

Araştırma Makalesi/ Research Article

Relationship Between Nurses' Vital Signs Monitoring and Patient Safety Attitudes: A Cross-sectional Study

Hemşirelerin Yaşam Bulgularını İzleme ve Hasta Güvenliği Tutumları Arasındaki İlişki: Kesitsel Bir Çalışma

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ABSTRACT

Objective: This study aimed to investigate the relationship between nurses' attitudes toward monitoring vital signs and patient safety.

Methods: This descriptive, correlational, cross-sectional study was conducted at a university hospital in Turkey. The population of the study was 390 nurses, and it was planned to include at least 206 nurses in the study with power analysis. The study was completed with 218 nurses between June 2020 and May 2021. The data were collected using tools like the Nurse Information Form, V-Scale Instrument, and Patient Safety Attitude Questionnaire.

Results: Nurses' V-Scale total mean score was 59.51±8.89, and the Patient Safety Attitude Questionnaire total mean score was 169.89±27.46 in this study. A positive, low-level significant correlation existed between the nurses' V-Scale and SAQ total scores ($r=0.248$, $p<0.001$). According to the results of linear regression analysis, receiving patient safety training in the current year and Patient Safety Attitude Questionnaire "safety climate" and "stress recognition" sub-dimension scores significantly affected V-Scale total scores ($p=0.022$, $p=0.032$, $p=0.002$, respectively).

Conclusions: In this study, nurses' vital signs monitoring and patient safety attitudes were above average, and there was a statistically significant correlation between these attitude scores.

Keywords: Nursing assessment, patient monitoring, patient safety, vital signs

Öz

Amaç: Bu araştırmanın amacı hemşirelerin yaşam bulgularını izleme ve hasta güvenliği tutumları arasındaki ilişkinin incelenmesidir.

Yöntem: Tanımlayıcı, ilişki arayıcı ve kesitsel tipteki çalışma, Türkiye'de bir üniversite hastanesinde yürütülmüştür. Çalışmanın evreni 390 hemşire olup, araştırmaya güç analizi ile en az 206 hemşirenin dahil edilmesi planlanmıştır. Çalışma 218 hemşire ile Haziran 2020-Mayıs 2021 tarihleri arasında yürütülmüştür. Veriler, Hemşire Bilgi Formu, Yaşam Bulguları Ölçeği ve Hasta Güvenliği Tutum Ölçeği kullanılarak, basılı veri toplama formları ile toplanmıştır.

Bulgular: Hemşirelerin Yaşam Bulguları Ölçeği puan ortalaması 59.51±8.89, Hasta Güvenliği Tutum Ölçeği puan ortalaması 169.89±27.46 olarak belirlenmiştir. Hemşirelerin Yaşam Bulguları Ölçeği ve Hasta Güvenliği Tutum Ölçeği ortalama puanları arasında pozitif yönde, düşük düzeyde anlamlı ilişki olduğu saptanmıştır ($r=0.248$, $p<0.001$). Lineer regresyon analizi sonuçlarına göre son bir yıl içinde hasta güvenliği eğitimi alma ve Hasta Güvenliği Tutum Ölçeği "güvenlik iklimi" ve "stresi tanımlama" alt boyut puanlarının Yaşam Bulguları Ölçeği toplam puanlarını anlamlı derecede etkilediği belirlenmiştir ($p=0.022$, $p=0.032$, $p=0.002$, sırasıyla).

Sonuç: Bu çalışmada hemşirelerin yaşam bulgularını izleme ve hasta güvenliği tutumları ortalamasının üzerinde ve bu tutum puanları arasında istatistiksel olarak anlamlı bir ilişki bulunmuştur.

Anahtar Kelimeler: Hemşirelik tanınması, hasta izlemi hasta güvenliği, yaşam bulguları

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Introduction

Vital signs reflect the patient's critical and essential cardiovascular, respiratory, and neurological systems data (Weber and Kelly, 2010). Monitoring vital signs is universally one of the simplest, easiest, most cost-effective, and most critical assessment practices performed on healthy/patient individuals in any healthcare institution (Turan et al., 2022). Differences in vital signs are the leading sign of changes in body functions (Gülınar et al., 2020). Monitoring these vital data is extremely important in delivering early diagnosis and intervention before clinical deterioration occurs (Brekke et al., 2019; Watkins, 2015). Nurses, who have a different place among healthcare professionals than other team members, monitor the vital signs of the individual, detect changes in health status at an early stage, take necessary interventions, and reduce mortality, morbidity, hospitalization time, and costs in relation to this (Dall'Ora et al., 2019). Effective monitoring of vital signs is a main patient safety issue (Haegdorens et al., 2019).

