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CLINICAL ENVIRONMENT AND ADVERSE EVENT REPORTING PRACTICES AMONG ADVANCED PRACTICE NURSES

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Abstract

Introduction. A favorable professional environment is a key factor influencing advanced practice nurses' (APNs) efficiency, motivation, and job satisfaction. Working conditions also affect their autonomy and willingness to report adverse events, which are essential for patient safety.

Aim. To assess APNs' attitudes toward their professional clinical environment and to examine the association between working conditions and their readiness to report adverse events.

Materials and Methods. A descriptive cross–sectional study was conducted among 77 APNs working in municipal polyclinics in Almaty. Data were collected using the Revised Professional Practice Environment (RPPE) and Reporting of Clinical Adverse Events Scale (RoCAES). Statistical analysis was performed using SPSS 29.0 with Chi–square (χ^2) and Fisher's exact tests at a significance level of $p < 0.05$.

Results. Overall, respondents evaluated their professional environment positively. The highest scores were observed for Leadership and Professional Autonomy in Clinical Practice (mean = 3.0) and Intrinsic Motivation (mean = 3.0). Lower scores were found for Teamwork (mean = 2.5) and Conflict Management (mean = 2.7), indicating challenges in interprofessional collaboration. Most nurses demonstrated a positive attitude toward adverse event reporting, particularly regarding procedural clarity and managerial support (mean = 2.9). A statistically significant association was identified between Clinical Communication with Patients and adverse event reporting ($p = 0.046$), with lower communication scores associated with more frequent reporting.

Conclusion. A supportive professional environment is associated with higher levels of motivation, autonomy, and leadership among APNs. However, only limited associations were found between environmental factors and reporting behavior. Key challenges include weaknesses in teamwork, communication, and concerns about negative consequences of reporting. Strengthening interprofessional collaboration and non–punitive reporting culture may improve patient safety.

Key words: Advanced Practice Nursing, Professional Practice Environment, Adverse Event Reporting, Patient Safety, motivation, teamwork.

Introduction. A well–structured professional environment plays a crucial role in optimizing the efficiency and job satisfaction of Advanced Practice Nurses (APNs). The effectiveness of APN practice is influenced by multiple organizational and interpersonal factors, including relationships with physicians and administrators, institutional policies, and the overall understanding of the APN role within healthcare delivery systems [1].

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Administrative and managerial support has been identified as one of the strongest predictors of job satisfaction and professional engagement among APNs [2].

Professional working conditions significantly influence nurses' autonomy, motivation, and ability to identify and prevent clinical errors, which are essential for improving patient safety and healthcare quality [3]. Strengthening collaboration between nurses, physicians, and administrators contributes to professional empowerment and enhances the effectiveness of nursing practice [4,5]. Furthermore, the professional environment has been shown to indirectly affect nurses' work engagement through mediating factors such as self–efficacy and achievement motivation [6].

Conversely, unfavorable working conditions can lead to medical errors, patient falls, or healthcare–associated infections [7]. Empirical studies indicate that nurses often perceive their work environment as suboptimal, which may reduce their willingness to report adverse events. Nevertheless, supportive leadership, interprofessional collaboration, and transparent communication have been associated with an increased frequency of adverse event reporting and, consequently, with improved patient safety [8,9].

Study aimed to assess APNs' attitudes toward their professional clinical environment and to examine the association between working conditions and their readiness to report adverse events.

Materials and Methods.

Ethical Issues

The study was approved by the Local Ethics Committee of S.D. Asfendiyarov Kazakh National Medical University (Protocol No. 07–140524, dated May 14, 2024). Participation was fully voluntary, and all data were collected and analyzed anonymously, ensuring confidentiality and compliance with the ethical principles of the Declaration of Helsinki.

Study Design

The study was designed as an observational, descriptive, cross–sectional study. It aimed to assess the attitudes of APNs toward their professional clinical environment and to identify factors associated with their professional performance and willingness to report adverse events.

The research was conducted in municipal public polyclinics providing primary healthcare services in Almaty, Republic of Kazakhstan, between January and March 2025. No experimental interventions were performed, and the study was purely analytical and descriptive in nature.

Sampling and Participants

The study population consisted of APNs employed in primary healthcare organizations (municipal public polyclinics) in Almaty, Republic of Kazakhstan. A total population sampling approach was used, as the study aimed to include all APNs performing independent clinical consultations within the framework of advanced nursing practice.

To ensure the representativeness and validity of the results, clear inclusion and exclusion criteria were established.

