Selected Paper of 3rd International Congress on Nursing (ICON-2019) 07 – 09 March 2019, Acapulco Hotel Convention Center, Kyrenia, North Cyprus

Factors affecting the attitudes of nurses towards change

Gulsah Kaya*, Yozgat Bozok University, Vocational School of Health Services, 66900 Yozgat, Turkey
Zeliha Koc, Ondokuz Mayis University, Faculty of Health Sciences, Samsun, Turkey
Dilek Kiymaz, Ondokuz Mayis University, Health Science Institution, Samsun, Turkey
Tugba Cinarli, Ondokuz Mayis University, Vocational School of Health Services, Samsun, Turkey

Abstract

This study was conducted as descriptive with an aim to determine the factors affecting the attitudes of nurses towards change. The study was conducted with the participation of 178 nurses in state hospital between October 10, 2017 and January 30, 2018. The data were collected using a questionnaire consisting of 24 questions, and the Attitude Against Change Scale consisting of 29 items. In the evaluation of the data, descriptive statistics, One-Way Anova, *t*-test, Kruskal–Wallis test and Mann–Whitney *U* test were used. The Attitude Against Change Scale score was determined as 56.82 ± 13.52. A meaningful relation was observed between the Attitude Against Change Scale score averages and certain sociodemographic characteristics of nurses ($p < 0.05$). It was determined in the study that the nurses between the ages of 30 and 39, having 8–15 years of profession had more positive attitudes towards change.

Keywords: Change, attitude towards change, nurse.

* ADDRESS FOR CORRESPONDENCE: **Teaching Asst., Gulsah Kaya,** Yozgat Bozok University, Vocational School of Health Services, Yozgat 66900, Turkey. *E-mail address*: glshkaya_55@hotmail.com / Tel.: +354 2121190

1. Introduction

Change is the transformation of a system, a process and an environment from one particular situation to another in a planned or unplanned way (Baykal and Turkmen, 2014). To put it more generally, change is a process whereby the living or non-living beings assume a different position from their current position and an individual's characteristics such as knowledge and talent are differentiated. The personal or social impact of change on living beings manifests itself in time (Wolff, 2005; 2013). Many factors, such as globalisation, increasing international competition, increasing importance of information, information and technological developments, increasing importance of human and quality management necessitate change (Seren, 2005). On the other hand, developments in the internal structures of individuals and organisations such as low productivity, a decrease in motivation, interpersonal conflicts, change of managers and organisational shortcomings can also reveal the need for change. Therefore, change is a natural and inevitable process for individuals, groups, organisations and societies (Kocel, 2013; Simsek, Akgemici & Celik, 2011).

The increase in the use of technology in the fight against diseases and the diagnostic methods and the more importance attached to scientific studies in the field of health necessitate the change in health institutions (Cinar & Toker, 2018; Sargutan, 2007; Tutar & Kilinc, 2008). Moreover, health institutions need the change to gain an advantage in competition, to integrate essential changes into the field, to tolerate environmental pressures, to reduce costs and to increase efficiency (Yasar, 2017). Not only the health institutions but also the health professionals working in these institutions are affected by the change processes (Cinar & Toker, 2018). Nurses who work as a change agent in health teams have vital roles and responsibilities in following changes in the field of health and integrating these changes into their institutions. The nursing profession has a crucial role in the protection, maintenance and development of health, which is the most natural and indispensable right of the individual and society and in determining health policies. Nurses should have sufficient knowledge and skills to adapt to new developments and new roles at the regional, institutional and national level and to provide the expected contribution to the health services, and most importantly, be open to change (Geduk, 2018; Karaoz, 2004; Taylan, Alan & Kadioglu, 2012). For this reason, it is essential to determine the attitudes of nurses towards change to increase the quality of care provided by them and to increase their job satisfaction.

1.1. The objective of the study

This study was planned as a descriptive study to determine the factors affecting the attitudes of nurses towards change. Answers to the following questions were sought in this study:

♦ What are the socio-demographic and professional characteristics of nurses?
♦ At what level are the nurses' attitudes towards change?
♦ Is there a relationship between the socio-demographic and professional characteristics of nurses and their attitude towards change?

2. Material and methods

2.1. Place and time of the research

This study was carried out as a descriptive and cross-sectional study to determine the factors affecting the attitudes of nurses towards change. It was conducted between 10 October 2017 and 30 January 2018 with the participation of nurses working in a public hospital.

2.2. Population and sample of the research

Nurses were selected using the simple random sampling method, one of the probability sampling methods, which is a sampling method in which individuals can be selected with equal probability from the universe. In the study, the number of samples to represent the universe was calculated to be 175 with a 5% error at 95% confidence limit in a total of 320 nurses working in the hospital. Considering that there may be data loss, 178 nurses were reached, and the data collection process was completed. The study included female and male nurses aged 18 and above who volunteered to participate in the study. The nurses who were on leave when the questionnaires were filled or who delivered incomplete questionnaires were not included in the sampling. The response rate was 84.8%.

2.3. Data collection tools

The data were collected using the 'Personal Information Form' and the 'Attitudes towards Change Scale', which consisted of a total of 24 questions to determine the socio-demographic and professional characteristics of nurses and their attitudes towards change. The questionnaire form was tested by pre-application in a group of 10 nurses and the nurses participating in the pilot study were not included in the sampling.

