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Research Article

Ethical climate perception and sustainability attitude among nurses: The mediating role of professional self-efficacy

Hemşirelerde etik iklim algısı ve sürdürülebilirlik tutumu arasındaki ilişkide mesleki öz yeterliliğin aracı rolü

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Abstract

This study aimed to examine the relationships among ethical climate perception, professional self-efficacy, and sustainability attitudes among nurses and to investigate the mediating role of professional self-efficacy. The study used a cross-sectional design with 257 nurses from a public hospital. Data were collected using the Ethical Climate Scale, the Professional Self-Efficacy Scale, and the Sustainability Attitude Scale. Descriptive statistics, correlation analysis, regression analysis, and mediation analysis using Hayes' PROCESS Model 4 were performed. The findings revealed significant positive relationships among ethical climate perception, professional self-efficacy, and sustainability attitudes ($p < 0.01$). While professional self-efficacy significantly predicted sustainability attitudes, ethical climate perception did not have a significant direct effect on sustainability attitudes. The mediation analysis demonstrated that professional self-efficacy played a significant mediating role in the relationship between ethical climate perception and sustainability attitudes (95% Bootstrap CI: 0.096–0.267). These findings indicate that ethical climate indirectly strengthens nurses' sustainability attitudes through professional self-efficacy. Therefore, fostering ethical work environments and enhancing nurses' professional self-efficacy may promote sustainability in healthcare services.

Keywords: Nursing, Ethical Climate, Professional Self-Efficacy, Sustainability Attitude

Jel Codes: I10, M12, D23

Öz

Bu çalışma, hemşirelerde etik iklim algısı, mesleki öz-yeterlilik ve sürdürülebilirlik tutumu arasındaki ilişkileri incelemeyi ve mesleki öz-yeterliliğin aracı rolünü araştırmayı amaçlamıştır. Araştırma, bir kamu hastanesinde çalışan 257 hemşire ile yürütülen kesitsel bir çalışmadır. Veriler Etik İklim Ölçeği, Mesleki Öz-Yeterlilik Ölçeği ve Sürdürülebilirlik Tutum Ölçeği kullanılarak toplanmış; analizlerde tanımlayıcı istatistikler, korelasyon, regresyon ve Hayes PROCESS Model 4 aracılığıyla aracılık analizi uygulanmıştır. Bulgular, etik iklim algısı, mesleki öz-yeterlilik ve sürdürülebilirlik tutumu arasında pozitif yönde anlamlı ilişkiler bulunduğunu göstermiştir ($p < 0,01$). Mesleki öz-yeterlilik sürdürülebilirlik tutumunu anlamlı düzeyde yordarken, etik iklim algısının sürdürülebilirlik tutumu üzerindeki doğrudan etkisi anlamlı bulunmamıştır. Aracılık analizi sonuçları, mesleki öz-yeterliliğin etik iklim algısı ile sürdürülebilirlik tutumu arasındaki ilişkide anlamlı bir aracı role sahip olduğunu ortaya koymuştur (%95 Bootstrap Güven Aralığı: 0,096–0,267). Sonuç olarak, etik iklimin hemşirelerin sürdürülebilirlik tutumlarını doğrudan değil, mesleki öz-yeterlilik aracılığıyla dolaylı olarak güçlendirdiği belirlenmiştir. Bu bulgu, sağlık kurumlarında etik çalışma ortamlarının desteklenmesi ve hemşirelerin mesleki öz-yeterliliklerinin artırılmasının sürdürülebilir sağlık hizmetlerinin geliştirilmesine katkı sağlayabileceğini göstermektedir.

Anahtar Kelimeler: Hemşire, Etik İklim, Mesleki Özyeterlilik, Sürdürülebilirlik Tutumu

JEL Kodları: I10, M12, D23

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Introduction

In recent years, interest in the concept of ethical climate in healthcare services has steadily increased. Ethical climate refers to shared perceptions of the organisational work environment regarding what constitutes ethically appropriate behaviour and how ethical issues are addressed within an organisation (Victor & Cullen, 1987; Koskenvuori et al., 2019). In this respect, ethical climate refers to the work environment that encompasses an organisation's procedures, policies, and practices related to moral issues and is an important component of organisational culture.