Inclusion criteria:

– Official employment in municipal public polyclinics of Almaty providing primary healthcare services;

– Holding the position of Advanced Practice Nurse and performing independent nursing consultations;

– Minimum of six months of continuous work experience in the current APN position;

– Voluntary participation and provision of written informed consent.

Exclusion criteria:

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– Nurses not performing functions corresponding to advanced nursing practice;
– Nurses on maternity leave, medical leave, or unpaid leave during the data collection period;
– Refusal to participate or incomplete questionnaire submission;
– Administrative or managerial nurses not directly involved in patient care.

The study included APNs from 29 municipal public polyclinics across Almaty. In total, 80 APNs were registered in these healthcare facilities, of whom 77 nurses (96.3%) met the inclusion criteria and completed the survey in full. Three nurses were excluded because they did not meet the inclusion requirements.

Data collection was conducted personally by the interviewer, who visited each of the 29 participating polyclinics, provided detailed explanations about the study objectives and procedures, distributed the questionnaires and informed consent forms, and guided participants through the completion process. Upon completion, the interviewer personally collected the completed questionnaires to ensure accuracy and completeness of responses.

Measurement Procedure

Two standardized and validated instruments were used to collect data and assess the professional practice environment and nurses' attitudes toward adverse event reporting.

Assessment of the professional environment. The Revised Professional Practice Environment (RPPE) scale was used to evaluate perceptions of the professional clinical environment. It was developed based on the Professional Practice Model designed at Massachusetts General Hospital (Boston, USA) [10]. The RPPE contains 42 items grouped into eight subscales reflecting key aspects of nursing practice: leadership, autonomy and control over practice, patient communication, teamwork, conflict management, collegial relationships, internal motivation, and cultural sensitivity. Each item was rated on a 4–point Likert scale (1 = strongly disagree, 4 = strongly agree). In this study, the Cronbach's alpha coefficient was 0.87, indicating strong internal reliability.

Assessment of attitudes toward adverse event reporting. The Reporting of Clinical Adverse Events Scale (RoCAES), originally developed in the United Kingdom by Wilson, Bekker, and Fylan (2008) [11], was used to assess nurses' perceptions of adverse events. The instrument includes 25 items across five domains: perceived blame and reporting criteria, colleagues' expectations, perceived benefits of reporting, clarity of reporting procedures, and managerial support. Responses were rated on a 4–point Likert scale (1 = strongly disagree, 4 = strongly agree). The Cronbach's alpha coefficient for the RoCAES in this study was 0.84, confirming good internal consistency.

Translation and adaptation of instruments. With the permission of the original authors, both questionnaires underwent linguistic and cultural adaptation. The process included forward translation from English into Kazakh and Russian by professional translators, followed by an independent back–translation into English. The original and back–translated versions were compared to ensure conceptual and semantic equivalence. Content validity was assessed by an expert panel consisting of nursing faculty members, who reviewed all items for clarity, relevance, and cultural appropriateness. Minor wording adjustments were made based on their feedback. A pilot test was conducted among five APNs who combined clinical and academic roles to evaluate clarity, cultural suitability, and comprehension of the translated items. The results confirmed that the wording was clear and culturally relevant.

Data collection procedure. Data were collected in 29 municipal public polyclinics across Almaty. The interviewer personally visited each facility, explained the study objectives, distributed consent forms and questionnaires, and collected the completed forms to ensure completeness and accuracy.

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Data Presentation and Statistical Analysis

All statistical analyses were performed using IBM SPSS Statistics for Windows, Version 29.0. The normality of quantitative variables was assessed using the Shapiro–Wilk test and visual inspection of histograms. All statistical tests were two–tailed, and exact p–values were reported. Missing data, if present, were excluded listwise.

Data Description. Quantitative variables were presented as mean (M) and standard deviation (SD) for normally distributed data. For non–normally distributed variables, the median (Me) and minimum (Min) and maximum (Max) values were used. Qualitative (categorical) variables were expressed as absolute frequencies (n) and relative frequencies (%).

Hypothesis Testing. Associations between categorical variables were examined using the Chi–square (χ^2) test. When the expected frequency in any cell was less than 5, Fisher's exact test was applied to ensure the accuracy of inference. The level of statistical significance was set at $p < 0.05$. Differences were considered statistically significant when the p–value was below this threshold.

Likert–Scale Data Processing. For the Likert–type scales, mean scores (M) were computed for each subscale of the RPPE and RoCAES questionnaires. Based on these averages, participants were divided into two categories:

- scores below 2.5 were interpreted as «negative» or «dissatisfied»;
- scores of 2.5 and above were classified as «positive» or «satisfied».