2.3.1. Attitudes towards change scale

The Attitudes towards Change Scale was developed by Seren (2005) to determine the attitudes of health professionals towards change. The Attitudes towards Change Scale consists of four sub-dimensions (Corporate Policy in Change, Consequences of Change, Resistance to Change and Management Styles in Change) and twenty-nine 5-point Likert-type items. The score of each item varies between 1 and 5. The positive items are scored in the following way: '1 = Strongly disagree', '2 = Disagree', '3 = Neutral', '4 = Agree' and '5 = Strongly agree' and the negative items (items no 13, 21, 22, 23 and 24) are scored in the following way: '1 = Strongly disagree', '2 = Disagree', '3 = Neutral', '4 = Agree' and '5 = Strongly agree'. The total score that can be taken from the scale varies between 29 and 145. The raw score is converted to 100 in absolute value, and a score between 20 and 100 is obtained. While low scores indicate a negative attitude towards change, high scores indicate a positive attitude towards change. Seren (2005) found Cronbach's alpha reliability coefficient of the Attitude towards Change Scale as 0.92. On the other hand, Cakiroglu (2015) found it as 0.93, Acar Yasar (2017) as 0.92 and Karakas (2012) as 0.91. In this study, the Cronbach's alpha reliability coefficient was found to be 0.93.

2.4. Data collection

The nurses were told that it was completely up to them whether or not to participate in the research, that their names would not be written on the questionnaire forms, and that the data to be collected from this study would be used only within the scope of the research. To collect the data, informed consent was obtained from the nurses included in the study and written permission from the managers in the hospital where the study was conducted. The data collection took approximately 15–20 minutes.

2.5. Data analysis

The statistical analysis of the data about the factors affecting the attitudes of the nurses towards change was performed by SPSS 21 software. Descriptive statistics and chi-square, independent sample T-test, one way ANOVA, Mann–Whitney *U* test and Kruskal–Wallis test were used for data analysis.

3. Results

Of the 178 nurses who participated in the study, 83.7% were women, 16.3% were men, 60.1% were married, 30.3% had associate degrees and 47.8% had undergraduate degrees. The mean age of the nurses was 32.64 ± 7.01. Of the nurses, 94.4% served as permanent staff, 75.8% worked in shifts, 70.2% were fond of their profession, 62.4% were fond of the departments they worked for and 68.5% of them chose the departments they worked for willingly. It was also found that 47.2% worked as a nurse for 1–7 years, 81.5% worked in their departments for 1–5 years and 51.7% worked for 41–60 hours a week. It was found that 93.8% of the nurses were happy to learn about the changes in their professions, 90.4% liked to follow the changes, 65.2% were informed about the changes through the Internet, 36.5% through colleagues and 12.9% through books, 88.8% of them participated in the in-service programmes related to the changes and 86% of them used the technology in their workplaces (Table 1).

Table 1. Distribution of socio-demographic and professional life characteristics of nurses

Characteristics		N	%
	Mean age 32.64 ± 7.01		
Age groups	21–29	73	41.0
	30–39 years	74	41.6
	40 and above	31	17.4
Sex	Female	149	83.7
	Male	29	16.3
Marital Status	Married	107	60.1
	Single	71	39.9
	Vocational school of health	29	16.3
	Associate Degree	54	30.3
	Undergraduate	85	47.8
Educational level	Master	10	5.6
Family type	Extended family	24	13.5
	Nuclear family	154	86.5
Children	Yes	105	59.0
	No	73	41.0
Number of children	1 child	29	27.6
	2 child	56	53.3
	3 and more child	20	19.1
	Surgical Units	53	29.8
	Internal Units	27	15.2
Department	Intensive Care	51	28.7
	Paediatrics	5	2.8
	Palliative Care	16	9.0
	Delivery room	7	3.9
	Physical therapy and rehabilitation	5	2.7
	Emergency	14	7.9
Duty at the department	Department Nurse	161	90.4
	Chief of the department	17	9.6
The years worked as a nurse	1–7 years	84	47.2
	8–15 years	56	31.5
	16 years and above	38	21.3
The years worked in the	1–7 years	107	60.1

current hospital	8–15 years	43	24.2
	16 years and above	28	15.7
The years worked in that department	1–7 years	145	81.5
	8–15 years	24	13.5
	16 years and above	9	5,0
Total number of nurses working in the department	1–10 years	91	51.2
	11–20 years	46	25.8
	21 years and above	41	23.0
Employment status	Permanent	168	94.4
	Contractual	10	5.6
Working type	Always during the day	43	24.2
	In Shifts	135	75.8
Whether they chose nursing profession willingly	Yes	133	74.7
	No	45	25.3
Whether they are fond of nursing profession	I am	125	70.2
	I am not	20	11.2
	Partly	33	18.6
Whether they are fond of their department	I am	111	62.4
	I am not	22	12.4
	Partly	45	25.2
Whether they chose their department willingly	Yes	122	68.5
	No	56	31.5
Total weekly working hours	20–40 hours	63	35.4
	41–60 hours	92	51.7
	61 hours and above	23	12.9
Whether they use technology in the workplace	Yes	153	86.0
	No	25	14.0
Participation in in-service programmes related to changes	Yes	158	88.8
	No	20	11.2
Whether they liked to be informed about the changes	Yes	167	93.8
	No	11	6.2
Whether they liked to follow the changes	Yes	161	90.4
	No	17	9.6
	Journals	12	6.7
*The way they follow the changes	Colleague	65	36.5
	Internet	116	65.2
	Books	23	12.9

*More than one answer.