Nursing practice takes place within a social context in which environmental factors and interpersonal relationships interact dynamically (Asgari et al., 2019). In their daily practice, nurses encounter ethical issues not only in patient care but also in their relationships with colleagues, other healthcare professionals, managers, the institution, and society at large. Therefore, the ethical climate of the work environment is a key factor influencing nurses' behaviours and professional practices (Numminen et al., 2015).

Making a significant contribution to the measurement of ethical climate in nursing, Olson defined ethical climate as nurses' perceptions of how ethical issues are managed within their work environments and emphasised that these perceptions influence employees' attitudes and behaviours (Olson, 1995; Lemmenes et al., 2018). The measurement tool developed by Olson enables the evaluation of nurses' perceptions of organisational practices within the context of relationships with patients, physicians, managers, and colleagues. It has been reported that perceptions of ethical climate shape nurses' ethical attitudes, the roles they assume when confronted with ethical problems, and their ethical decision-making processes, and that a positive ethical climate is essential for supporting professional nursing practice (Olson, 1998; Lemmenes et al., 2018).

The literature emphasises that ethical climate is an important factor affecting nurses' well-being in the work environment and the quality of patient care (Koskenvuori et al., 2019). Ethical culture and ethical climate are among the fundamental elements determining the quality of nursing care in healthcare settings (Imani et al., 2025). Regardless of environmental and organisational conditions, nurses are expected to deliver care that is ethically and clinically sound (Numminen et al., 2015).

Studies on ethical climate have largely focused on variables such as job satisfaction, turnover intention, and organisational commitment (Numminen et al., 2015). Positive relationships between ethical climate and job satisfaction have been reported (Özden et al., 2019), and these findings have been supported by meta-analytic studies (Ozdoba et al., 2022). Ethical climate has been shown to reduce turnover intention (Simha & Pandey, 2021), to be significantly associated with organisational commitment (Borhani et al., 2014; Mohamed et al., 2020), and to be linked with ethics-related constructs such as moral distress, moral resilience, and moral courage (Pauly et al., 2009; Hashish & Razek, 2025). In addition, ethical climate has been reported to be associated with organisational citizenship behaviours and to play a determining role in ethical outcomes reflected in organisational policies (Asgari et al., 2019; Aloustani et al., 2020).

Ethical climate is also reported to be associated with nurses' perceptions of professional competence and self-efficacy. Professional competence refers to nurses' capacity to deliver care by integrating knowledge, skills, attitudes, and values within a specific context (Numminen et al., 2015). Self-efficacy, on the other hand, reflects an individual's belief in their ability to successfully perform a task (Judge & Bono, 2001). In nursing, self-efficacy is considered a critical factor influencing nurses' overall competence in the care delivery process and their professional performance (Vicdan & Taştekin, 2019). High levels of self-efficacy have been reported to be associated with high-quality nursing care and improvements in individual and organisational performance (Manojlovich, 2005; Pronajaya et al., 2021; Carvalho et al., 2022). In this context, assessing nurses' self-efficacy is critical to enhancing the quality of care (Lazemi & Barkhordari-Sharifabad, 2023).

In recent years, healthcare services have become increasingly complex due to Industry 4.0, the COVID-19 pandemic, economic challenges, and environmental crises. Healthcare organisations are responsible not only for maintaining the quality of patient care but also for reducing their environmental footprint, improving waste management, and ensuring compliance with environmental regulations (Swarnakar et al., 2021; Vasileiou et al., 2024). The World Health Organisation emphasises that healthcare services threaten public health through high carbon emissions and waste generation, and identifies the development of sustainable health systems as a priority (WHO, 2017; WHO, 2020a).

Nurses constitute approximately 57% of the global health workforce and occupy a central position in the development of sustainable healthcare services (WHO, 2020b). Decisions related to materials used in nursing practice, waste management, and energy consumption have a direct impact on

environmental sustainability (Kalogirou et al., 2020; Chung et al., 2024). The International Council of Nurses defines sustainability and environmental stewardship as an ethical responsibility for nurses (Stievano & Tschudin, 2019; Einberg, 2025; Zoromba & El-Gazar, 2025). In this respect, sustainability is regarded not merely as a preference in healthcare services but as an ethical imperative (Oflaz, 2025).

