

# Relationship Between Professional Attitudes of Nurses and Their Attitudes Toward Change

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## Abstract

**BACKGROUND/AIMS:** The factors which influence professional attitudes and organizational change ideally ensure the quality of efficient patient care. This study aimed to determine the relationships between nurses' professional attitudes and their attitudes toward change.

**MATERIALS AND METHODS:** This study used a descriptive, cross-sectional, and correlational research design. A total of 376 nurses working in four state hospitals in North Cyprus were interviewed between June and July, 2016. Data were collected using a Socio-demographic Form, the Attitudes toward Change Scale (ATCS) and the Inventory of Professional Attitude at Occupation.

**RESULTS:** The professional attitudes of the participant nurses were relatively high ( $135.82 \pm 21.31$ ), whereas their attitudes toward change were moderate ( $59.0 \pm 9.95$ ); there was a positive relationship between professional attitudes and attitudes toward change among the nurses. The problem areas of nurses regarding change are *change outcomes and management style of change*. Scale scores were higher for those nurses who had higher professional positions, were members of professional organizations, contributed to institutional change, followed developments in health sciences and the nursing literature, were able to use computers and were more open-minded to change ( $p < 0.05$ ).

**CONCLUSION:** A positive correlation was found between the nurses' professional attitudes and their attitudes toward change. The nurses had a high degree of professionalism and did not show any reaction toward change. The positive impact of nurses' professional attitudes on the change process should be considered in order to determine the resistance points and conduct programs to facilitate necessary changes. Nurses should be informed about the reasons, processes, and outcomes of changes.

**Keywords:** Nurses, professionalism, professional attitudes, attitudes toward change

## INTRODUCTION

Professionalism refers to the expertise, knowledge, qualifications, attitudes, and behaviors in line with professional standards which should be possessed by all individuals responsible for performing the roles and responsibilities of a particular profession.<sup>1</sup> In order to attain the status of perfect professionalization, professional attitudes have been an important subject in the nursing curriculum for more than half a century. The rising number of studies on the quality of health show that nurses who were competent in terms of healthcare were

gradually replaced by nurses with high levels of professionalism.<sup>2</sup> This has increased the demand for nurses who were aware of their roles and responsibilities and can adapt to changing professional life, act autonomously, think critically, and internalize ethical values; thereby, providing top-quality healthcare services to patients.<sup>3,4</sup>

Today, rapidly evolving organizations face difficulties in adapting to changes. Such changes should be gradually adopted in a conscious and planned manner. Change may not only provide solutions to existing problems, but may also create new problems. One of the most

**To cite this article:** Gönel A, Sezgin H. Relationship Between Professional Attitudes of Nurses and Their Attitudes Toward Change. Cyprus J Med Sci 2023;8(6):425-434

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**Received:** 12.11.2021

**Accepted:** 06.10.2022



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important problems during the process of change is the resistance to change. Resistance may be defined as the behaviors of employees which result in unexpected delays, increases in costs, and instability in the process of change.<sup>5</sup>

Organizational changes in health institutions aim to decrease costs, sustain productivity, and increase patient and employee satisfaction.<sup>6</sup> However, a hospital is an institution where individuals with different expertise and education levels work together to achieve a common goal. This situation necessitates coping with various difficulties when there is a demand to make changes in nursing services within that institution. To manage these difficulties, nurses, who are primarily and considerably affected by the process of organizational change, should take part in this process.<sup>7</sup> Attempts to realize this goal will contribute to the success of targeted organizational change and improve the quality of healthcare.<sup>3</sup> Nurses implement and keep a close watch on organizational changes. Nurses are the primary agents who determine the quality of healthcare, and health managers should be responsive to the expectations of nurses stemming from organizational changes.<sup>6</sup>

A professional nursing environment, a positive emotional climate, and structural empowerment, which provides access to information, support, and opportunities, has a positive impact on nurses' readiness for organizational changes.<sup>8</sup> However, there are economic, sociological, psychological, and rational reasons for resistance to organizational change.<sup>5</sup>

Managing resistance to change is a subject which has attracted researchers studying the factors influencing administrative success. However, we have not found any studies on the relationship between the professional attitudes of nurses and their attitudes toward change. In the literature, it was seen that some factors have negative effects on the professional attitudes of nurses and their attitudes toward change, such as insufficient resource provision of the institution, the management's attitude, an inability to adapt to current developments, a failure to grasp the research methodology and results, and low autonomy.<sup>7,9</sup> This information suggests that there may be a relationship between these concepts.