The median of the total scores of the Attitudes towards Change Scale and the scores of the sub-dimensions are presented in Table 2. The total score of Attitudes towards Change Scale is 56.82 ± 13.52. The median scores of the sub-dimensions of Resistance to Change, Corporate Policy in Change, Consequences of Change and Management Styles in Change were found to be 56 (20–92), 60 (20–88), 60 (20–98) and 55 (20–100), respectively. The Cronbach Alpha values of the scale and its sub-dimensions were found as 0.935, 0.722, 0.938, 0.891 and 0.617, respectively.

Table 2. Median scores of the attitude towards change scale and its sub-dimensions

Sub-dimensions	Mean ± S.D Med (Min–Max)
Attitudes towards Change Scale	56.82 ± 13.52
Resistance to Change	56 (20–92)
Corporate Policy in Change	60 (20–88)
Consequences of Change	60 (20–98)
Management Styles in Change	55 (20–100)

Table 3. Comparison of the socio-demographic and professional life characteristics of nurses and the total scores from the attitude towards change scale and its sub-dimensions

Characteristics		Total scores from the attitude towards change scale Med (Min–Max) Mean ± S.D	Corporate policy Med (Min–Max) Mean± S.D	Consequences of change Med (Min–Max) Mean ± S.D	Resistance to change Med (Min–Max) Mean ± S.D	Management style Med (Min–Max) Mean ± S.D
Age groups	21–29 years	53.9 ± 15.2A	55 (20–86.7)	55.9 ± 18.7A	52 (20–92)	51.1 ± 17.3
	30–39 years	59.7 ± 11.7B	61.7 (20–88.3)	63.1 ± 14.2B	56 (20–88)	54.1 ± 14.7
	40 years and above	56.8 ± 12.4AB	61.7 (20–80)	58.3 ± 16.8AB	56 (20–80)	52.9 ± 14.5
	p value	*p* =0.037	*p* = 0.029	*p* = 0.032	*p* = 0.840	*p* = 0.523
	Test value	$F = 3.365$	$\chi^2 = 7.102$	$F = 3.497$	$\chi^2 = 0.350$	$F = 0.650$
Sex	Female	56.7 ± 13.2	60 (20–88.3)	60 (20–90)	52 (20–92)	55 (20–100)
	Male	57.6 ± 15.4	60 (20–85)	57.5 (20–97.5)	60 (20–88)	55 (20–85)
	p value	*p* = 0.719	*p* = 0.610	*p* = 0.469	*p* = 0.337	*p* = 0.422
	Test value	$t = -0.361$	$U = 2290.0$	$U = 1977.0$	$U = 2403.50$	$U = 2363.50$
Marital status	Married	56.6 ± 12.7	58.5 ± 17.1	15.7 (58.6–0)	56 (20–84)	55 (20–85)
	Single	57.2 ± 14.8	57.2 ± 17.8	18.5 (60.4–0)	52 (20–92)	55 (20–100)
	p value	*p* = 0.780	*p* = 0.620	*p* = 0.401	*p* = 0.523	*p* = 0.311
	Test value	$t = -0.279$	$t = 0.497$	$U = 4081.0$	$U = 4012.50$	$U = 4138.0$
Educational level	Vocational school of health	56.9 ± 14.6	58 ± 18.2	60 (20–87.5)	60 (20–84)	53.8 ± 17.8
	Associate Degree	59 ± 10.4	61.7 ± 15.5	63.8 (30–85)	48 (24–80)	52.8 ± 14
	Undergraduate	55.7 ± 14.3	56.1 ± 17.8	60 (20–97.5)	56 (20–92)	52.7 ± 15.8
	Master	54.6 ± 18.6	53.5 ± 19.4	62.5 (20–90)	52 (20–88)	48 ± 19.3
	p value	*p* = 0.527	*p* = 0.251	*p* = 0.371	*p* = 0.344	*p* = 0.776
	Test value	$F = 0.744$	$F = 1.377$	$\chi^2 = 3.134$	$\chi^2 = 3.328$	$\chi^2 = 1104.0$
Family type	Extended family	64.1 (20–81.4)	70 (20–86.7)	65 (20–87.5)	46 (20–84)	57.1 ± 14.1
	Nuclear family	57.9 (20–84.1)	59.2 (20–88.3)	60 (20–97.5)	56 (20–92)	51.9 ± 15.9
	p value	*p* = 0.140	*p* = 0.066	*p* = 0.146	*p* = 0.242	*p* = 0.138
	Test value	$U = 1,501.50$	$U = 1,417.50$	$U = 1,507.0$	$U = 2,121.50$	$t = 1.490$
Children	Yes	57.7 ± 12.7	59.6 (17–0)	15.8 ± 59.8	53.9 ± 15.4	55 (20–100)
	No	55.5 ± 14.6	55.6 (17.7–0)	18.4 ± 58.6	52.7 ± 16.8	50 (20–90)
	p value	*p* = 0.271	*p* = 0.181	*p* = 0.629	*p* = 0.609	*p* = 0.782