The literature indicates that ethical climate is associated with nurses' green behaviours and environmental sustainability practices, with higher ethical climate perceptions leading to more environmentally responsible behaviours (Maiz et al., 2023). Self-efficacy has also been found to be related to organisational citizenship behaviours and sustainability-oriented actions, and it has been emphasised that nurses' personal self-efficacy beliefs regarding their ability to mitigate the climate crisis encourage behavioural change (Pradhan et al., 2020; Yi & Yi, 2025).

These findings suggest that ethical climate, professional self-efficacy, and sustainability are complementary and mutually reinforcing constructs within nursing practice. From a theoretical perspective, Social Cognitive Theory suggests that environmental and organisational conditions may influence individual attitudes and behaviours through self-efficacy beliefs (Bandura, 1986). Within healthcare settings, ethical climate can be regarded as an organisational resource that supports nurses' confidence in their professional abilities. Nurses who perceive themselves as competent in fulfilling professional responsibilities may be more likely to embrace sustainability-oriented attitudes and contribute to environmentally responsible healthcare practices. Accordingly, professional self-efficacy may serve as an important mechanism through which perceptions of ethical climate influence sustainability attitudes.

Given the limited evidence regarding the relationships among ethical climate perception, professional self-efficacy, and sustainability attitudes among nurses, a cross-sectional correlational design was deemed appropriate to examine these associations and test the proposed mediation model. This design enables the exploration of relationships among organisational and individual factors within real-world healthcare settings and provides a foundation for future longitudinal research. However, despite the growing body of evidence on ethical climate, professional self-efficacy, and sustainability in nursing, no study has examined these three variables simultaneously within a single model or explored the mediating role of professional self-efficacy in the relationship between ethical climate perception and sustainability attitude.

Accordingly, this study aimed to examine the relationships among ethical climate perception, professional self-efficacy, and sustainability attitude among nurses, and to evaluate the mediating role of professional self-efficacy in the relationship between ethical climate perception and sustainability attitude. In addition, the study investigated whether nurses' perceptions of ethical climate, professional self-efficacy, and sustainability attitudes differed across sociodemographic and professional characteristics.

Within this framework, the study sought to answer the following research questions:

Is there a significant relationship between nurses' perceptions of ethical climate and their sustainability attitudes?

Is there a significant relationship between nurses' perceptions of ethical climate and their levels of professional self-efficacy?

Are nurses' levels of professional self-efficacy associated with their sustainability attitudes?

Does professional self-efficacy play a mediating role in the relationship between ethical climate perception and sustainability attitude?

Do nurses' perceptions of ethical climate, professional self-efficacy, and sustainability attitudes differ according to sociodemographic and professional characteristics?

Methods

Study design

This study employed a cross-sectional, quantitative design and aimed to examine perceptions of ethical climate, professional self-efficacy, and sustainability attitudes among nurses.

Study population and sample

The study was conducted in a Training and Research Hospital in Osmaniye. A total of 750 nurses were actively employed at the hospital. Based on a known population sample size calculation with a 95% confidence level and a 5% margin of error, a target sample size of 255 nurses was determined. Using

convenience sampling, data were collected from 257 nurses. Descriptive characteristics of the participating nurses are presented in Table 1.

Table 1: Descriptive Characteristics of the Participants

Variable	Category	n	%
Gender	Female	218	84.8
	Male	39	15.2
Age Group*	≤30 years	95	37.0
	31–40 years	115	44.7
	≥41 years	47	18.3
Marital Status	Married	189	73.5
	Single	68	26.5
Education Level*	Associate degree or lower	54	21.0
	Bachelor's degree	181	70.4
	Postgraduate degree	22	8.6
Professional Experience*	≤5 years	83	32.3
	6–10 years	53	20.6
	≥11 years	121	47.1
Unit of Employment	Medical ward	61	23.7
	Surgical ward	69	26.8
	Intensive care unit	53	20.6
	Emergency department	29	11.3
	Other	45	17.5
Length of Employment in Institution	<1 year	29	11.3
	1–5 years	125	48.6
	6–10 years	45	17.5
	≥11 years	58	22.6
Sustainability Training	Yes	119	46.3
	No	138	53.7
Professional Ethics Training	Yes	200	77.8
	No	57	22.2
Environmentally Friendly Practices in the Institution	Yes	155	60.3
	No	47	18.3
	Not sure	55	21.4

* Categories created for analysis purposes.