This study aimed to determine the relationship between nurses' professional attitudes and their attitudes toward change. The findings of this research are expected to fill a gap in the literature focusing on the relationship between the professional attitudes of nurses and their attitudes toward change. Additionally, our findings may also help health managers develop strategies which may contribute to the active participation of nurses in the processes of organizational change and help them to adapt to changing organizational structures.

### Research Questions

- What are the professional attitudes levels of nurses?
- What are the attitudes toward change levels of nurses?
- Do nurses' descriptive characteristics impact their professional attitudes and their attitudes toward change?
- Is there a relationship between the professional attitudes of nurses and their attitudes toward change?

## MATERIALS AND METHODS

### Research Design

This study employed a descriptive, cross-sectional, and correlational research design. The population of the study comprised 627 nurses working in four different public hospitals in the Turkish Republic of Northern Cyprus (TRNC), with 391 in Nicosia, 135 in Famagusta, 69 in Kyrenia, and 32 in Lefka. The data was collected between June and July 2016 from 376 nurses who met the inclusion criteria for the study, without any sample selection.

### Sample Collection

The study was conducted with official permission from the head nurses of the hospitals. The researcher visited 402 nurses working in the first and second shifts (shift 1: 07-14:00, shift 2: 14-21:00, shift 3: 9-07:00) in their respective clinics and explained the research's purpose. Research forms were distributed to 383 nurses who agreed to participate in the study. The researcher collected the full-filled forms from the clinics the following day. Seven forms that were incompletely filled out were excluded from evaluation.

**Inclusion criteria:** Nurses who voluntarily agreed to participate in this study and those working in the first or second shifts were included.

**Exclusion criteria:** Nurses working at the same institution for less than one year, those on maternity, sickness, or annual leave, and those who did not complete the forms were excluded from this study. This study used the STROBE guidelines and the EQUATOR checklist for reporting cross-sectional studies (Supplementary 1).

### Data Collection

**Sociodemographic form:** The socio-demographic form included variables such as age, gender, marital status, education level, employment status, professional experience and position, length of service in the institution, professional organization membership, experience/thoughts about change, and the following of developments in health sciences and nursing literature. This form was developed by researchers in line with the literature.<sup>2,10,11</sup>

**Attitudes Toward Change Scale (ATCS):** Developed by Seren and Baykal,<sup>10</sup> ATCS has 29 items and four sub-dimensions, namely *institutional policy in change* (12 items), *change outcomes* (8 items), *resistance to change* (5 items), and *management style in change* (4 items). Twenty-four items of this scale are positive, whereas five are negative. The items are scored on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*); negative items are reverse scored. The raw score of the scale varies between 29 and 145. By converting the raw score to 100 in terms of absolute value, scale points between 20 and 100 are obtained (there are 80 points between these two points). The average score of this scale is obtained by using the formula  $80 \div 2 + 20 : 60$ . In this study, the relationship between the nurses' professional attitudes and their attitudes toward change, as well as their descriptive characteristics which may make a difference in the nurses' scale scores, were investigated. The total score ranged from 20 to 100, with a mean ATC score of 60. Higher scores indicate a more positive attitude toward change. The Cronbach's alpha of the original scale and our study were 0.92 and 0.90, respectively.

**Inventory of Professional Attitude at Occupation:** Developed by Erbil and Bakır,<sup>1</sup> the Inventory of Professional Attitude at Occupation (IPA0) is appropriate for professional nurses and midwives. The Likert-type inventory consists of 32 items on issues such as professional training and development, interpersonal relations, and attitudes toward problems. Items are scored on a 5-point Likert scale ranging from 1 (*it does not fit me at all*) to 5 (*it fits me completely*). The total score ranges from 32 to 160, with higher scores indicating higher professional attitudes.<sup>1</sup> The Cronbach's alpha of the original inventory and our study were 0.89 and 0.97 respectively.

**Ethical Considerations**

We obtained permission from the Ethics Committee of Okan University (approval number: 06/06/2016-11), and institutional permission from the TRNC Department of Inpatient Treatment Institutions (16.05.2016). This study adhered to the principles of data collection laid out by the Declaration Helsinki. The nurses were informed about the aims and scope of the research and written informed consent was obtained from all participants.

**Statistical Analysis**

The collected data were analyzed using IBM-SPSS Version 21. Frequency was used to determine the descriptive and professional characteristics of the nurses. Scores obtained from the scales were analyzed using descriptive statistics, including the mean, standard deviation, minimum and maximum values. Mann-Whitney U and Kruskal-Wallis tests were used to compare the descriptive characteristics of the nurses with the scores obtained from the scales. Differences between the categories of independent variables were evaluated using the Mann-Whitney U test. Spearman's correlation analysis was used to evaluate the relationships between the scales. The significance level was set at  $p < 0.05$ .