Instrument Reliability. Internal consistency was assessed using Cronbach's alpha (α). In the present study, Cronbach's alpha coefficients were 0.84 for the RoCAES and 0.87 for the RPPE, confirming the high internal reliability of the instruments.

Rationale for the Statistical Approach. Likert–scale responses were summarized using mean scores, although the data were treated as ordinal for hypothesis testing. The use of the χ^2 test and Fisher's exact test allowed for accurate evaluation of relationships between variables without assuming normal distribution.

Results. Table 1 presents the characteristics of APNs. The age of the nurses who participated in the study ranged from 18 to 59 years, with an average age of 35.45 (SD = 11.05) years, and their work experience ranged from 1 to over 20 years (including a ⩾20 years category), with a mean of 13.4 years (SD = 10.1) (Table 1).

Table 1. Demographic characteristics of the participants

Characteristics	N	%
Age		
18–29 years	29	37.66
30–39 years	20	25.97
40–49 years	18	23.38
50–59 years	10	12.99
Work experience		
1–4 years	22	28.57
5–9 years	9	11.69
10–14 years	15	19.48
15–19 years	9	11.69
≥20 years	22	28.57
Gender		
Female	76	98.7
Male	1	1.3

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Nurses' Attitude toward Clinical Work Environment

The analysis of nurses' perceptions of their professional work environment demonstrated generally positive evaluations across most domains. The highest mean score was observed for «Leadership and Professional Autonomy in Clinical Practice» (mean = 3.02), indicating a strong perception of managerial support and clinical independence. Within this domain, the most highly rated items were «In my department, nurses have control over their activities» (mean = 3.27) and «Leadership supports nursing practice» (mean = 3.10).

The second–highest rated domain was «Intrinsic Motivation» (mean = 2.96), reflecting a high level of professional engagement and job satisfaction among respondents. The item «I feel great satisfaction when I do my job well» received the highest score within this domain (mean = 3.23). Other positively evaluated aspects included opportunities for professional development (mean = 3.12), the motivating nature of work (mean = 3.03), and the perception of enhanced professional growth (mean = 3.00).

Overall, among the six assessed subscales, the highest ratings were consistently observed in leadership/autonomy and intrinsic motivation, both approaching a mean value of 3.0. In contrast, comparatively lower scores were identified for Control over Clinical Practice (mean = 2.8), Clinical Communication with Patients (mean = 2.8), Conflict Management (mean = 2.7), and particularly Teamwork (mean = 2.5), suggesting potential challenges in interprofessional collaboration and organizational processes (Table 2).

Table 2. Nurses' attitudes toward the professional practice environment domains (Answers ≥2.5), N = 77

Subscale and Items	**Mean**	**SD**	**Median**	**Min–Max**	**Positive Answers N (%) ***
Leadership and Professional Autonomy in Clinical Practice	**3.02**	**0.51**	**3.0**	**1.8–4**	**64 (83.1)**
Leadership supports nursing.	3.10	0.77	3.0	1–4	68 (88.3)
In my department, nurses control their activities.	3.27	0.50	3.0	2–4	75 (97.4)
I can independently make important decisions related to patient care.	2.89	0.77	3.0	1–4	54 (70.1)
The head nurse of my department is a good manager and leader.	3.06	0.75	3.0	1–4	66 (85.7)
My head nurse supports nurses in making decisions, even when there are conflicts with doctors.	2.77	0.84	3.0	1–4	53 (68.8)
Control over Clinical Practice	**2.82**	**0.58**	**2.8**	**1.2–4**	**55 (71.4)**
The work of nurses is well organized in the department, which allows more time to be spent with the patient.	2.81	0.83	3.0	1–4	52 (67.5)
I have enough time and opportunity to discuss patient care with other nurses.	2.69	0.86	3.0	1–4	45 (58.4)