Technology-based approaches, including wearable devices (Breteler et al., 2020), machine learning (Barton et al., 2019), and various early warning scoring systems have been found to increasing use in recent years for more accurate diagnosis and effective vital signs monitoring (Wood et al., 2019). Undoubtedly, these innovative approaches guide nurses and other healthcare team members in setting standards and facilitating vital signs monitoring (Haegdorens et al. 2019). These supportive tools and guides technically facilitate the process, but nurses must still make physical evaluations to monitor the individual better, detect changes earlier, and ensure patient safety (Wood et al., 2019).

Nurses are in a crucial position in the healthcare team in diagnosing possible clinical changes timely. Monitoring and evaluation of vital signs is a major component of nursing diagnosis (Eddahchouri et al., 2021). Nurses' attitudes may affect the early diagnosis of life-threatening conditions such as cardiopulmonary arrest that require emergency intervention in the patient, and prevention/control of possible negative patient outcomes/adverse events (Chua et al., 2013; Elliott and Endacott, 2022). However, previous studies have shown that nurses poorly adhere to vital signs monitoring protocols (Eddahchouri et al., 2021) and use non-standardized and pre-established approaches (Burchill and Polomano, 2016; Turan et al., 2022) and that this

leads to delayed and missed assessments and vital signs monitoring (Kamio et al., 2018; Mok et al., 2015; Redfern et al., 2019). Inadequacies in the follow-up of vital signs expose patients to several risks that threaten their safety. Yet, it is a fundamental right and basic principle for health services for individuals to receive health care services in a safe clinical environment protected from all forms of harm (Baykal et al., 2010; Turan et al., 2022; WHO, 2021).

The WHO (2021) '2021-2030 Global Patient Safety Action Plan' describes "the use of both scientific expertise and patient experience to improve safety and instill a safety culture in the design and delivery of health" as the basic principles to guide practice. The initial step to creating a patient safety culture is to attain a patient safety attitude. (Baykal et al., 2010). Attitude is described as "a bodily state of readiness to respond in a characteristic way to a stimulus (such as an object, concept, or situation)" (Merriam-Webster, n.d.). Identifying attitudes is important in explaining the underlying reasons for behaviour and preventing negative consequences. Examining and discussing the relationship between nurses' attitudes that are effective in vital signs monitoring and patient safety attitudes can provide important data. There are limited studies in the literature examining the attitudes of nurses toward vital signs monitoring (Ertuğ et al., 2018; Gülınar et al., 2020; Mok et al., 2015; Özsaban et al., 2022; Pozam et al., 2022; Prgomet et al., 2016; Turan et al., 2022). In addition, the national and international literature did not contain any studies examining the connection between nurses' attitudes toward patient safety and their monitoring of vital signs. This study, therefore, sought to investigate the relationship between nurses' monitoring of vital signs and attitudes toward patient safety.

Method

Design

This study is a descriptive, correlational, and cross-sectional study.

Setting and Participants

The study universe included 390 nurses working in a university hospital in Turkey between June 2020 and May 2021. G*Power 3.1 program was used to determine the number of individuals to be sampled. To determine the effect size, nurses' perceptions of patient safety culture according to the degree of patient safety were calculated according to their mean scores. (Koç, Eraydın and Tezcan, 2020).

Accordingly, the number of samples required for 95% confidence ($1-\alpha$), 90% test power ($1-\beta$), $d=0.455$ effect size, and pairwise t-test were determined as 206. Therefore, the study sample consisted of 218 nurses in the population. The inclusion criteria were to work as a nurse in charge of patient care for at least one year and in the hospital's internal, surgical, intensive care, and emergency units where the research was carried out. The exclusion criteria were nurses on sick/annual leave and those who worked as nurses for less than one year.

Instruments

Nurse Information Form: The researchers created the form using data from the literature (Ertuğ et al., 2018; Gülnar et al., 2020; Mok et al., 2015). It contains questions about nurses' personal information, such as age, gender, education, and factors that could affect their vital signs and patient safety attitudes.