**RESULTS**

In this study, the relationship between the nurses' professional attitudes and their attitudes toward change, as well as the descriptive characteristics which can make a difference in the nurses' scale scores were investigated. Of the total sample, 85.64% of the participants were female, 72.34% were married, 60.37% had bachelor's degrees, 9.84% had completed postgraduate education, 46.81% were aged between 31 and 40 years, 92.02% were bedside nurses, 30.32% had five years or less length of service in the institution, and 30.05 % had between 6-10 years of professional experience (Table 1). In North Cyprus, bedside nurses are directly responsible for patient care. They always work in three shifts, that is, they work in turns to ensure a continuous service.

Demographic variable	Number (n)	Percentage (%)
<b>Gender</b>		
Female	322	85.64
Male	54	14.36
<b>Marital status</b>		
Married	272	72.34
Single	104	27.66
<b>Education level</b>		
Vocational school of health	29	7.71
Associate	83	22.07

Demographic variable	Number (n)	Percentage (%)
Bachelor's	227	60.37
Postgraduate	37	9.84
<b>Age</b>		
30 years or below	129	34.31
31-40 years	176	46.81
41 years or above	71	18.88
<b>Professional experience</b>		
5 years or below	65	17.29
6-10 years	113	30.05
11-15 years	92	24.47
16-20 years	46	12.23
21 years or above	60	15.96
<b>Length of service in the institution</b>		
5 years or below	114	30.32
6-10 years	108	28.72
11-15 years	77	20.48
16-20 years	31	8.24
21 years or above	46	12.23
<b>Professional position</b>		
Chief nurse	7	1.86
Nurse supervisor	23	6.12
Bedside nurse	346	92.02
<b>Total</b>	<b>376</b>	<b>100.00</b>

Characteristic	Number (n)	Percentage (%)
<b>Professional organization member</b>		
Yes	316	84.04
No	60	15.96
<b>An institutional change in their institution</b>		
Yes	274	72.87
No	102	27.13
<b>Participation in institutional change</b>		
Yes	285	75.80
No	91	24.20
<b>Believes that institution is open to change</b>		
Yes	239	63.56
No	137	36.44
<b>Follows developments in health sciences</b>		
Yes	339	90.16
No	37	9.84
<b>Follows scientific literature on nursing</b>		
Yes	296	78.72
No	80	21.28
<b>Uses computers</b>		
Yes	353	93.88
No	23	6.12
<b>Believes that s/he is open to innovations</b>		
Yes	361	96.01
No	15	3.99
<b>Total</b>	<b>376</b>	<b>100.00</b>

As illustrated in Table 2, 84.04% of the participants were members of a nursing organization, 72.87% had experienced a change in the institutions they worked at, 75.8% reported their participation in the process of a change, and 63.56% considered their organization to be open to change. Of the total participants, 90.16% followed developments in health sciences, and 78.72% followed scientific literature on nursing. Of the total, 93.88% were able to use a computer, and 96.01% perceived themselves as being open to innovations.

**Levels of IPAO and Factors Associated with IPAO**

The nurses' IPAO scores were found to be high (135.82±21.31) (Table 3). The IPAO scores were higher for those participants who held higher professional positions, were members of professional organizations, contributed to organizational change, followed developments in health sciences and nursing literature, were able to use computers, and were mentally open to change (p<0.05; Table 4).

**Levels of ATCS and Factors Associated with ATCS**

Table 3 shows that the mean ATCS of the participants were at medium levels (59.0±9.95). The score of the *resistance to change* (65.74±12.43) subscale was found to be above the average. Scores above the average indicate that there is no resistance to change, and even that nurses have a more positive attitude towards change.<sup>9</sup> The subscale scores of *change outcomes* (56.28±12.13) and *management style in change* (56.64±12.62) were below average. It was determined that the problem areas of nurses regarding change are the *change outcomes* and the *management style of change*.

Overall the ATCS of bedside nurses were found to be lower than those of nurses with higher professional positions. For the *change outcomes* subscale, those participants who were between the ages of 31 and 40 years, and had professional experience of 6-10 years obtained lower scores and those who had a length of service in the institution of 16-20 years obtained high scores.

Those participants who were members of professional organizations and followed developments in health sciences scored higher on the ATCS and all its subscales. Nurses who believed in the openness of their organizations for change, reported changes in their organizations, contributed to organizational change, were able to use a computer, and followed the scientific literature on nursing obtained higher scores on the ATCS and its subscales of *institutional policy*, *change outcomes*, and *management style in change* (p<0.05; Table 5).