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My department has enough nurses to ensure quality patient care.	2.94	0.80	3.0	1–4	58 (75.3)
We have enough staff members to get the work done in the department.	2.86	0.77	3.0	1–4	56 (72.7)
There is an opportunity to work in a highly specialized patient care department.	2.82	0.77	3.0	1–4	56 (72.7)
Clinical Communication with Patients	**2.83**	**0.55**	**2.67**	**1.33–4**	**54 (70.1)**
Information about the patient's condition is always available when I need it.	2.94	0.76	3.0	1–4	61 (79.2)
I quickly receive information about changes in my patient's condition.	3.06	0.61	3.0	2–4	65 (84.4)
Information about patient care is transmitted immediately.	2.49	0.82	3.0	1–4	42 (54.5)
Teamwork	**2.54**	**0.60**	**2.33**	**1–4**	**38 (49.4)**
Staff in my department do not receive sufficient cooperation from other departments when needed.	2.40	0.83	2.0	1–4	36 (46.8)
I think that the staff in another department has a bad opinion about my department.	2.38	0.84	2.0	1–4	33 (42.9)
Inadequate working relationships with other hospital staff limit work efficiency in my department.	2.83	0.71	3.0	1–4	56 (72.7)
Conflict Management	**2.70**	**0.46**	**2.83**	**1.33–4**	**58 (75.3)**
Staff in my department avoid conflict.	2.62	0.76	3.0	1–4	51 (66.2)
In my department, the attitudes of all staff are well considered to find the best solution to the problem.	2.78	0.66	3.0	1–4	54 (70.1)
Everyone in my department works hard to find the best possible solution to the problem.	2.79	0.65	3.0	1–4	54 (70.1)
In my department, all staff withdraw from the conflict and resolve it until everyone is satisfied with the decision.	2.62	0.71	3.0	1–4	46 (59.7)
Every member of staff in my department contributes to	2.87	0.68	3.0	1–4	58 (75.3)

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conflict resolution with their experience and knowledge.					
The staff participating in the conflict resolved the dispute by consensus.	2.53	0.66	3.0	1–4	40 (52.0)
Intrinsic Motivation	**2.96**	**0.43**	**3.0**	**1.86–4**	**68 (88.3)**
My opinion of myself is better when I work in my department.	2.81	0.69	3.0	1–4	54 (70.1)
I feel bad when I realize that I do a task worse than I should.	2.66	0.68	3.0	1–4	48 (62.3)
I feel great satisfaction when I do my job well.	3.23	0.67	3.0	1–4	73 (94.8)
I work in a demanding job that motivates me to work as best as I can.	3.03	0.58	3.0	2–4	65 (84.4)
Working in my department gives me the opportunity to gain new knowledge and skills.	3.12	0.69	3.0	1–4	69 (89.6)
I am motivated to work well because I am empowered by my work environment.	2.84	0.73	3.0	1–4	54 (70.1)
Working in this environment increases my sense of professional growth.	3.00	0.76	3.0	1–4	61 (79.2)

* Positive answers: for subscales—average value of all items ≥2.5; for separate items—sum of «agree» and «strongly agree» cases.

Within the Teamwork domain, the least favorable evaluations were related to interdepartmental relationships. In particular, respondents reported insufficient cooperation from other departments (mean = 2.40) and perceived negative attitudes toward their department from other staff (mean = 2.38). These findings suggest the presence of organizational and communication barriers that may limit effective collaboration.

Similarly, relatively low scores were identified in the Clinical Communication with Patients subscale (mean = 2.83). The lowest–rated item in this domain was «Information about patient care is transmitted immediately» (mean = 2.49), indicating possible delays in information exchange and gaps in communication processes.

In the Conflict Management domain, although the overall score was moderate (mean = 2.70), certain aspects revealed limitations in effective conflict resolution. The lowest–rated item was «The staff participating in the conflict resolved the dispute by consensus» (mean = 2.53), suggesting that collaborative decision–making during conflicts may not be consistently achieved.

Overall, these findings indicate that while leadership and intrinsic motivation are strong aspects of the professional environment, teamwork, communication, and conflict management remain key areas requiring improvement.

Nurses' Attitude toward Adverse Events

The findings indicate that nurses generally hold a positive perception of organizational aspects related to adverse event reporting. The highest scores were observed for Reporting

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Procedures (mean = 2.88) and Supportive Reporting Culture (mean = 2.79), suggesting that formal structures and institutional support for reporting are relatively well established. In particular, respondents reported the presence of clear guidelines specifying which adverse events should be reported (mean = 3.00) and noted that encouragement from senior staff facilitates reporting practices (mean = 2.87).

At the same time, more moderate evaluations were observed for Reporting Practices (mean = 2.54) and Perceived Consequences (mean = 2.55). Within these domains, several responses indicate uncertainty regarding professional responsibility and concerns about potential negative outcomes of reporting. For example, relatively high agreement was noted for statements such as «It is not my responsibility to report colleagues involved in an adverse event» (mean = 2.65) and «The careers of staff who report adverse events suffer» (mean = 2.64), reflecting the presence of perceived risks associated with reporting.