V-Scale Instrument: This instrument was created to assess nurses' attitudes about vital sign monitoring by Mok et al. (2015). Ertuğ (2018) conducted the Turkish adaptation study for this instrument. With 16 total items on a 5-point Likert-type scale, scored in the range of "1- strongly disagree"- "5- strongly agree". In its calculation, all but the 5th, 8th, and 9th items are negative and reverse scored. The scale sub-dimensions include "workload," "technology," "communication," "knowledge," and "key indicators." The score range of the scale is between 16-80, with "low scores indicating poor attitude" and "high scores indicating good attitude". Cronbach's alpha value was 0.76 in the adaptation study (Ertuğ, 2018). In this study, this value was calculated as 0.78.

Patient Safety Attitude Questionnaire-SAQ: SAQ was developed to evaluate the patient safety attitude by Sexton et al. (2006). Baykal et al. (2010) adapted the scale into Turkish and transformed it into a structure applicable in all clinical areas. The scale consists of 6 sub-dimensions, including "job satisfaction (11 items), teamwork (12 items), safety climate (5 items), perceptions of management (7 items), stress recognition (5 items), and working conditions (6 items)" for a total of 46 items. The five-point Likert scale is scored from "1-strongly disagree" to "5-strongly agree". The "21st, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd and 45th" items of the scale are scored negatively. The total score that can be obtained from the scale is between 46 and 230. Attitudes towards patient safety increase positively as the total score increases. Baykal et al.

(2010) found that Cronbach's alpha value was 0.93 in the Turkish validation study of the scale. In this study, this value was calculated as 0.95.

Data Collection

The data were collected with printed data collection tools between June 2020 and May 2021. Data collection forms were given to the nurses who met the inclusion criteria and agreed to participate in the study. The average time to fill out the forms was 15-20 minutes.

Ethics Approval

Approval from the Bezmialem Vakıf University Non-Interventional Research Ethics Committee (21/05/2020-6162) and institutional permission were obtained before starting the study. The nurses who agreed to take part in the study gave their verbal and written consents. The nurses were initially informed about the goal and scope of the study, what was expected of them, and that they could withdraw at any moment.

Data Analyses

The study data were evaluated in the R vers. 2.15.3 software (R Core Team, 2013). Descriptive analyses were applied as number (n), percent value (%), minimum, maximum, median and mean \pm standard deviation. The fit of the quantitative data to normal distribution was evaluated with the Shapiro-Wilk test and graphical examinations. Independent groups t-test was used to analyse the normally distributed variables between the two groups. One-way analysis of variance and Bonferroni post-hoc tests were used in the intergroup evaluations of the non-normally distributed variables. The post-hoc Dunn-Bonferroni and Kruskal-Wallis tests were employed for the intergroup evaluations of variables that did not exhibit a normal distribution. The internal consistency of the scale items was evaluated using the Cronbach's alpha coefficient. We looked at how training and SAQ scores affected V-Scale scores using linear regression analysis. The $p<0.05$ value was taken as a reference for statistical significance.

Results

As seen in Table 1, 78.4% of the nurses participating in this study were female; their mean age was 26 ± 4.64 years, 38.5% of them had associate degrees, and 5.67 ± 5 years of experience in the profession. 27.5% worked in the intensive care unit, 81.7% provided patient-centered care, 78.4% received patient safety training, and 38.6% cared for 7 or more patients during the daytime, with this rate

being 40.8% during night shifts and 39.5% during the weekend.

The nurses' mean V-Scale total score was 59.51±8.89 (min-max: 28-76). Their mean scores from V-Scale sub-dimensions were 16.13±3.67 for "workload," 14.55±3.74 for "technology," 8.48±2.14 for "communication," 11.46±2.16 for "knowledge," and 8.89±2.41 for "key indicators" sub-dimensions (Table 2).

Table 1. Nurses' characteristics (n=218)

Variables	Min.-Max. (Median)	Mean±SD
Age	19-45 (24)	26±4.64
Professional Experience (year)	1-25 (4)	5.67±5
	n	%
Gender		
Female	171	78.4
Male	47	21.6
Education Level		
Health high school	69	31.7
Associate degree	84	38.5
Bachelor's and graduate degree	65	29.8
Working Unit		
Medical	63	28.9
Surgical	67	30.7
Intensive Care Unit	60	27.5
Emergency	28	12.8
Nursing Care Model		
Patient-centered	178	81.7
Task-oriented	40	18.3
Patient Safety Training		
No	47	21.6
No remember	80	36.7
In this year	29	13.3
Olden than one year	62	27.5
Patient/Nurse Ratio (daily)		
1-2	26	12
3-4	58	26.6
5-6	50	22.9
7 and more	84	38.6
Patient/Nurse Ratio (night)		
1-2	25	11.5
3-4	51	23.4
5-6	53	24.3
7 and more	89	40.8
Patient/Nurse Ratio (weekend or holidays)		
1-2	34	15.6
3-4	52	23.9
5-6	46	21.1
7 and more	86	39.5