Variable	$\bar{x}$	SD	Min.	Max.
<b>IPAO</b>	135.82	21.31	32.00	160.00
<b>ATCS</b>	59.00	9.95	28.97	96.55
<i>Institutional policy in change</i>	58.79	14.36	20.00	100.00
<i>Change outcomes</i>	56.28	12.13	17.50	87.50
<i>Resistance to change</i>	65.74	12.43	28.00	100.00
<i>Management style in change</i>	56.64	12.62	20.00	100.00

IPAO: Inventory of Professional Attitude at Occupation, ATCS: Attitudes Towards Change Scale, ATCS's sub-dimensions: *Institutional policy in change*, *change outcomes*, *resistance to change*, *management style in change*;  $\bar{x}$ : Mean; SD: Standard deviation, Min.: Minimum, Max.: Maximum

**Table 4. Distribution scores of the participants from IPAO according to certain descriptive characteristics (n=376)**

Variable	n	IPAO		Statistic
		Av. rank		
<b>Age</b>				
≤30 years <sup>1</sup>	129	189.46	X <sup>2</sup> =2.00; p=0.37	
31-40 years <sup>2</sup>	176	181.81		
≥41 years <sup>3</sup>	71	203.35		
<b>Professional experience</b>				
≤5 years <sup>1</sup>	65	207.87	X <sup>2</sup> =6.89; p=0.14	
6-10 years <sup>2</sup>	113	168.16		
11-15 years <sup>3</sup>	92	189.47		
16-20 years <sup>4</sup>	46	201.87		
≥21 years <sup>5</sup>	60	194.09		
<b>Length of service in the institution</b>				
≤5 years <sup>1</sup>	114	200.59	X <sup>2</sup> =6.12; p=0.19	
6-10 years <sup>2</sup>	108	174.25		
11-15 years <sup>3</sup>	77	176.53		
16-20 years <sup>4</sup>	31	190.61		
≥21 years <sup>5</sup>	46	210.61		
<b>Professional position</b>				
Chief nurse <sup>1</sup>	7	221.86	X <sup>2</sup> =12.23; p=0.00**	
Nurse supervisor <sup>2</sup>	23	262.46		
Bedside nurse <sup>3</sup>	346	182.91		
<b>Institutional change</b>				
Yes	274	192.94	U=12757.50 p=0.19	
No	102	176.57		
<b>Participation in institutional change</b>				
Yes	285	198.19	U=10204.50 p=0.00**	
No	91	158.14		
<b>Believes that institution is open to change</b>				
Yes	239	196.33	U=14499.00 p=0.06	
No	137	174.83		
<b>Follows developments in the health sector</b>				
Yes	339	193.86	U=4456.00 p=0.00**	
No	37	139.43		
<b>Follows scientific literature on nursing</b>				
Yes	296	199.88	U=8472.00 p=0.00**	
No	80	146.40		
<b>Uses computers</b>				
Yes	353	193.33	U=2353.00 p=0.00**	
No	23	114.30		
<b>Believes that s/he is open to innovations</b>				
Yes	361	192.87	U=1130.50 p=0.00**	
No	15	83.37		

IPAO: Inventory of Professional Attitude at Occupation, ATCS: Attitudes Towards Change Scale, X<sup>2</sup>: Kruskal-Wallis, U: Mann-Whitney U, p<sup>1,2,3</sup>: Mann-Whitney U, \*p<0.05, \*\*p<0.001.

Table 5. Distribution of scores of the participants from ATCS according to certain descriptive characteristics (n=376)