	Test value	$t = 1.103$	$U = 3,380.50$	$t = 0.485$	$t = 0.512$	$U = 3,739.50$
Number of children	1 child	56.6 ± 12.6	$58.3\ (20–86.7)$	12.7 ± 58.3	$60\ (24–80)$	17 ± 54.3
	2 child	56.9 ± 11.9	$60.8\ (20–88.3)$	16.6 ± 58.7	$56\ (20–80)$	13.6 ± 50.8
	3 child and more	61.7 ± 14.9	$70\ (20–86.7)$	17 ± 65.3	$48\ (20–88)$	19 ± 56.3
	p Value	$p = 0.314$	$p = 0.143$	$p = 0.230$	$p = 0.325$	$p = 0.348$
	Test Value	$F = 1.171$	$\chi^2 = 3.896$	$F = 1.489$	$\chi^2 = 2.250$	$F = 1.067$
Department	Surgical Units	56.9 ± 10.8	$58.3\ (21.7–83.3)$	$57.5\ (20–97.5)$	$60\ (24–88)$	15.1 ± 55.1
	Internal Units	58 ± 13.8	$66.7\ (20–88.3)$	$65\ (20–90)$	$48\ (20–80)$	14.1 ± 49.8
	Intensive Care	58.5 ± 15	$61.7\ (20–86.7)$	$67.5\ (20–87.5)$	$48\ (20–84)$	17.2 ± 53.4
	Paediatrics	54.5 ± 19.8	$61.7\ (20–63.3)$	$60\ (20–82.5)$	$64\ (20–68)$	18.9 ± 52
	Palliative Care	56.9 ± 15	$54.2\ (20–80)$	$60\ (30–80)$	$60\ (44–80)$	18.4 ± 55.6
	Delivery room	58.5 ± 10.9	$70\ (40–85)$	$70\ (25–87.5)$	$44\ (36–64)$	11.1 ± 47.9
	Physical therapy and rehabilitation	45.1 ± 15.7	$40\ (20–60)$	$60\ (20–80)$	$52\ (20–72)$	17.2 ± 47
	Emergency	52.2 ± 12.9	$52.5\ (25–78.3)$	$57.5\ (20–75)$	$50\ (20–92)$	12.8 ± 47.1
	p value	$p = 0.470$	$p = 0.070$	$p = 0.234$	$p = 0.081$	$p = 0.563$
	Test value	$F = 0.949$	$\chi^2 = 13.100$	$\chi^2 = 9.261$	$\chi^2 = 12.657$	$\chi^2 = 0.830$
Duty at the department	Department Nurse	$57.9\ (20–84.1)$	$60\ (20–88.3)$	$60\ (20–97.5)$	$56\ (20–92)$	15.9 ± 52.8
	Chief of the department	$60.7\ (20–71.7)$	$65\ (20–86.7)$	$60\ (20–77.5)$	$56\ (20–72)$	15 ± 51.5
	p value	$p = 0.473$	$p = 0.425$	$p = 0.937$	$p = 0.815$	$p = 0.749$
	Test value	$U = 1,513.50$	$U = 1,529.50$	$U = 1,352.50$	$U = 1,415.50$	$t = 0.321$
The years worked as a nurse	1–7 years	$54.8\ (20–84.1)A$	$53.3\ (20–86.7A$	$57.5\ (20–97.5)A$	53.2 ± 16.8	17.4 ± 51
	8–15 years	$62.1\ (31–82.8)B$	$62.5\ (20–88.3)B$	$65\ (30–90)B$	54.1 ± 16.3	14.2 ± 55.2
	16 years and above	$60\ (20–80)AB$	$64.2\ (20–80)AB$	$61.3\ (20–85)AB$	52.7 ± 13.8	13.9 ± 52.6
	p value	$p = 0.010$	$p = 0.002$	$p = 0.028$	$p = 0.98$	$p = 0.300$
	Test value	$\chi^2 = 9.286$	$\chi^2 = 12.230$	$\chi^2 = 7.147$	$F = 0.086$	$F = 1.211$
The years worked in the current hospital	1–7 years	$54.7 \pm 14.2A$	$55\ (20–86.7)A$	$17.4 \pm 56.5A$	54.2 ± 16.7	$50\ (20–100)$
	8–15 years	$61.8 \pm 10.7B$	$66.7\ (20–88.3)B$	$13.1 \pm 66.9B$	51.7 ± 15.4	$55\ (20–90)$
	16 years and above	$57.4 \pm 12.9AB$	$66.7\ (20–80)AB$	$16.8 \pm 58.2AB$	52.9 ± 14.1	$57.5\ (20–80)$
	p value	$p = 0.013$	$p = 0.001$	$p = 0.002$	$p = 0.679$	$p = 0.525$
	Test value	$F = 4.484$	$\chi^2 = 13.931$	$F = 6.255$	$F = 0.389$	$\chi^2 =1.288$
The years worked in that department	1–7 years	$58.6\ (20–84.1)$	$60\ (20–88.3)$	$60\ (20–97.5)$	$52\ (20–92)$	$55\ (20–100)$
	8–15 years	$57.2\ (20–80.7)$	$60\ (20–80)$	$58.8\ (20–80)$	$54\ (20–84)$	$52.5\ (20–90)$
	16 years and above	$59.3\ (39.3–71)$	$60\ (40–75)$	$55\ (30–72.5)$	$60\ (36–68)$	$55\ (30–75)$
	p value	$p = 0.814$	$p = 0.834$	$p = 0.219$	$p = 0.894$	$p = 0.992$
	Test value	$\chi^2 = 0.413$	$\chi^2 = 0.364$	$\chi^2 = 3.039$	$F = 0.112$	$\chi^2 = 0.016$
Total number of nurses number of nurses working in the department	1–10 nurses	56.7 ± 12.9	58.9 ± 17.3	$60\ (20–97.5)$	$52\ (20–80)$	$55\ (20–85)$
	11–20 nurses	57.8 ± 15	57.9 ± 19.1	$60\ (30–90)$	$56\ (20–88)$	$60\ (20–100)$
	21 nurses and	55.9 ± 13.5	55.9 ± 15.6	$62.5\ (20–80)$	$56\ (20–92)$	$50\ (20–90)$