The lowest scores were identified in the Barriers to Reporting Adverse Events domain (mean = 2.27), highlighting significant obstacles to effective reporting. Respondents indicated that they may feel restricted in reporting adverse events (mean = 2.23) and expressed the belief that such events are sometimes unavoidable and therefore not worth reporting (mean = 2.18). Additionally, the perception that colleagues are not sufficiently concerned about adverse events (mean = 2.39) further reflects gaps in safety culture.

Overall, the results suggest that while structural and organizational components of adverse event reporting systems are relatively strong, behavioral and cultural barriers—particularly related to perceived consequences, professional responsibility, and attitudes toward reporting—remain important challenges (Table 3).

Table 3. Nurses' attitudes toward adverse events

Subscale and Items	Mean	SD	Median	Min–Max	Positive Answers N (%)*
Barriers to Reporting Adverse Events	**2.27**	**0.59**	**2.0**	**1–4**	**24 (31.2)**
I am not allowed to report adverse events.	2.23	0.74	2.0	1–4	24 (31.2)
Adverse events cannot be avoided; therefore, there is no reason to report them.	2.18	0.70	2.0	1–4	21 (27.3)
Colleagues are not worried when adverse events occur.	2.39	0.71	2.0	1–4	32 (41.6)
Reporting Practices	**2.54**	**0.56**	**2.4**	**1.2–4**	**38 (49.4)**
It is not my responsibility to report colleagues who are involved in an adverse event.	2.65	0.76	3.0	1–4	45 (58.4)
If those around you learn from adverse events, there is no need to report them.	2.62	0.73	3.0	1–4	47 (61.0)
There is no need to report minor adverse events.	2.35	0.77	2.0	1–4	27 (35.1)
Only rare adverse events should be reported.	2.48	0.79	2.0	1–4	35 (45.5)

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Only adverse events from which lessons can be learned should be reported.	2.58	0.75	2.0	1–4	37 (48.1)
Perceived Consequences	**2.55**	**0.50**	**2.4**	**1.4–4**	**35 (45.5)**
Reporting adverse events allows others to verify me.	2.56	0.70	2.0	1–4	38 (49.4)
The careers of staff who report adverse events suffer.	2.64	0.79	3.0	1–4	46 (59.7)
Adverse event reports cause a lot of trouble for me.	2.43	0.64	2.0	1–4	29 (37.7)
Adverse event reporting lets everyone know I made a mistake.	2.7	0.71	3.0	1–4	45 (58.4)
Adverse event reports encourage colleagues to gossip about my mistakes.	2.41	0.86	2.0	1–4	33 (42.9)
Supportive Reporting Culture	**2.79**	**0.52**	**3.0**	**1.5–4**	**67 (87.0)**
I receive encouragement from experienced colleagues to report adverse events.	2.87	0.66	3.0	1–4	57 (74.0)
The hospital's adverse event monitoring unit would encourage staff to report errors.	2.71	0.65	3.0	1–4	49 (63.6)
Reporting Procedures	**2.88**	**0.55**	**3.0**	**2–4**	**64 (83.1)**
The hospital where I work has clear procedures for how to report adverse events.	2.75	0.65	3.0	1–4	51 (66.2)
The hospital where I work has clear procedures for what adverse events should be reported.	3.0	0.67	3.0	2–4	60 (77.9)

* Positive answers: for subscales—average value of all items ≥2.5; for separate items—sum of «agree» and «strongly agree» cases.

Relationship between Clinical Environment and Adverse Events Reporting

During the analysis of associations, a statistically significant association was identified in one domain. Specifically, in the «Clinical Communication with Patients» subscale, the responses from nurses were statistically significant ($p = 0.046$). Other factors in the clinical environment did not show a significant association with the decision to report or not report adverse events (Table 4).

Table 4. Relationship between domains of clinical practice environment and nurses reporting adverse events

RPPE Subscale	**Reported an Adverse Event N (%)**	**Didn't Report an Adverse Event N (%)**	**$\chi 2$, p–Value**

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Leadership and Professional Autonomy in Clinical Practice	≥2.5	24 (31.2)	40 (51.9)	1.68, p = 0.195
	<2.5	8 (10.4)	5 (6.5)	
Control over Clinical Practice	≥2.5	25 (32.5)	30 (39.0)	0.71, p = 0.400
	<2.5	7 (9.0)	15 (19.5)	
Clinical Communication with Patients	≥2.5	18 (23.4)	36 (46.8)	3.97, p = 0.046
	<2.5	14 (18.2)	9 (11.6)	
Teamwork	≥2.5	18 (23.4)	20 (26.0)	0.62, p = 0.43
	<2.5	14 (18.2)	25 (32.4)	
Conflict Management	≥2.5	22 (28.6)	36 (46.8)	0.74, p = 0.39
	<2.5	10 (13.0)	9 (11.6)	
Intrinsic Motivation	≥2.5	28 (36.4)	40 (51.9)	p = 0.562 (Fisher's exact test)
	<2.5	4 (5.2)	5 (6.5)	

* Statistically significant difference comparing «Didn't report an adverse event» group with «Reported an adverse event» group.