A total of 257 nurses were included in the study. The majority of the participants were female (84.8%) and married (73.5%). Among the nurses, 44.7% were in the 31–40 age group. Most participants held a bachelor's degree (70.4%), and 47.1% had 11 years or more of professional experience. Nearly half of the nurses (48.6%) had been working in their current institution for 1–5 years. Of the participants, 46.3% reported receiving sustainability training, and 60.3% stated that environmentally friendly practices were implemented at their institution. Additionally, 77.8% of the nurses reported having received professional ethics training.

Ethical considerations

Ethical approval for the study was obtained from the Osmaniye Korkut Ata University Health Sciences Research Ethics Committee (Approval No: E.243213; Date: 05.08.2025). In addition, institutional permission was obtained from the relevant hospital to conduct the study. Written informed consent was

obtained from all participants before data collection, and the study was conducted in accordance with the principles of the Declaration of Helsinki.

Data collection procedure

Data were collected between November and December 2025 using paper-based questionnaires administered face-to-face to nurses working at the study hospital. Participation was voluntary, responses were anonymous, and completion of the questionnaire took approximately 10–15 minutes.

Data collection instruments

Three data collection instruments were used in the study.

Demographic information form

A demographic information form consisting of questions designed by the researchers to describe the participants was used.

Hospital ethical climate survey

To assess nurses' perceptions of the ethical climate in their work environments, the 24-item instrument developed by Olson (1998) was used (Olson, 1998). The Turkish validity and reliability analyses of the scale were conducted by Bahçecik and Öztürk (2003).

Sustainability Attitudes in Nursing Survey (SANS-2)

In this study, the scale developed by Richardson et al. (2016), consisting of nine items with a single-factor structure, was used. The Turkish validity and reliability analyses were conducted by İlaslan and Şahin Orak (2023).

Professional self-efficacy scale

To evaluate nurses' professional self-efficacy, the scale developed by Caruso et al. (2016) was used (Caruso et al., 2016). The Turkish validity and reliability analyses of the scale were performed by Vicdan and Taştekin (2019).

Table 2: Descriptive Statistics, Normality, and Reliability Findings of the Scales

Scale	Number of Items	Score Range (Min–Max)	Mean ± SD	Skewness	Kurtosis	Cronbach's Alpha (α)
Sustainability Attitude Scale	9	1.78 – 7.00	5.15 ± 1.02	–0.699	0.621	0.888
Ethical Climate Scale	24	1.58 – 5.00	4.03 ± 0.75	–0.868	0.737	0.964
Professional Self-Efficacy Scale	16	2.50 – 5.00	4.38 ± 0.57	–1.041	1.201	0.942
Note: The skewness and kurtosis values of all scales were within the ±2 range, indicating that the assumption of normal distribution was met. Therefore, parametric tests were used in the analyses.						

Descriptive statistics, normality indicators, and reliability coefficients of the scales used in the study are presented in Table 2. The Sustainability Attitude Scale consists of 9 items and demonstrated high internal consistency (Cronbach's $\alpha = 0.888$). The Ethical Climate Scale comprises 24 items and exhibited a very high level of internal consistency (Cronbach's $\alpha = 0.964$). The Professional Self-Efficacy Scale consists of 16 items and demonstrated high reliability (Cronbach's $\alpha = 0.942$). Since the skewness and kurtosis values of the scale scores were within acceptable limits, parametric tests were applied in the analyses.

Results

The findings from the comparison of participants' sustainability, ethical climate, and professional self-efficacy scores by demographic and professional characteristics are presented in Table 3. The analyses revealed no statistically significant differences in any of the three scale scores according to gender or marital status ($p > 0.05$).