	above					
	p value	$p = 0.791$	$p = 0.657$	$p = 0.887$	$p = 0.360$	$p = 0.082$
	Test value	$F = 0.234$	$F = 0.421$	$\chi^2 = 0.241$	$\chi^2 = 2.045$	$\chi^2 = 4.996$
Employment status	Permanent	57 ± 13.1	60 (20–88.3)	60 (20–90)	56 (20–92)	55 (20–100)
	Contractual	53.4 ± 20.4	64.2 (20–78.3)	56.3 (20–97.5)	46 (20–80)	42.5 (20–85)
	p value	$p = 0.590$	$p = 0.942$	$p = 0.599$	$p = 0.447$	$p = 0.311$
	Test value	$t = 0.558$	$U = 851.50$	$U = 757.0$	$U = 720.00$	$U = 680.50$
Working type	Always during the day	58.6 ± 13.5	61.7 (20–88.3)	60 (20–80)	60 (20–84)	55 (20–100)
	In Shifts	56.3 ± 13.5	58.3 (20–86.7)	60 (20–97.5)	52 (20–92)	55 (20–90)
	p value	$p = 0.331$	$p = 0.168$	$p = 0.920$	$p = 0.062$	$p = 0.909$
	Test value	$t = 0.980$	$U = 2,497.50$	$U = 2,932.0$	$U = 2,355.50$	$U = 2,869.0$
Whether they chose nursing profession willingly	Yes	60 (20–84.1)	60 (20–86.7)	62.5 (20–97.5)	52.2 ± 16.5	55 (20–100)
	No	53.8 (22.1–80.7)	53.3 (25–88.3)	57.5 (20–80)	57 ± 13.6	50 (20–85)
	p value	$p = 0.051$	$p = 0.064$	$p = 0.049$	$p = 0.815$	$p = 0.092$
	Test value	$U = 2,408.50$	$U = 2,440.0$	$U = 2,405.50$	$t = -1.755$	$U = 2,491.0$
Whether they are fond of nursing profession	I am	60 (20–84.1)A	61.7 (20–88.3)A	62.5 (20–90)	52.8 ± 15.6	55 (20–100)
	I am not	46.6 (31–73.1)B	42.5 (20–80)B	48.8 (25–80)	61.2 ± 15	45 (20–85)
	Partly	55.9 (22.1–80.7)AB	55 (21.7–80)B	60 (20–97.5)	51 ± 16.9	55 (20–85)
	p value	$p = 0.002$	$p = 0.001$	$p = 0.055$	$p = 0.057$	$p = 0.203$
	Test value	$\chi^2 = 12.279$	$\chi^2 = 17.199$	$\chi^2 = 6.724$	$F = 2.918$	$\chi^2 = 3.192$
Whether they are pleased with their department	I am	60 (20–82.8)	60 (20–88.3)	60 (20–90)	52 (20–88)	55 (20–90)
	I am not	53.4 (31–84.1)	58.3 (20–86.7)	60 (30–90)	54 (20–92)	50 (20–100)
	Partly	55.9 (20–80.7)	55 (20–80)	60 (20–97.5)	56 (20–84)	55 (20–85)
	p value	$p = 0.201$	$p = 0.049$	$p = 0.777$	$p = 0.746$	$p = 0.432$
	Test value	$\chi^2 = 3.208$	$\chi^2 = 6.037$	$\chi^2 = 0.504$	$\chi^2 = 0.585$	$\chi^2 = 1.678$
Whether they chose their profession willingly	Yes	59.7 (20–84.1)	60 (20–86.7)	60 (20–97.5)	53.4 ± 15.9	50 (20–100)
	No	56.2 (20–80.7)	56.7 (20–88.3)	60 (20–87.5)	53.4 ± 16.3	55 (20–85)
	p value	$p = 0.300$	$p = 0.482$	$p = 0.212$	$p = 0.984$	$p = 0.679$
	Test value	$U = 3,085.50$	$U = 3,192.0$	$U = 3,018.50$	$t = 0.020$	$U = 3,547.50$
Total weekly working hours	20–40 hours	60 (20–80)	60.8 ± 16.1	15.9 ± 60.8	52 (20–80)	55 (20–80)
	41–60 hours	56.6 (20–84.1)	56 ± 17.6	16.6 ± 57.9	56 (20–92)	55 (20–100)
	61 hours and above	62.1 (20–82.8)	58.1 ± 19.5	20.3 ± 61	52 (20–88)	50 (20–85)
	p value	$p = 0.200$	$p = 0.237$	$p = 0.512$	$p = 0.611$	$p = 0.699$
	Test Value	$\chi^2 = 18.150$	$F = 1.454$	$F = 0.672$	$U = 0.986$	$\chi^2 = 0.717$
Whether they use technology in the workplace	Yes	57 ± 13.5	60 (20–88.3)	60 (20–97.5)	52 (20–92)	55 (20–100)
	No	55.9 ± 14.1	60 (20–80)	60 (25–80)	56 (20–84)	55 (20–85)
	p value	$p = 0.713$	$p = 0.636$	$p = 0.890$	$p = 0.905$	$p = 0.871$
	Test value	$t = 0.368$	$U = 1,799.50$	$U = 1,879.50$	$U = 1,941.0$	$U = 1,874.0$
Participation in	Yes	57.3 ± 13.1	60 (20–88.3)	60 (20–97.5)	52 (20–92)	55 (20–90)