Variable	n	ATCS	Institutional policy in change	Change outcomes	Resistance to change	Management style in change
		Av. rank	Av. rank	Av. rank	Av. rank	Av. rank
<b>Age</b>						
≤30 years <sup>1</sup>	129	191.47	188.92	198.22	193.58	187.32
31-40 years <sup>2</sup>	176	183.06	186.63	173.88	185.76	186.20
≥41 years <sup>3</sup>	71	196.59	192.38	207.08	186.06	196.36
X <sup>2</sup>		0.93	0.14	<b>6.36</b>	0.44	0.48
p		0.63	0.93	<b>0.04*</b> p <sup>1,2</sup> =0.046 p <sup>2,3</sup> =0.036	0.80	0.79
<b>Professional experience</b>						
≤5 years <sup>1</sup>	65	213.05	209.55	220.02	210.19	203.29
6-10 years <sup>2</sup>	113	174.85	183.54	161.16	179.53	180.73
11-15 years <sup>3</sup>	92	180.71	181.01	182.24	186.07	177.84
16-20 years <sup>4</sup>	46	203.05	190.27	211.91	194.85	194.16
≥21 years <sup>5</sup>	60	188.39	185.18	197.48	180.76	199.11
X <sup>2</sup>		6.40	3.19	<b>15.62</b>	3.92	3.49
p		0.17	0.53	<b>0.00**</b> p <sup>1,2</sup> =0.000 p <sup>2,4</sup> =0.005	0.42	0.48
<b>Length of service in the institution</b>						
≤5 years <sup>1</sup>	114	201.50	201.21	203.89	194.13	191.82
6-10 years <sup>2</sup>	108	175.54	180.49	164.93	192.63	181.80
11-15 years <sup>3</sup>	77	172.30	176.12	168.86	172.87	179.30
16-20 years <sup>4</sup>	31	212.13	198.13	233.21	181.90	207.58
≥21 years <sup>5</sup>	46	197.90	190.03	208.42	195.47	198.55
X <sup>2</sup>		6.69	3.40	<b>16.84</b>	2.39	2.51
p		0.15	0.49	<b>0.00**</b> p <sup>1,2</sup> =0.007 p <sup>2,4</sup> =0.002 p <sup>3,4</sup> =0.005	0.66	0.64
<b>Professional position</b>						
Chief nurse <sup>1</sup>	7	213.21	221.71	195.71	151.29	223.14
Nurse supervisor <sup>2</sup>	23	244.52	235.39	235.91	194.30	219.33
Bedside nurse <sup>3</sup>	346	184.28	184.71	185.20	188.87	185.75
X <sup>2</sup>		<b>7.00</b>	5.37	4.77	0.90	2.89
p		<b>0.03*</b> p <sup>2,3</sup> =0.003	0.07	0.09	0.64	0.24
<b>Institutional change</b>						
Yes	274	203.98	202.90	200.43	189.31	199.97
No	102	146.93	149.81	156.47	186.33	157.68
U		<b>9,733.50</b>	<b>1,0028.00</b>	<b>10,706.50</b>	13,753.00	<b>10,830.50</b>
p		<b>0.00**</b>	<b>0.00**</b>	<b>0.00**</b>	0.81	<b>0.00**</b>
<b>Participation in institutional change</b>						
Yes	285	208.03	204.10	207.11	192.73	200.55
No	91	127.34	139.65	130.21	175.24	150.76
U		<b>7,401.50</b>	<b>8,522.00</b>	<b>7,663.50</b>	11,761.00	<b>9,533.50</b>
p		<b>0.00*</b>	<b>0.00**</b>	<b>0.00**</b>	0.18	<b>0.00**</b>

Table 5. Continued

Variable	n	ATCS	Institutional policy in change	Change outcomes	Resistance to change	Management style in change
		Av. rank	Av. rank	Av. rank	Av. rank	Av. rank
<b>Believes that institution is open to change</b>						
Yes	239	219.60	219.74	213.67	185.83	214.65
No	137	134.25	134.01	144.59	193.16	142.88
U		<b>8,939.00</b>	<b>8,906.00</b>	<b>10,355.50</b>	15,733.00	<b>10,121.00</b>
p		<b>0.00**</b>	<b>0.00**</b>	<b>0.00**</b>	0.53	<b>0.00**</b>
<b>Follows developments in the health sector</b>						
Yes	339	196.14	195.76	196.18	184.86	193.21
No	37	118.50	121.97	118.16	221.89	145.39
U		<b>3,681.50</b>	<b>3,810.00</b>	<b>3,669.00</b>	<b>5,036.00</b>	<b>4,676.50</b>
p		<b>0.00**</b>	<b>0.00**</b>	<b>0.00**</b>	<b>0.046*</b>	<b>0.01*</b>
<b>Follows scientific literature on nursing</b>						
Yes	296	200.91	200.33	198.00	188.53	196.91
No	80	142.57	144.72	153.35	188.38	157.37
U		<b>8,165.50</b>	<b>8,337.50</b>	<b>9,028.00</b>	11,830.00	<b>9,349.50</b>
p		<b>0.00**</b>	<b>0.00**</b>	<b>0.00**</b>	0.99	<b>0.00**</b>
<b>Uses computer</b>						
Yes	353	192.75	192.42	192.28	187.98	191.29
No	23	123.20	128.39	130.50	196.46	145.65
U		<b>2,557.50</b>	<b>2,677.00</b>	<b>2,725.50</b>	3,876.50	<b>3,074.00</b>
p		<b>0.00**</b>	<b>0.01*</b>	<b>0.01*</b>	0.72	<b>0.047*</b>
<b>Believes that s/he is open to innovations</b>						
Yes	361	192.00	192.00	191.72	186.56	190.51
No	15	104.37	104.30	110.93	235.10	140.17
U		<b>1,445.50</b>	<b>1,444.50</b>	<b>1,544.00</b>	2,008.50	1,982.50
p		<b>0.00**</b>	<b>0.00**</b>	<b>0.00**</b>	0.09	0.07

ATCS: Attitudes Towards Change Scale, ATCS's sub-dimensions: *Institutional policy in change*, *change outcomes*, *resistance to change*, *management style in change*,  $\chi^2$ : Kruskal-Wallis, U: Mann-Whitney U,  $p^{1,2,3,4,5}$ : Mann-Whitney U, \* $p<0.05$ , \*\* $p<0.001$ .