Table 3: Comparison of Sustainability, Ethical Climate, and Professional Self-Efficacy Scores According to Demographic and Professional Characteristics

Variable	Group	Sustainability (Mean ± SD)	Ethical Climate (Mean ± SD)	Professional Self-Efficacy (Mean ± SD)
Gender	Female	5.18 ± 1.02	4.01 ± 0.78	4.37 ± 0.59
	Male	4.97 ± 0.97	4.14 ± 0.55	4.40 ± 0.43
	Test	t(255)=1.22; p=0.223	t(255)=−0.99; p=0.326	t(255)=−0.32; p=0.750
Marital status	Married	5.12 ± 1.07	4.03 ± 0.82	4.39 ± 0.53
	Single	5.23 ± 0.87	4.02 ± 0.53	4.33 ± 0.66
	Test	t(255)=−0.80; p=0.423	t(255)=0.04; p=0.971	t(255)=0.81; p=0.420
Age group	≤30 years	5.29 ± 0.78[a]	4.07 ± 0.68[ab]	4.33 ± 0.60
	31–40 years	4.91 ± 1.10[b]	3.88 ± 0.83[b]	4.36 ± 0.54
	≥41 years	5.47 ± 1.11[a]	4.30 ± 0.61[a]	4.51 ± 0.56
	Test	F(2,254)=6.74; **p=0.001**	F(2,254)=5.74; **p=0.004**	F(2,254)=1.56; p=0.212
Education level	Associate degree or lower	5.08 ± 0.95	3.83 ± 0.82[b]	4.22 ± 0.53[b]
	Bachelor's degree	5.14 ± 1.08	4.11 ± 0.67[a]	4.40 ± 0.59[ab]
	Postgraduate degree	5.42 ± 0.54	3.85 ± 1.09[ab]	4.62 ± 0.41[a]
	Test	F(2,254)=0.92; p=0.400	F(2,254)=3.56; **p=0.030**	F(2,254)=4.37; **p=0.014**
Professional experience	≤5 years	5.24 ± 0.67	3.95 ± 0.71	4.35 ± 0.60
	6–10 years	5.21 ± 1.18	4.25 ± 0.48	4.25 ± 0.57
	≥11 years	5.06 ± 1.13	3.99 ± 0.85	4.45 ± 0.54
	Test	F(2,254)=0.87; p=0.420	F(2,254)=3.01; p=0.051	F(2,254)=2.35; p=0.097
Sustainability training	Yes	5.14 ± 0.99	4.19 ± 0.61[a]	4.49 ± 0.51[a]
	No	5.16 ± 1.05	3.88 ± 0.83[b]	4.28 ± 0.61[b]
	Test	t(255)=−0.11; p=0.910	t(255)=3.47; **p=0.001**	t(255)=2.91; **p=0.004**
Professional ethics training	Yes	5.27 ± 0.97[a]	4.10 ± 0.71[a]	4.40 ± 0.53
	No	4.71 ± 1.08[b]	3.76 ± 0.83[b]	4.30 ± 0.70
	Test	t(255)=3.79; p<0.001	t(81)=2.80; p=0.006	t(255)=1.15; p=0.252
Unit of employment	Medical ward	5.29 ± 0.89	4.29 ± 0.54[a]	4.44 ± 0.57
	Surgical ward	5.31 ± 1.12	3.74 ± 0.96[b]	4.39 ± 0.58
	Intensive care unit	4.82 ± 0.84	3.88 ± 0.57[b]	4.22 ± 0.62
	Emergency department	4.89 ± 1.09	4.30 ± 0.49[a]	4.34 ± 0.39
	Other	5.26 ± 1.08	4.11 ± 0.78[ab]	4.46 ± 0.58
	Test	F(4,252)=2.79; p=0.027	F(4,252)=6.56; p<0.001	F(4,252)=1.48; p=0.210

Values are presented as mean ± standard deviation.

Groups with different superscript letters (a, b) within the same column indicate statistically significant differences ($p < 0.05$).

An independent samples t-test was used for two-group comparisons, and One-Way ANOVA (Tukey HSD) was used for comparisons involving three or more groups.

Comparisons across age groups indicated statistically significant differences in sustainability and ethical climate scores ($p = 0.001$ and $p = 0.004$, respectively). Post hoc analyses showed that sustainability

scores were lower in the 31–40 age group compared to the other age groups. In contrast, ethical climate scores were higher among participants aged 41 years and older. Professional self-efficacy scores did not differ significantly across age groups ($p > 0.05$).

Analyses by education level demonstrated significant differences in ethical climate ($p = 0.030$) and professional self-efficacy ($p = 0.014$), but no significant difference in sustainability scores ($p > 0.05$). Post hoc analyses revealed that ethical climate scores were higher among nurses with a bachelor's degree compared to those with an associate degree or lower, and that professional self-efficacy scores were higher among nurses with postgraduate education.