in-service programmes related to changes	No	52.8 ± 16.4	50.8 (20–85)	48.8 (25–80)	58 (20–84)	50 (20–100)
	p value	p = 0.159	p = 0.057	p = **0.**040	p = 0.155	p = 0.963
	Test value	t = 1.416	U = 1,167.0	U = 1,134.50	U = 1,887.50	U = 1,590.0
Whether they liked to be informed about the changes	Yes	56.4 ± 13.6	60 (20–88.3)	60 (20–97.5)	52 (20–92)	50 (20–100)
	No	63.1 ± 10.3	60 (40–80)	65 (42.5–80)	60 (28–84)	60 (55–85)
	p value	p = 0.113	p = 0.492	p = 0.224	p = 0.152	p = **0.008**
	Test value	t = −1.591	U = 1,032.0	U = 1,119.50	U = 1,155.0	U = 1,354.0
Whether they liked to follow the changes	Yes	56.3 ± 13.6	60 (20–88.3)	17.1 ± 58.7	56 (20–92)	50 (20–90)
	No	61.7 ± 12.1	60 (35–85)	13.3 ± 65.3	56 (28–84)	55 (20–100)
	p value	p = 0.120	p = 0.432	p = 0.123	p = 0.559	p = **0.033**
	Test value	t = −1.561	U = 1,527.0	t = −1.548	U = 1,486.0	U = 1,797.0

It was found that the total scores of the scale differed according to the age group of the nurses ($p = 0.037$, $F = 3.365$), the years worked ($p = 0.010$, $\chi^2 = 9.286$), the years worked at the current hospital ($p = 0.013$, $F = 4.484$) and whether they were fond of their professions ($p < 0.01$, $\chi^2 = 12.279$). It was also found that the total scores of the Attitudes towards Change Scale did not differ according to some socio-demographic and professional characteristics such as sex, educational level, department, duty at the department, employment type, whether they chose the department they worked for voluntarily, whether they were fond of their departments, whether they could use technology in their workplace, whether they participated in in-service training programmes related to the professional changes, whether they liked to be informed about the changes and whether they liked to follow changes ($p > 0.05$) (Table 3).

In this study, it was found that the median scores of the Corporate Policy sub-dimension differed according to the age groups of the nurses ($p = 0.029$, $\chi^2 = 7.102$), the years worked ($p = 0.002$, $\chi^2 = 12.230$), the years worked at the current hospital ($p = 0.001$, $\chi^2 = 13.931$) and whether they were fond of their professions ($p = 0.001$, $\chi^2 = 17.199$). On the other hand, it was found that the median scores of the Corporate Policy sub-dimension did not differ according to some socio-demographic and professional characteristics such as sex, educational level, department, duty at the department, the years worked at the current department, employment type, whether they chose the profession voluntarily, whether they were fond of their departments and total working hours per week ($p > 0.05$) (Table 3).

According to obtained data, it was found that the median scores of the Consequences of Change sub-dimension differed according to the age of the participants ($p = 0.032$, $F = 3.497$), the years worked ($p = 0.028$, $\chi^2 = 7.147$), the years worked at the current hospital ($p = 0.002$, $F = 6.255$) and whether they chose their professions voluntarily ($p = 0.049$, $U = 2405.50$) and whether they participated in in-service training programmes related to the professional changes ($p = 0.040$, $U = 1134.50$). On the other hand, it was found that the median scores of the Consequences of Change sub-dimension did not differ according to some socio-demographic and professional characteristics such as sex, educational level, department, whether they were fond of their professions, whether they

were fond of their departments, whether they liked to be informed about the changes and whether they liked to follow the changes (*p* > 0.05) (Table 3).