Min: Minimum, Max: Maximum, SD: Standard Deviation

Table 2. Average total scores and sub-dimension scores for the V-Scale and Patient Safety Attitude Questionnaire (n=218)

Scales	Min.-Max. (Median)	Mean±SD
Workload	4-20 (16)	16.13±3.67
Technology	4-20 (15)	14.55±3.74
Communication	2-10 (9.5)	8.48±2.14
Knowledge	5-15 (11)	11.46±2.16
Key Indicators	3-15 (9)	8.89±2.41
V-Scale Total	28-76 (60)	59.51±8.89
Job satisfaction	11-55 (39)	37.65±9.36
Teamwork	16-60 (47.5)	46.88±8.60
Safety climate	5-25 (20)	20.14±3.75
Perception of management	7-35 (28)	27.49±5.32
Stress recognition	5-25 (16)	16.37±4.88
Working conditions	6-30 (22)	21.36±4.66
SAQ Total	52-230 (171)	169.89±27.46

Min: Minimum, Max: Maximum, SD: Standard Deviation

The nurses' mean Patient Safety Attitude Questionnaire total score was 169.89±27.46 (min-max: 52-230). Their mean scores from the Patient Safety Attitude Questionnaire sub-dimensions were 37.65±9.36 for "job satisfaction," 46.88±8.60 for "teamwork," 20.14±3.75 for "safety climate," 27.49±5.32 for "perception of management," 16.37±4.88 for "stress recognition," and 21.36±4.66 for "working conditions" sub-dimensions (Table 2).

There was a statistically significant correlation between the nurses' V-Scale and SAQ total scores ($r=0.248$, $p<0.001$). There was also a statistically significant positive correlation between the V-Scale Workload sub-dimension and SAQ total and all sub-dimensions ($p<0.05$). There was a statistically significant positive relationship between the V-Scale technology sub-dimension and the SAQ teamwork sub-dimension and between the V-Scale communication sub-dimension and the SAQ "stress recognition" and "working conditions" sub-dimensions and a statistically significant negative relationship between the job satisfaction sub-dimension ($p<0.05$).

Table 3. Correlation between nurses’ vital signs monitoring and patient safety attitudes (n=218)

		V-Scale					SAQ							
		Workload	Technology	Communication	Knowledge	Key Indicators	V-Scale Total	Job Satisfaction	Teamwork	Safety Climate	Perception of Management	Stress Recognition	Working Conditions	SAQ Total
Workload	r	1.000												
	p	-												
Technology	r	0.442	1.000											
	p	<0.001*	-											
Communication	r	0.130	-0.005	1.000										
	p	0.056	0.944	-										
Knowledge	r	0.304	0.330	0.356	1.000									
	p	<0.001*	<0.001*	<0.001*	-									
Key Indicators	r	0.240	0.438	-0.414	0.114	1.000								
	p	<0.001*	<0.001*	<0.001*	0.094	-								
V-Scale Total	r	0.768	0.801	0.266	0.623	0.482	1.000							
	p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	-							
Job Satisfaction	r	0.207	0.072	-0.146	-0.005	0.092	0.104	1.000						
	p	0.002*	0.289	0.031*	0.936	0.176	0.125	-						
Teamwork	r	0.293	0.148	0.074	0.206	-0.010	0.248	0.709	1.000					
	p	<0.001*	0.029*	0.274	0.002*	0.883	<0.001*	<0.001*	-					
Safety Climate	r	0.293	0.129	0.036	0.185	0.075	0.249	0.585	0.733	1.000				
	p	<0.001*	0.057	0.598	0.006*	0.270	<0.001*	<0.001*	<0.001*	-				
Perception of Management	r	0.210	0.104	-0.039	0.084	0.031	0.150	0.633	0.713	0.805	1.000			
	p	0.002*	0.126	0.567	0.216	0.651	0.027*	<0.001*	<0.001*	<0.001*	-			
Stress Recognition	r	0.220	0.069	0.365	0.241	-0.096	0.240	0.003	0.094	0.056	0.000	1.000		
	p	0.001*	0.311	<0.001*	<0.001*	0.159	<0.001*	0.970	0.165	0.409	0.994	-		
Working Conditions	r	0.177	0.043	0.280	0.178	-0.117	0.170	0.342	0.447	0.427	0.484	0.584	1.000	
	p	0.009*	0.532	<0.001*	0.008*	0.085	0.012*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	-	
SAQ Total	r	0.312	0.128	0.083	0.177	0.008	0.248	0.824	0.886	0.804	0.825	0.315	0.682	1.000
	p	<0.001*	0.059	0.221	0.009*	0.911	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	-