No statistically significant differences in scale scores were found according to length of professional experience ($p > 0.05$). In contrast, participants who had received sustainability training exhibited significantly higher ethical climate and professional self-efficacy scores than those who had not ($p = 0.001$ and $p = 0.004$, respectively). Similarly, participants who had received professional ethics training demonstrated significantly higher sustainability and ethical climate scores ($p < 0.01$).

Comparisons by unit of employment revealed significant differences in sustainability ($p = 0.027$) and ethical climate ($p < 0.001$) scores, but no significant differences in professional self-efficacy scores ($p > 0.05$). Post hoc analyses indicated that ethical climate scores were lower among nurses working in surgical units than in other units.

Table 4: Correlation Coefficients for Sustainability, Ethical Climate Perception, and Professional Self-Efficacy Variables

Variables	**1**	**2**	**3**
1. Sustainability	1		
2. Ethical Climate	0.21**	1	
3. Professional Self-Efficacy	0.38**	0.37**	1
** Correlation is significant at the 0.01 level (2-tailed).			

According to the correlation analysis (Table 4), sustainability scores were positively and significantly correlated with ethical climate ($r = 0.21$, $p < 0.01$) and professional self-efficacy ($r = 0.38$, $p < 0.01$). In addition, a positive and statistically significant relationship was identified between ethical climate and professional self-efficacy ($r = 0.37$, $p < 0.01$).

Table 5: Multiple Linear Regression Analysis of Predictors of Sustainability

Variable	**B**	**SE**	**β**	**t**	**p**	**VIF**
Constant	1.97	0.48	–	4.08	<0.001	–
Ethical climate	0.11	0.08	0.08	1.35	0.178	1.15
Professional self-efficacy	0.62	0.11	0.35	5.61	<0.001	1.15
Model statistics: $R = 0.39$; $R^2 = 0.15$; Adjusted $R^2 = 0.14$ $F(2,254) = 22.40$; $p < 0.001$; Durbin–Watson = 1.51						

As presented in Table 5, the multiple linear regression analysis conducted to identify the predictors of sustainability indicated that the model was statistically significant ($F(2,254) = 22.40$; $p < 0.001$). Ethical climate and professional self-efficacy together explained 15% of the variance in sustainability scores ($R^2 = 0.15$). Examination of the regression coefficients showed that professional self-efficacy was a significant and positive predictor of sustainability ($\beta = 0.35$; $p < 0.001$), whereas the effect of ethical climate on sustainability was not statistically significant ($p > 0.05$).

Based on the results of the multiple linear regression analysis, professional self-efficacy significantly predicted sustainability attitudes, while the direct effect of ethical climate perception was not significant. Therefore, the mediating role of professional self-efficacy in the relationship between ethical climate perception and sustainability attitude was examined using Hayes PROCESS Macro (Model 4).

Table 6: Mediation Analysis of Professional Self-Efficacy in the Relationship Between Ethical Climate and Sustainability (PROCESS Model 4)

Path	B	SE	t	p
Ethical climate → Professional self-efficacy (a)	0.28	0.04	6.27	<0.001
Professional self-efficacy → Sustainability (b)	0.62	0.11	5.61	<0.001
Ethical climate → Sustainability (c')	0.11	0.08	1.35	0.178
Indirect effect (a × b): Effect = 0.17; 95% CI [0.10–0.27]				

To examine the mediating role of professional self-efficacy in the relationship between ethical climate and sustainability, a mediation analysis was conducted using Hayes' PROCESS Macro Model 4 (Table 6). The results indicated that ethical climate significantly and positively predicted professional self-efficacy (B = 0.28; p < 0.001). When professional self-efficacy was included in the model, the direct effect of ethical climate on sustainability was not statistically significant (p > 0.05). In contrast, the indirect effect of ethical climate on sustainability through professional self-efficacy was significant, and the bootstrap confidence interval did not include zero (effect = 0.17; 95% CI [0.10, 0.27]). These findings demonstrate that professional self-efficacy fully mediates the relationship between ethical climate and sustainability.

