standards (15.6%). These results and values were very similar to the studies by Mohammadzadeh and

Soleimanpour Omran (13) and Salehi and Firozjaeiyan (3).

Finally, in investigating the association between organizational citizenship behavior and environmental behavior, the results demonstrated a positive correlation between some of the subscales of these two components. For example, altruism was significantly and positively related to saving gas consumption and the use of products with environmental standards. Its relationship with the environmental behavior subscales is that the mean score of saving gas consumption and the use of products with environmental standards are higher in individuals with higher altruism. Also, by increasing the score of conscience as one of the subscales of citizenship behavior, the mean scores of saving gas consumption, electricity consumption, and water consumption, the use of products with environmental standards, and the protection of natural resources have increased too. Naturally, a conscientious and dutiful individual also performs his/her environmental duties well; it is why the conscience component has a significant relationship with most of the environmental behavior subscales.

According to the current study results, the total score of "citizenship behavior" had a statistically significant relationship with "the use of products with environmental standards" and "protection of natural resources" in such a way that by increasing the scores of the organizational citizenship behavior dimensions, a positive trend was observed in the occurrence of these components of environmental behavior. Therefore, benefitting from organizational citizenship behavior can culminate in reducing the organization's environmental damage. Consistent with the present results, the studies by Alizadeh et al (16) and de Resende Alt and Spitzack (17), indicated the presence of a significant association between employees' citizenship behavior and environmental performance, similar to the results of Mohammadzadeh and Soleimanpour Omran's (13) study showing that citizenship education has an impact on environmental skills (13), which is matched with the present study. Therefore, it is suggested to hold regular training sessions to discuss how the hospital helps create a healthier environment. During these sessions, it is necessary to encourage employees to share tips about how they work to lessen their environmental effects.

One of the most important limitations of the current study was the lack of related studies investigating the association between employees' organizational citizenship behavior and environmental behavior (particularly using the questionnaires used in this study), which faced the possibility of comparing the results with limitations. Also, since the study was conducted in hospital organizations in the city of Yazd, the results should be generalized to other cities and organizations cautiously.

## Conclusion and Suggestions

Given the relationship between the components of organizational citizenship behavior and the environmental behavior of hospital employees and their necessity to promote the quality of health services and reduce costs, creating appropriate solutions proportionate to the existing situation can culminate in providing conditions to establish green hospitals with an approach to paying attention to environmental issues. One of these solutions is incorporating training into curricula in-service programs regarding showing citizenship behavior and its role in personnel satisfaction and the necessity of developing pro-environmental behavior in order to achieve public health. Considering the significant relationship between education level and citizenship behavior, such training must be emphasized particularly at the postgraduate level.

In addition, by considering such behaviors in employee performance evaluation criteria and reward-providing procedures, incentives should be induced to improve these behaviors.

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## Authors' Contribution

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## Competing Interests

The authors declared no conflict of interest in the present study.

## Ethical Approval

The present study was approved by the Research Ethics Committee of Shahid Sadouqi University of Medical Sciences, Yazd, Iran (code: IR.SSU.SPH.REC.1401.116) on November 21, 2022. In order to observe ethical considerations, information was collected from the employees who consented to complete the questionnaire.

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