When assessing the relationship between nurses' work environment and their intention to report adverse events in the future, no significant relationships were found across all groups. However, the proportion of APNs unwilling to report adverse events in the future exceeded that of those willing to report. This finding may indicate hesitancy or uncertainty in reporting behavior rather than a higher sense of responsibility (Table 5).

Table 5. Relationship between domains of the clinical practice environment and nurses who will report adverse events in the future

RPPE Subscale		**Will Report Adverse Events in the Future N (%)**	**Will Not Report Adverse Events in the Future N (%)**	**χ2, p–Value**
Leadership and Professional Autonomy in Clinical Practice	≥2.5	25 (32.5)	39 (50.6)	0.03, p = 0.869
	<2.5	6 (7.8)	7 (9.1)	
Control over Clinical Practice	≥2.5	21 (27.3)	34 (44.2)	0.11, p = 0.741
	<2.5	10 (13.0)	12 (15.6)	
Clinical Communication with Patients	≥2.5	19 (24.7)	35 (45.5)	1.29, p = 0.255
	<2.5	12 (15.6)	11 (14.3)	
Teamwork	≥2.5	18 (23.4)	20 (26.0)	1.05, p = 0.306
	<2.5	13 (16.9)	26 (33.7)	
Conflict Management	≥2.5	24 (31.2)	34 (44.2)	0.01, p = 0.936
	<2.5	7 (9.1)	12 (15.6)	
Intrinsic Motivation	≥2.5	29 (37.7)	39 (50.6)	p = 0.3 (Fisher's exact test)
	<2.5	2 (2.6)	7 (9.1)	

According to the analysis (Table 5), no statistically significant associations were found between the subscale scores and the intention to report adverse events ($p > 0.05$ for all domains).

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However, no consistent pattern of association with reporting behavior was observed among nurses with higher scores in Workplace Intrinsic Motivation and Leadership and Professional Autonomy in Clinical Practice compared to those with lower scores.

Discussion. The findings of this study demonstrate that advanced practice nurses (APNs) generally perceive their professional clinical environment positively, particularly in relation to leadership and professional autonomy. High scores in this domain likely reflect the expanded scope of APN practice, including independent clinical decision–making and increased responsibility for patient care. These results are consistent with previous studies highlighting the critical role of autonomy and leadership in enhancing professional engagement and job satisfaction among nurses [12].

Intrinsic motivation was also highly rated, indicating that APNs experience a strong sense of professional fulfillment and ongoing development within their work environment. This supports existing evidence identifying intrinsic motivation as an important determinant of performance, retention, and quality of care [13].

In contrast, lower scores observed in teamwork and conflict management suggest persistent challenges in interprofessional collaboration. These findings are consistent with prior research demonstrating that relational and organizational aspects of the work environment are often evaluated less favorably than leadership–related factors [14–17]. Such limitations may negatively affect coordination of care and overall system efficiency.

Although the majority of respondents reported adequate staffing levels, several indicators point to perceived workload pressures and time constraints. This suggests that challenges may be related not only to staffing numbers but also to workflow organization and task distribution within clinical settings [18].

Communication processes also emerged as a relevant area of concern. Delays in information exchange, potentially associated with limited access to certain components of electronic medical records, may hinder timely clinical decision–making and continuity of care.

A statistically significant association was identified between clinical communication and adverse event reporting. Interestingly, nurses with lower communication scores reported adverse events more frequently. This finding may indicate that reporting is more likely to occur in response to system weaknesses or breakdowns in communication, rather than as part of a consistently embedded safety–oriented practice.

At the organizational level, APNs positively evaluated reporting procedures and managerial support, emphasizing the importance of clear guidelines and encouragement from leadership. These findings are consistent with previous studies demonstrating that supportive and non–punitive environments facilitate reporting behavior [19].

However, important barriers to reporting remain. Concerns related to blame, reputational risks, and interpersonal tensions were frequently reported. In addition, some respondents perceived adverse event reporting as outside their professional responsibilities, suggesting gaps in role clarity and training [20, 21].

A particularly important finding is that despite the availability of formal reporting systems, a considerable proportion of APNs remain reluctant to report adverse events. The discrepancy between past reporting experience and future reporting intentions indicates the presence of underlying psychological and organizational barriers that are not fully addressed by existing systems.