### IPAO and ATCS Correlation

The results showed a positive correlation between the scores obtained from the IPAO and the ATCS and its subscales ( $r=0.30$ ,  $p=0.00$ ). This finding showed that higher scores obtained from the ATCS and its subscales were parallel to an increase in the IPAO score. We also found a positive and moderate correlation between the scores obtained from the *institutional policy*, *change outcomes* ( $r=0.56$ ,  $p=0.00$ ), and *management style in change* subscales of the ATCS ( $r=0.56$ ,  $p=0.00$ ). Furthermore, there was a negative and weak correlation between the *resistance to change* and *management style in change* subscales of the ATCS ( $r=-0.11$ ,  $p=0.04$ ). These findings suggest that an increase in the score obtained from *resistance to change* results in a decrease in the *management style in change* subscale ( $p<0.05$ ; Table 6).

### DISCUSSION

This study focused on the relationship between nurses' professional attitudes and their attitudes toward change and the nurses' descriptive characteristics which make a difference in their scale scores. This discussion is presented under the headings in which the findings are presented.

### Levels of IPAO and Factors Associated with IPAO

The nurses in this study obtained high IPAO scores ( $135\pm 21.31$ , 32-160), which implies that the professional attitudes of the participants were at high levels.<sup>1,12,13</sup> Another study conducted on participants from 74 hospitals in seven European countries found that the professional attitudes of physicians ( $n=2,067$ ) and nurses ( $n=2,805$ ) were high and there were no significant differences between these two professional groups.<sup>7</sup> Unlike this study, a study with 180 Iranian nurses found that the nurses had moderate professional attitudes.<sup>14</sup> This difference may be explained by the number of participants, social and educational factors which may influence professionalism and the number of nurses with managerial status.

Similar to our findings, in other studies, descriptive characteristics, including, age, gender, educational level, professional experience, and length of service in the institution did not have an impact on the IPAO scores of nurses.<sup>11,12,15</sup> In the literature, there are studies showing differences where IPAO scores increase with age and professional experience. This difference may be explained in terms of the different number of samples taken, the institutions where the nurses work, age, and the professional experience averages between the studies.<sup>12,14,16,17</sup> If a nurse working in the same service for a long time does the same



**Table 6. Correlation between the scores obtained from IPAO and ATCS**

Variable		IPAO	ATCS	Institutional policy in change	Change outcomes	Resistance to change	Management style in change
IPAO	r	1					
	p	-					
ATCS	r	0.30	1				
	p	0.00**	-				
<i>Institutional policy in change</i>	r	0.24	0.92	1			
	p	0.00**	0.00**	-			
<i>Change outcomes</i>	r	0.31	0.77	0.56	1		
	p	0.00**	0.00**	0.00**	-		
<i>Resistance to change</i>	r	0.15	0.19	0.03	0.09	1	
	p	0.00**	0.00**	0.55	0.09	-	
<i>Management style in change</i>	r	0.14	0.62	0.54	0.44	-0.11	1
	p	0.01**	0.00**	0.00**	0.00*	0.04*	-

IPAO: Inventory of Professional Attitude at Occupation, ATCS: Attitudes Towards Change Scale, ATCS's sub-dimensions: *Institutional policy in change, change outcomes, resistance to change, management style in change*. r: Spearman's correlation test, \*p<0.05 \*\*p<0.001.

job continuously, it may make them feel more professional than a new nurse, and it may have a positive effect between professional experience and IPAO.<sup>18</sup> Studies conducted with nurses and medical students found that women had higher IPAO scores.<sup>11,19,20</sup> The goals of the student nurses were different from the working nurses. In addition, it has been reported that access to high-paid and qualified job positions was lower for females than for males.<sup>21</sup> This situation may be explained by the higher number of females who receive education and work in the health sector. In our study, although the lowest IPAO scores belonged to the graduates of health vocational high schools, no statistical difference was found between the other groups. Tarhan et al.<sup>22</sup> found that as the education level of nurses working in military hospitals (n=156) increased, their IPAO scores also increased. It has been claimed that not only the level of education sufficient for professionalism, but also the quality of the education, as well as other factors affecting professionalism, should be investigated.<sup>13</sup>