It was found that the median scores of the Resistance to Change sub-dimension did not differ according to the socio-demographic and professional characteristics of the nurses (*p* > 0.05). On the other hand, it was found that the median scores of the Management Styles in Change sub-dimension differed according to whether the nurses liked to be informed about the changes (*p* = 0.008, *U* = 1354.0) and whether they liked to follow the changes (*p* < 0.05). It was also found that the median scores of the Management Styles in Change sub-dimension did not differ according to the socio-demographic and some professional characteristics of the nurses (*p* > 0.05) (Table 3).

4. Discussion

Nowadays, many factors that require change such as reducing environmental pressures, outrivalling other institutions, successfully managing significant changes in institutions, reducing costs and increasing productivity are observed in the provision of health services (Kavuncubasi & Yildirim, 2015). Although change is seen as an obligation, it has many benefits such as attracting employees' interests, giving an opportunity to review routine applications, motivating employees in terms of professional development and increasing job satisfaction (Seren, 2005). To achieve a positive result from the change, the most important application is to determine the causes of change and the attitudes of health professionals towards change. This is the first study to identify and evaluate the factors affecting the attitudes of nurses working in a public hospital in northern Turkey. This research was carried out because nurses play an important role in the realisation of the change in health institutions.

In this study, which was conducted to determine the attitudes of nurses towards change, the mean score of the nurses from the Attitudes towards Change Scale was 56.82 ± 13.52. Thus, it was observed that nurses had moderate attitudes towards change. The mean score of the same scale was reported to be 64.13 ± 13.12 by Seren (2005), 87.00 ± 15.75 by Uzun (2008), 66.15 ± 11.19 by Yasar (2017) and 59.00 ± 9.95 by Gonel (2017). The averages of the scores obtained from the scale differ in the research studies, and it is thought that this difference may arise from the working environment and conditions of the nurses and their socio-demographic and professional characteristics.

In this study, the nurses in the 30–39 age range, those who worked at their current hospital for 8–15 years and those who were fond of their profession obtained higher scores from the Attitude towards Change Scale. Similarly, some other studies have reported that some characteristics such as age (Acar Yaşar, 2017; Uzun, 2008), total years worked (Uzun, 2008) and the years worked at the current hospital (Acar Yasar, 2017) affected the attitudes of nurses towards change. On the other hand, inconsistent with the findings of the present study, other studies reported that there was no significant relationship between the years worked and the total scores obtained from the Attitudes towards Change Scale (Gonel, 2017; Seren, 2005; Uzun, 2008). This may be attributed to the fact that nurses who are fond of their professions and who have worked at their current hospitals for a certain period develop a positive psychological and social bond with their hospitals.

In this study, it was determined that the total scores from the Corporate Policy sub-dimension differed according to the age groups of the nurses, total years worked, the years worked at the current hospital and whether they were fond of their profession. Also, the nurses in the 30–39 age range, those who worked at the current hospital for 8–15 years and those who were fond of their profession obtained higher scores from the Corporate Policy sub-dimension. A study on this subject also revealed that the years worked on the current hospital affected the attitudes of nurses towards change, which is consistent with the findings of this study (Acar Yasar, 2017). However, the same study also suggests that the age of the nurses did not affect the attitudes of nurses towards change. This finding suggests that nurses who are fond of their professions and hospitals, work in collaboration with their managers and use the resources of their hospitals effectively support change more.

Furthermore, the total scores from the Consequences of Change sub-dimension of the scale differed according to the age groups of nurses, total years worked, the years worked at the current hospital, whether they chose their profession willingly and whether they participated in the relevant in-service training programmes. Also, the nurses in the 30–39 age range, those who worked as a nurse for 8–15 years, those who worked at the current hospital for 1–7 years, those who chose their profession willingly and those who participated in the relevant in-service training programmes obtained higher scores from the Consequences of Change sub-dimension. Similarly, some studies on this subject have also reported that nurses' age (Acar Yasar, 2017) and the years worked at the current hospital (Acar Yasar, 2017; Gonel, 2017) affect their attitudes towards change. This can be attributed to the fact that nurses who chose their profession willingly and those who have started their profession recently embrace change more easily and assume more responsibilities in the process of change. It was also determined that the total scores from the Management Styles in Change sub-dimension differed according to whether the nurses liked to be informed about the changes and whether they liked to follow the changes. The nurses who did not like to be informed about the changes and those who did not like to follow the changes obtained higher scores from the Management Styles in Change sub-dimension.

Change is an inevitable phenomenon that exists in every aspect of life. Changes in all areas especially in recent years have significantly affected all organisations. In addition, the structure of the workforce, low productivity and the morale of the employees necessitate a change for health institutions. Accurate diagnosis of change needs, focusing on change strategies, careful planning and multidisciplinary interaction is crucial in realising the change in health institutions (Seren & Baykal, 2007).