Overall, the results suggest that while structural elements of reporting systems are relatively well established, behavioral and organizational factors continue to play a decisive role in shaping reporting practices. Addressing these factors requires not only formal policies

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but also targeted interventions aimed at improving communication, strengthening interprofessional collaboration, and fostering a culture of trust and psychological safety.

Study limitations

One of the main limitations of this study is its limited external validity. The sample included only APNs working in public polyclinics in Almaty; APNs from private organizations, hospitals, and other regions of Kazakhstan were not included. Therefore, the findings cannot be fully generalized to the national healthcare system.

The cross–sectional design does not allow for causal inferences, and the results reflect associations only. Self–reported data may be influenced by subjectivity and social desirability, while the use of Likert scales limits the depth of assessment.

Voluntary participation may introduce selection bias, and the findings primarily represent the experience of APNs in primary care. Organizational characteristics of Almaty polyclinics may also differ from those in other regions, further limiting generalizability.

Conclusion. The findings of this study suggest that the relationship between the clinical environment and adverse event reporting among APNs is multifactorial and context–dependent, shaped by the interaction of structural conditions and socio–cultural dynamics within healthcare organizations. Only limited associations were identified between specific domains of the professional environment and reporting behavior.

APNs reported high levels of internal motivation, autonomy, and leadership, reflecting a generally favorable perception of their professional environment. At the same time, comparatively lower scores in teamwork and conflict management, along with reported delays in information exchange, indicate areas requiring organizational improvement.

Although most respondents perceived staffing levels as adequate, some findings suggest the presence of workload– and time–related constraints, pointing to potential inefficiencies in work organization rather than a direct shortage of personnel.

Despite the presence of formal reporting procedures and perceived managerial support, a substantial proportion of nurses appeared hesitant to report adverse events, and many also expressed limited willingness to report such events in the future. Reported barriers included fear of negative consequences, uncertainty regarding responsibilities, and insufficient engagement in reporting culture.

Importantly, the observed association between communication and reporting behavior was inconsistent in direction and should be interpreted with caution. This finding suggests that reporting practices may be influenced by contextual and organizational factors rather than reflecting a stable pattern.

Overall, the results highlight the need to strengthen non–punitive reporting environments, improve interprofessional communication and teamwork, and enhance clarity of professional roles. Further research, including multi–center and longitudinal studies, is required to better understand the determinants of reporting behavior and to support the development of effective patient safety.

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КЕҢЕЙТІЛГЕН ТӘЖІРИБЕДЕГІ МЕЙІРГЕРЛЕРДІҢ КЛИНИКАЛЫҚ ОРТАСЫ ЖӘНЕ ЖАҒЫМСЫЗ ОҚИҒАЛАРДЫ ХАБАРЛАУ ПРАКТИКАСЫ

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Түйіндеме

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Кіріспе. Қолайлы кәсіби орта – кеңейтілген тәжірибедегі мейіргерлердің тиімділігіне, уәждемесіне және еңбекке қанағаттануына ықпал ететін негізгі факторлардың бірі. Еңбек жағдайларының сапасы олардың дербестігіне және жағымсыз оқиғалар туралы хабарлау дайындығына тікелей әсер етеді, бұл өз кезегінде науқастардың қауіпсіздігін қамтамасыз ету және медициналық көмектің сапасын

Мақсаты. Кеңейтілген тәжірибедегі мейіргерлердің кәсіби клиникалық ортасына қатысты көзқарастарын бағалау және еңбек жағдайлары мен жағымсыз оқиғалар туралы хабарлау дайындығы арасындағы байланысты зерттеу.

Материалдар мен әдістер. Алматы қаласының қалалық емханаларында жұмыс істейтін 77 кеңейтілген тәжірибедегі мейіргер арасында сипаттамалық көлденең зерттеу жүргізілді. Деректер Revised Professional Practice Environment (RPPE) және Reporting of Clinical Adverse Events (RoCAES) шкалалары арқылы жиналды. Статистикалық талдау SPSS 29.0 бағдарламасында χ^2 және Фишердің дәл критерийін қолдану арқылы жүргізілді, маңыздылық деңгейі $p < 0,05$.