The literature shows that nurses working in executive positions; a state that besides his education level and professional experience, he has higher responsibility to fulfill duties and demands, independence and autonomy related to work.<sup>3,13,23</sup> Professional nursing attitudes are related to self-learning behaviors. The more active this behavior is, the higher the ability to practice nursing is. Following developments in health sciences and scientific literature on nursing contributes to the professional nursing attitude.<sup>12,20</sup> The IPAO scores of those who were members of professional organizations were higher.<sup>4,7,18</sup> Local nursing organizations in North Cyprus, to which the nursing profession is affiliated, work very actively compared to many other countries. They also use political power to defend the rights and interests of nurses, act in unity, and find solutions to problems. This power motivates nurses under difficult working conditions, it can also be said that it plays an important role in providing a qualified service to society and promoting professionalization. The rate of the nurses participating in this study following developments in the health sector and the literature was at a perfect level. In addition, it was determined that the nurses used computers at a very high rate and they stated that they are open to developments. For these nurses, it was observed that the IPAO scores were also higher. It has been shown in the literature that the level of professionalization affects learning, increases participation in scientific

and research activities, and increases autonomy. It has been highlighted that this increased the structural strength, professional management, and business success of the institution, which leads to increased quality of care and patient satisfaction.<sup>24</sup>

The high IPAO scores in this study can be explained by the high autonomy and self-regulation skills of people who seek, question, and improve themselves, which are closely related to professional attitudes in nursing. This result also reveals the existence of a positive relationship between IPAO and ATCS, which are affected by similar characteristics.<sup>25</sup>

**Levels of ATCS and Factors Associated with ATCS**

The ATCS of the participants were at medium levels (59.00±9.95, minimum: 28.97-maximum: 96.55). It can be said that the nurses' general attitudes towards change were not negative. Seren and Baykal's<sup>10</sup> study showed that the ATCS of nurses working in state hospitals (56.94±11.36) were lower than those working in private hospitals (70.34±11.25). It has been stated that in environments with a culture of cooperation, resistance to change is lower than in environments with a power culture.<sup>5,26</sup> The *resistance to change* subscale scores of the scale were above average. It can be said that nurses with higher scores do not resist change and may even be compatible with it. On the other hand, the low scores in the subscales of *change outcomes, management style in change, and institutional policy in change* are noteworthy. These reflect nurses' dissatisfaction with the management style of change and their concern about the consequences of change.<sup>26</sup>

They may be caused by a mismatch between the demands of the nurses and the priorities of the hospital management regarding the change.<sup>9,27</sup> Successful change in healthcare can be sustained by the participation of both management and employees, and a management style with strong leadership which supports employees and takes into account their ideas and their resistance to change.<sup>6,28,29</sup>

Age, professional experience, years worked at the institution, and higher professional positions affected the *change outcomes* subscale scores. Younger nurses can easily adapt to change and technological developments with their new knowledge. They are productive and eager to learn in the early years of their profession. Age runs parallel to

professional experience. Experienced participants can participate in the change process by perceiving the need for change with their practices.<sup>9</sup> One-fifth of the participants with higher professional positions had a higher education level and 16-20 years of professional experience. Since they took part in the process of change, nurses with higher professional positions could develop a more positive attitude towards change compared to bedside nurses.<sup>25,29</sup>

While changes were experienced in working conditions, administrative structures, and functions of hospitals, nurses were mostly left out of decision making regarding the change process.<sup>25,30</sup> In our study, the high participation of nurses in the change process in their institutions (75.80%) can be explained by their membership of professional organizations (84.04%). We believe that professional organizations in North Cyprus, with their strong structures, provide nurses with information about the reasons and benefits of change, and offer the opportunity to participate in change activities.<sup>26</sup> It can be said that those who are open to change, investigative and innovative see change as an opportunity and a source of motivation. The most important reason why health professionals react to change is the necessity of acquiring new skills. Worrying about not being able to perform what is expected of them and being unsuccessful due to possible changes in their duties is an important risk perception.<sup>8</sup> In our study group, of those who followed the scientific literature (78.77%) and innovations in the health sector (90.16%), who could use computers (93.88%), and those who believed they were open to innovations (96.01%), it was observed that their attitude towards change were also positive. The literature emphasizes that professionals with these characteristics have a broad perspective.<sup>11,12</sup> It was highlighted that a broad perspective can increase adaptation to change while also facilitating cooperation with different disciplines and institutions.<sup>5,9</sup>