r=Pearson correlation analysis, *p<0.05

Table 4. Linear regression analysis of factors affecting vital signs monitoring attitudes (n=218)

	Beta (95 % CI)	t	p
Constant	41.254 (33.662, 48.845)	10.713	<0.001*
Patient Safety Training			
No	2.225 (-0.79, 5.24)	1.455	0.147
In this year	4.268 (-0.610, 7.926)	2.300	0.022*
Older than one year	2.119 (-0.686, 4.924)	1.489	0.138
SAQ			
Job satisfaction	-0.108 (-0.282, 0.067)	-1.218	0.225
Teamwork	0.217 (-0.001, 0.445)	1.886	0.061
Safety climate	0.595 (0.053, 1.137)	2.164	0.032*
Perception of management	-0.141 (-0.546, 0.264)	-0.687	0.493
Stress recognition	0.493 (0.184, 0.801)	3.149	0.002*
Working conditions	-0.266 (-0.636, 0.103)	-1.420	0.157

*R²adj=0.130, F=4.600, p<0.001**

There was a statistically significant positive relationship between V-Scale “knowledge” and SAQ total, “teamwork,” “safety climate,” “stress recognition,” and “working conditions” sub-dimensions. There was a statistically significant positive relationship between V-Scale total and SAQ “teamwork,” “safety climate,” “perception of management,” “stress recognition,” and “working conditions” sub-dimensions ($p < 0.05$). There was no statistically significant relationship between other V-Scale and SAQ sub-dimension scores ($p > 0.05$; Table 3).

The study employed linear regression analysis to investigate the impact of SAQ sub-dimension scores on the V-Scale. The V-Scale total score was included in the model as the dependent variable, and patient safety training and SAQ sub-dimensions of “job satisfaction,” “teamwork,” “safety climate,” “perception of management,” “stress recognition,” and “working conditions” as the independent variables. The resulting model was found to be statistically significant ($F=4.600$, $p < 0.001$, $R^2_{adj}=0.130$). In the model, having received education in the current year caused an increase of 0.595 in the V-Scale total score [Beta (95% CI) = 4.268 (0.610, 7.926), $p=0.022$]. The effect of SAQ safety climate and stress recognition sub-dimension scores was also statistically significant in this model. A 1-unit increase in the SAQ safety climate sub-dimension caused an increase of 0.595 in the V-

Scale total score [Beta (95% CI) = 0.595 (0.053, 1.137), $p=0.032$]. A 1-unit increase in the SAQ stress recognition sub-dimension resulted in an increase of 0.493 in the V-Scale total score [Beta (95% CI) = 0.493 (0.184, 0.801), $p=0.002$; Table 4].

Discussion

Vital signs monitoring is a crucial component of patient safety, allowing the timely diagnosis of any clinical changes (Elliott and Endacott, 2022). Nurses had above-average V-Scale and SAQ total scores, and there was a statistically significant association between these attitude scores in this study. These were the primary findings of the first study, which looked at the relationship between nurses' vital sign monitoring and patient safety attitudes.

The nurses' V-Scale score was above average in this study. The value obtained from the scale was very similar to those reported by Gülnar et al. (2020), Mok et al. (2015), Pozam et al. (2022), and Özşaban et al. (2022). This above-average attitude score can be considered positive data. Yet, monitoring of vital signs is critical for all clinical settings (Kyriacos et al., 2011). Missing monitoring or erroneous patient evaluation can result in adverse events (Mok et al., 2015; Redfern et al., 2019). On the other hand, routine monitoring of vital signs can become a task-oriented practice. Nurses may even be inclined to record normal ranges to make patients appear less sick and reduce their workload (Kellett and Sebat, 2017). Although previous studies have established the problems of missed vital signs monitoring, it isn't easy to solve them with administrative inspections in clinical practice. Positive attitudes that drive nurses' monitoring behaviours can make it possible to create internal motivation and belief. In light of this information, it should be aimed to improve the attitude scores for all nurses responsible for patient care.