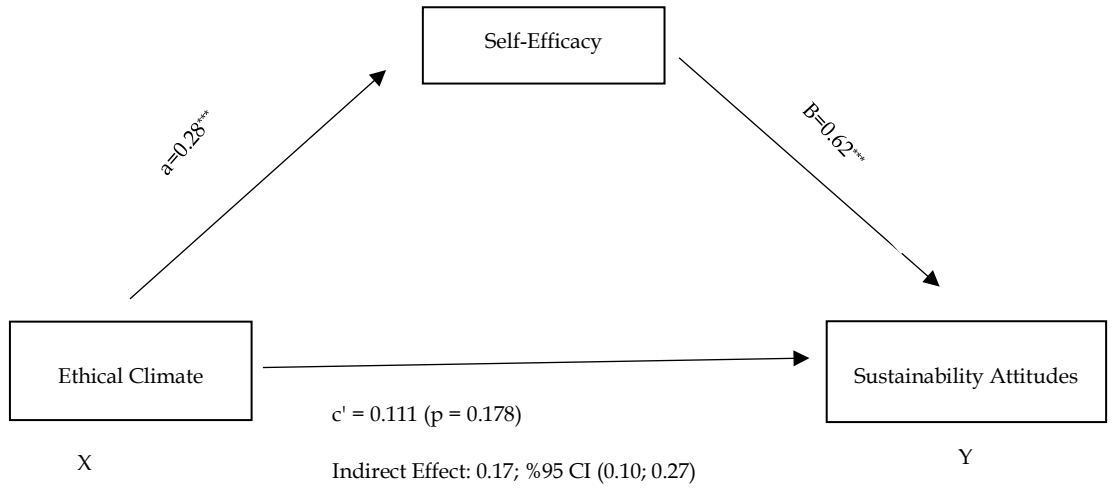

Figure 1: The Mediating Role of Professional Self-Efficacy in The Relationship Between Ethical Climate and Sustainability

A mediation analysis was conducted using the PROCESS macro (Model 4) to examine the mediating role of professional self-efficacy in the relationship between ethical climate and sustainability attitudes (Figure 1). The findings showed that ethical climate significantly predicted professional self-efficacy (B = 0.28; SE = 0.04; p < 0.001). Professional self-efficacy was a significant predictor of sustainability attitudes (B = 0.62; SE = 0.11; p < 0.001).

When professional self-efficacy was included in the model, the direct effect of ethical climate on sustainability attitudes was not statistically significant (B = 0.11; SE = 0.08; p = .178). The bootstrap analysis using 5,000 resamples indicated that the indirect effect of ethical climate on sustainability attitudes through professional self-efficacy was significant (B = 0.17; 95% CI [0.10–0.27]). The direct effect of ethical climate on sustainability attitudes was no longer statistically significant after the inclusion of professional self-efficacy in the model, whereas the indirect effect remained significant.

Discussion

In this study, the relationships among ethical climate perception, professional self-efficacy, and sustainability attitudes among nurses were examined comprehensively. The findings indicate positive associations between nurses' perceptions of ethical climate and both their professional self-efficacy and sustainability attitudes. This result suggests that a work environment grounded in ethical values may support nurses' perceptions of professional competence and their orientation toward sustainability. The findings are consistent with previous studies reporting that professional self-efficacy is associated with environmental responsibility and related behaviours (Manojlovich, 2005; Vicdan & Taştekin, 2019; Pradhan et al., 2020).