Нәтижелер. Респонденттер өздерінің кәсіби ортасын жалпы алғанда оң бағалады. Ең жоғары орташа көрсеткіштер «Клиникалық тәжірибедегі көшбасшылық және кәсіби дербестік» (3,0) және «Ішкі мотивация» (3,0) шкалалары бойынша анықталды, бұл мейіргерлердің жоғары деңгейдегі кәсіби жауапкершілігі мен жұмысқа тартылуын көрсетеді. Төменірек көрсеткіштер «Командалық жұмыс» (2,5) және «Қақтығыстарды басқару» (2,7) шкалаларында байқалды, бұл әртүрлі мамандар арасындағы өзара әрекеттестікте қиындықтардың бар екенін көрсетеді.

Мейіргерлердің басым бөлігі жағымсыз оқиғалар туралы хабарлауға оң көзқарас білдірді, әсіресе рәсімдердің айқындығы мен басқарушылық қолдауға қатысты (орташа мәні = 2,9). «Науқастармен клиникалық коммуникация» қосалқы шкаласы мен жағымсыз оқиғаларды хабарлау арасында статистикалық тұрғыдан мәнді байланыс анықталды ($p = 0,046$), бұл ретте коммуникация деңгейі төмен мейіргерлер жағымсыз оқиғалар туралы жиі хабарлаған.

Қорытынды. Қолдаушы кәсіби орта мейіргерлердің уәждемесімен, дербестігімен және көшбасшылық қасиеттерінің жоғары деңгейімен байланысты. Алайда кәсіби орта факторлары мен жағымсыз оқиғаларды хабарлау арасындағы байланыстар шектеулі болып табылады. Негізгі қиындықтар командалық жұмыстың әлсіздігімен, коммуникациялық үдерістердің жеткіліксіздігімен және хабарлаудың ықтимал жағымсыз салдарларына қатысты алаңдаушылықпен байланысты.

Түйінді сөздер: кеңейтілген мейіргерлік тәжірибе, кәсіби орта, жағымсыз оқиғалар туралы хабарлау, науқас қауіпсіздігі, уәждеме, командалық жұмыс.

КЛИНИЧЕСКАЯ СРЕДА И ПРАКТИКА СООБЩЕНИЯ О НЕБЛАГОПРИЯТНЫХ СОБЫТИЯХ МЕДИЦИНСКИХ СЕСТЕР РАСШИРЕННОЙ ПРАКТИКИ

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Аннотация

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Введение. Благоприятная профессиональная среда является ключевым фактором, влияющим на эффективность, мотивацию и удовлетворенность трудом медицинских сестер расширенной практики. Условия труда также влияют на автономию и готовность сообщать о неблагоприятных событиях, что имеет важное значение для обеспечения безопасности пациентов.

Цель. Оценить отношение медицинских сестер расширенной практики к их профессиональной клинической среде и изучить взаимосвязь между условиями труда и их готовностью сообщать о неблагоприятных событиях.

Материалы и методы. Проведено описательное поперечное исследование среди 77 медицинских сестер расширенной практики, работающих в муниципальных поликлиниках г. Алматы. Данные собирались с использованием шкал Revised Professional Practice Environment (RPPE) и Reporting of Clinical Adverse Events Scale (RoCAES). Статистический анализ выполнен с использованием программы SPSS 29.0 с применением критерия χ^2 и точного критерия Фишера при уровне значимости $p < 0,05$.

Результаты. В целом респонденты положительно оценили свою профессиональную среду. Наиболее высокие показатели были отмечены по шкалам «Лидерство и профессиональная автономия в клинической практике» (среднее значение = 3,0) и «Внутренняя мотивация» (среднее значение = 3,0). Более низкие значения были выявлены по шкалам «Командная работа» (среднее значение = 2,5) и «Управление конфликтами» (среднее значение = 2,7), что указывает на трудности в межпрофессиональном взаимодействии. Большинство медицинских сестер продемонстрировали положительное отношение к сообщению о неблагоприятных событиях, особенно в отношении ясности процедур и управленческой поддержки (среднее значение = 2,9). Была выявлена статистически значимая связь между подшкалой «Клиническая коммуникация с пациентами» и сообщением о неблагоприятных событиях ($p = 0,046$), более низкие показатели коммуникации были связаны с более частым сообщением.

Заключение. Поддерживающая профессиональная среда связана с более высоким уровнем мотивации, автономии и лидерских качеств у медицинских сестер расширенной практики. Однако выявлены лишь ограниченные взаимосвязи между факторами среды и поведением, связанным с сообщением о неблагоприятных событиях. Основные проблемы включают недостатки в командной работе, коммуникации и опасения негативных последствий сообщения.

Ключевые слова: расширенная сестринская практика, профессиональная среда, сообщение о неблагоприятных событиях, безопасность пациентов, мотивация, командная работа.