5. Conclusion

The findings of this study revealed that the total scores of the Attitudes towards Change Scale and the scores of the sub-dimensions differ according to some socio-demographic and professional characteristics of the nurses. The findings have also shown that the nurses in the 30–39 age group, those with a work experience of 8–15 years and those who were fond of their profession had positive attitudes towards change. In line with the findings of the present study, we can recommend that individual and professional factors affecting the attitudes of nurses towards change should be taken into account. In addition, training programmes should be organised to increase the awareness of nurses about professional changes. Moreover, nurses at the management level should support nurse clinicians at every stage of change.

6. Limitation of the research

The present study is the first to determine the factors affecting the attitudes of nurses working in a public hospital in the central Black Sea region of Turkey towards change, and the findings from this study will be used in determining the strategies of change in health institutions. These features are the strengths of this research. The fact that the study was conducted in a single hospital and that the findings were not based on concurrent interviews with nurses, and the lack of observations to evaluate their attitudes towards change was the limitations of this study. We recommend that subsequent studies utilize qualitative research methods when collecting data and conduct focus group interviews with nurses.

References

Baykal, U. & Turkmen, E. (2014). *Hemsirelik Hizmetleri Yonetimi*. Istanbul, Turkey: Akademi Basin ve Yayincilik.

Cakıroglu, O. C. (2015). *Kamu Hastaneleri Birligine Baglı Hastanelerde Calisan Hemsirelerin Kisilik Ozellikleri ile Degisime Yonelik Tutumları Arasındaki Iliskinin Belirlenmesi* (Yukseklisans Tezi, Istanbul Universitesi).

Kaya, G., Koc, Z., Kiymaz, D. & Cinarli, T. (2019). Factors affecting the attitudes of nurses toward change. *New trends and issues proceedings on advances in pure and applied sciences*. [Online]. 11*,* 18-29. Available from: https://doi.org/10.18844/gjpaas.v0i11.4309

Cinar, F. & Toker, K. Ameliyathane Hemsirelerinin Degisime Acikliga Iliskin Degerlendirmeleri. *Saglik ve Hemsirelik Yonetimi Dergisi, 5*(1), 19–26.

Geduk, E. A. (2018). Hemsirelik Mesleginin Gelisen Rolleri. *Saglik Bilimleri ve Meslekleri Dergisi, 5*(2). https://doi.org/10.17681/hsp.358458

Gonel, A. (2017). *Hemsirelerin Mesleki Profesyonellik Tutumları ile Kurumlarinda Yasanan Degişimlere Karsi Tutumlari Arasindaki Iliski* (Yukseklisans Tezi, Okan Universitesi, Istanbul).

Karakaş Yilmaz, A. (2012). *Değişim yönetimi stratejilerinin hemşireler üzerindeki etkileri: Bir hastane örneği* (Doctoral dissertation, DEÜ Sosyal Bilimleri Enstitüsü). http://hdl.handle.net/20.500.12397/10504

Karaöz, S. (2004). Hemşirelerin politik gücü. *Cumhuriyet Üniversitesi Hemşirelik Yüksek Okulu Dergisi*, *8*, 30-36..

Kavuncubasi, S. & Yildirim, S. (2015). *Hastane ve saglık kurumları yonetimi*. Siyasal Kitabevi.

Kocel, T. (2013). *Isletme Yoneticiligi* (14. Baskı ed.). Istanbul, Turkey: Istanbul Beta Basim Yayin.

Sargutan, A. E. (2007). Saglik teknolojisi yonetimi. *Hacettepe Saglik Idaresi Dergisi, 8*(1), 11.

Seren, S. (2005). *Degisime karsi tutum olceginin gelistirilmesi ve kalite belgesi alan hastanelerde degisim ile orgut kulturu arasındaki iliskinin incelenmesi* (Doktora Tezi, Istanbul Universitesi).

Seren, Ş., & Baykal, Ü. (2007). Kalite belgesi alan hastanelerde örgüt kültürü ve değişime karşı tutumun incelenmesi. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi*, *10*(2), 1-11..

Simsek, M., Akgemici, T. & Celik, A. (2011). *Davranis Bilimlerine Giris ve Orgutlerde Davranis, Gazi Kitapevi, 6*. Baski, Ankara, 202.

Taylan, S., Alan, S., & Kadioğlu, S. (2012). Hemşirelik Rolleri ve Özerklik. *Turkish Journal of Research & Development in Nursing*, *14*(3).

Tutar, F. & Kilinc, N. (2008). Turkiye'nin saglik sektorundeki ekonomik gelismislik potansiyeli ve farklı ulke ornekleriyle mukayesesi. *Afyon Kocatepe Universitesi, Iktisadi ve Idari Bilimler Dergisi, 9*(1), 31–54. http://dergipark.org.tr/akuiibfd/issue/1631/20448

Uzun, A. (2008). *Universite ve Kamu Kuruluslarinda Calisan Hemsirelerin Degisime Karsi Tutumlarının Belirlenmesi.* (Yukseklisans Tezi, Marmara Universitesi, Istanbul).

Wolff, A. (2005). Organizasyonel Degismede Egitim Teknolojilerinin Rolu ve Onemi. *TOJET: The Turkish Online Journal of Educational Technology, 4*(1).

Yasar, J. A. (2017). *Hemsirelerin Orgutsel Degisime Yonelik Tutumlarının Degerlendirilmesi.* (Yukseklisans, Halic Universitesi, Istanbul).