The most notable finding of the study is that professional self-efficacy plays a significant mediating role in the relationship between perceptions of ethical climate and sustainability attitudes. While the direct effect of ethical climate perception on sustainability attitude was not significant, the indirect effect became significant when professional self-efficacy was included in the model. This indicates that ethical climate influences sustainability attitudes not directly, but through nurses' perceptions of their professional competence. This finding highlights the critical role of individual psychological resources in the development of value-based attitudes such as sustainability. This finding suggests that ethical climate contributes to sustainability attitudes indirectly by strengthening nurses' perceptions of professional self-efficacy. In ethically supportive work environments, nurses may feel more competent and confident in fulfilling their professional responsibilities, which, in turn, may foster greater commitment to sustainability-oriented values and practices. This interpretation is also consistent with Social Cognitive Theory, which emphasises the role of self-efficacy beliefs in shaping individual attitudes and behaviours (Bandura, 1986). The present findings are also consistent with previous research suggesting that self-efficacy functions as an important psychological mechanism linking organisational conditions to individual attitudes and behaviours. Previous studies have reported that supportive organisational environments strengthen employees' self-efficacy beliefs, which, in turn, contribute to positive work-related and sustainability-oriented outcomes (Pradhan et al., 2020; Carvalho et al., 2022). In this respect, the current study extends the existing literature by demonstrating that professional self-efficacy serves as a mediating mechanism through which perceptions of ethical climate are translated into sustainability attitudes among nurses. In addition, perceptions of ethical climate and professional self-efficacy together explained 15% of the variance in sustainability attitudes. Although this proportion may appear modest, sustainability attitudes are multidimensional constructs shaped by complex interplays among organisational, professional, individual, and environmental factors. Therefore, the ability of these two predictors to explain 15% of the variance suggests that ethical climate perception and professional self-efficacy constitute meaningful determinants of sustainability attitudes among nurses. At the same time, the unexplained variance suggests that other factors, such as organisational support, leadership practices, environmental awareness, institutional sustainability policies, and personal values, may also contribute to the development of sustainability attitudes. Similar studies have likewise emphasised that sustainability-related attitudes and behaviours are influenced by a broad range of contextual and psychosocial factors rather than a single determinant (Pradhan et al., 2020; Yi & Yi, 2025). These findings underscore the need for more comprehensive models to better understand the factors shaping sustainability attitudes in nursing practice.

Analyses of demographic and professional variables revealed significant differences in perceptions of the ethical climate and sustainability attitudes among certain groups. In particular, variables such as age, education level, and unit of employment appeared to be influential determinants of these perceptions. Similarly, Bahçecik and Öztürk (2003) reported that ethical climate perception was significantly affected by age and unit of employment, supporting the present findings. However, in the current study, no significant differences were found in ethical climate perceptions or sustainability attitudes by gender, marital status, or professional experience. In this respect, the findings diverge from some results reported in the literature for these variables (Larionow et al., 2024; Wullenkord et al., 2021).

These results indicate that ethical climate and sustainability attitudes should not be addressed through uniform, homogeneous approaches; rather, differentiated strategies that account for individual and professional characteristics are required. In addition, the study demonstrated that prior training in sustainability and ethics positively affected perceptions of the ethical climate, professional self-efficacy, and sustainability attitudes. This finding suggests that institutional and educational initiatives strengthen nurses' environmental awareness and sustainability-oriented attitudes (Back et al., 2025). Indeed, studies by Alvarez-Nieto et al. (2022), Cruz et al. (2018) and Aransson et al. (2020) have also emphasised that incorporating sustainability themes into nursing education enhances environmental awareness and ethical sensitivity (Aransson et al., 2020).

In conclusion, this study demonstrates that ethical climate alone is insufficient to strengthen sustainability attitudes among nurses; rather, professional self-efficacy is a key mechanism in this process. In this context, developing organisational policies that support an ethical climate in healthcare institutions, alongside implementing educational and empowerment programs to enhance nurses' professional self-efficacy, may make a substantial contribution to the development of sustainable healthcare services.

Limitations

The study was conducted among nurses working at a single training and research hospital in Osmaniye, limiting the generalizability of the findings. In addition, as the study employed a cross-sectional design,

the results of the mediation analysis should be interpreted not as evidence of causal relationships, but as an explanation of the statistical associations among the variables.

Conclusion

This study emphasises that there are significant relationships among ethical climate perception, professional self-efficacy, and sustainability attitudes among nurses, and that professional self-efficacy mediates these relationships. Furthermore, the findings indicate that various demographic and organisational factors may influence perceptions of the ethical climate, professional self-efficacy, and sustainability attitudes. Future studies may replicate the proposed model using larger, more diverse samples across different healthcare settings and regions. In addition, longitudinal studies are needed to better understand the causal relationships among ethical climate perception, professional self-efficacy, and sustainability attitudes. Future research may also expand the current model by incorporating organisational variables such as leadership style, organisational support, job satisfaction, and organisational commitment. From a practical perspective, healthcare administrators should strengthen ethical work environments and support nurses' professional self-efficacy through training and organisational development initiatives to promote sustainability-oriented attitudes and practices.

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