The nurses also had above-average patient safety attitude scores. While the scores of these nurses were found to be higher than the previous two studies using the SAQ scale (Durgun and Kaya, 2018; Fu et al., 2022), it was slightly lower than the results of Ünver and Yeniğün (2022). Still, nurses were concluded to have positive attitudes in the previous studies mentioned (Brasaitte et al., 2015; Durgun and Kaya, 2018; Fu et al., 2022) and, in this study. A systematic review supporting these findings determined that health professionals generally had positive patient safety attitudes. Studies on nurses' patient safety emphasize the work environment-related factors as the main

problems (Cheng et al., 2020; Vaismoradi et al., 2020). Thus, there seems to be a need for studies to examine the factors affecting the patient safety attitudes of nurses and to further improve them.

In this study, a significant relationship was observed between nurses' attitudes towards monitoring vital signs and patient safety attitudes, and receiving patient safety training also contributed to developing a positive attitude toward monitoring vital signs. Nurses' awareness (Rose and Clarke, 2010) and knowledge (Kellett and Sebat, 2017) about monitoring vital signs can affect their attitudes. In this study, most of the nurses had received training on patient safety and had good attitudes which seemed to have increased their awareness of effective monitoring of vital signs.

Besides, SAQ safety climate and stress recognition sub-dimensions significantly affected the attitudes toward monitoring vital signs. The items of the safety climate sub-dimension are directly related to the patient safety measures in the unit, including safe reporting systems, compliance with clinical guidelines and evidence-based practices, and acceptance of patient safety as a priority. Previous studies also recommended structured guides with early warning systems for an individualized approach (Haegdorens et al., 2019; Vaismoradi et al., 2020). The stress recognition sub-dimension, on the other hand, addresses fatigue, expressing problems in the care process, and the relationship between individual stress and performance and the care process. As reported in previous studies, communication problems (Chua et al., 2013) and excessive workload (Rose and Clarke 2010; Turan et al., 2022) can affect the attitudes toward vital signs monitoring. Nurses' higher stress recognition levels may be associated with their increased awareness and self-management skills. Inadequate nurse staffing leads to missed vital signs monitoring and adds to mortality and adverse event rates (Dall'Ora et al., 2020; Griffiths et al., 2018). Unfortunately, the nursing shortage is a prime, universal problem (ICN, 2022). These findings explain the relationship between nurse workload and stress experience, which are important obstacles in acquiring and maintaining positive attitudes in monitoring vital signs.

Limitations and Strengths

This research has some limitations and strengths. Limitations of the study are that the findings are not generalizable because it was a single-center study, data were collected with self-reported tools, and it

was a descriptive study. The strengths of the study are that it was the first to investigate the relationship between vital signs monitoring and patient safety attitudes and that attitudes were evaluated using valid and reliable data collection tools.

Conclusion and Recommendations

Nurses should monitor vital signs with an individualized and holistic approach to ensure patient safety in all clinical settings. It can be recommended to standardize the vital signs monitoring process with an individualized approach and to focus on stress management and patient safety training to improve nurses' attitudes toward vital signs monitoring. In addition, considering the relationship of safety climate and stress management with workload, it can be recommended to prioritize nurse workforce planning activities.

This study concluded that nurses' vital signs monitoring attitudes and patient safety attitudes were above average and there was a significant correlation between both attitude scores. Nurses' attitudes towards monitoring vital signs were also affected by safety climate and stress recognition levels and whether they received patient safety training in the last year. Thus, we can suggest offering regular patient safety training programs and introducing training content for monitoring vital signs in these programs. Interventional studies aimed at improving nurses' attitudes regarding vital signs monitoring and patient safety may also be useful. For this, we can suggest planning future studies on this topic with large sample groups and different research designs.

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Ethics Committee Approval: Approval from the Bezmialem Vakif University Non-Interventional Research Ethics Committee (21/05/2020-6162) and institutional permission were obtained before starting the study.

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What did the study add to the literature?

- In this study, nurses' attitudes toward vital signs monitoring and patient safety were above average. At the same time, there was a statistically significant correlation between these attitude scores.
- The nurses' attitudes towards monitoring vital signs were also affected by safety climate and stress recognition levels and whether they received patient safety training in the last year.
- This study suggests regular patient safety training programs and introducing training content for monitoring vital signs in these programs.

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