### IPAO and ATCS Correlation

As the IPAO scores of the participant nurses increased, their scores obtained from the ATCS and its subscales increased. There was a statistically significant positive correlation between the two scales ( $r=0.30$ ,  $p=0.00$ ). The reason why we found a weak relationship between these two concepts may be due to the scales we used. The fact that the relationship is positive indicates that professional attitude positively affects *resistance to change*. Although we could not find a high level of correlation between the two scales, we identified common factors which positively affect both professional attitude and *resistance to change*. These are as follows; professional position, being a member of professional organizations, contributing to institutional change, following developments in health sciences and the nursing literature, being able to use a computer, and being more open-minded to change related to professional and personal development. Mareš<sup>9</sup> explains that resistance to change in health professionals is based on structural (adequate resource provision, management attitude, creation of evidence-based care guides), environmental (political, economic, and socio-cultural resources), and personal (intellectual level, perception, and understanding, motivation and psychology) factors.<sup>3,8</sup> The findings of this study revealed influential personal factors. Successful change initiatives are influenced not only by individual factors, but also by professional nursing practices and a positive work environment.<sup>3</sup>

Regarding the subscales of the ATCS, we found that scores obtained from the *change outcomes* and *management style* increased parallel to an increase in *institutional policy in change*. We may suggest

that institutions which are supportive of workers and are open to communication may accomplish the management process of change.<sup>29</sup> In addition, the scores obtained from the *change outcomes* and *management style* were positively correlated.<sup>6</sup> It may be that nurses who experienced the positive effects of the change were more likely to cooperate with the administrators.<sup>29</sup> As the scores of the *resistance to change* subscale increased, there was a decrease in the scores obtained from the *management style in change*. Manageable resistance to change may decrease conflicts between the nurses and the administration and increase cooperation.

### Study Limitations

Although this study had a good response rate and included nurses working in all state hospitals, there were certain limitations. A self-report questionnaire was used in this study, which may have led to response bias. Responses to the questionnaire may only be reflective of the respondent's experience and may not be fully indicative of the practice within their hospital. Additionally, there were no comparisons between hospitals. The results of this research can only be generalized to the four state hospitals in North Cyprus from where the data were collected.

### CONCLUSION

This study found a positive relationship between the nurses' professional attitudes and their attitude towards change. It was determined that the professional attitudes of the nurses were at a high level and their attitudes towards change were at a mid-level. The nurses participating in this study had high degrees of professionalism and did not show any reaction to toward change. It was determined that the problem areas regarding change are the *change outcomes* and the *management style of change*.

With regards to the nurses' descriptive characteristics and behaviors; higher professional positions, being a member of professional organizations, contributing to institutional change, following developments in health sciences and nursing literature, being able to use a computer, and being more open-minded to change related to professional and personal development had positive effects on their professional attitudes and attitude towards change.

For the success of change, executive nurses can create a professional environment where open communication is maintained positively. Structural resources should be created and environmental regulations should be made in order to develop personal factors which positively affect nurses' resistance to change and professional attitude. During the process of change, administrators should help health professionals to take responsibility and express themselves. Nurses should be informed that the resources which will be used during the institutional change may provide more effective and qualified solutions for patient needs and the working environment of the nurses. Programs which facilitate change should be implemented by determining the nurses' resistance levels and reasons for resistance to change. Qualitative studies are recommended before planning changes to determine the reasons for nurses' resistance to change. It is recommended that administrators should encourage nurses to become members of a professional organization, to follow scientific literature and to participate in scientific events.



## MAIN POINTS

- Common factors affecting nurses' professional attitudes and perspectives on change should be determined and personal development programs should be carried out.
- Bedside nurses should be informed about the reasons, processes, and outcomes of organizational changes.
- During the change process, it is recommended that all employees be allowed to take responsibility and express themselves.
- Administrative support should be given to nurses for their graduate education, professional innovations, and publications.

## ETHICS

**Ethics Committee Approval:** We obtained permission from the Ethics Committee of Okan University (approval number: 06/06/2016-11), and institutional permission from the TRNC Department of Inpatient Treatment Institutions (16.05.2016).

**Informed Consent:** The nurses were informed about the aims and scope of the research and written informed consent was obtained from all participants.

**Peer-review:** Externally peer-reviewed.

## Authorship Contributions

Concept: A.G., H.S., Design: A.G., H.S., Supervision: H.S., Data Collection and/or Processing: A.G., Analysis and/or Interpretation: H.S., Literature Search: A.G., H.S., Writing: A.G., Critical Review: H.S.

## DISCLOSURES

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study had received no financial support.

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