

Table 3 Scores and items of the 10 dimensions of patient safety culture

Items of patient safety culture dimensions	Absolute frequency (n)	Average positive response (%)
D1: Overall perceptions of safety		53.65
Patient safety is never sacrificed to get more work done	90	65
Our procedures and systems are good at preventing errors from happening	83	59.8
It is just by chance that more serious mistakes do not happen around here	67	48.9
We have patient safety problems in this facility	56	40.9
D2: Frequency of events reported		27.7
When a mistake is made, but is caught and corrected before affecting the patient, it is reported	40	29.2
When a mistake is made, but has no potential to harm the patient, it is reported	33	24
When a mistake is made that could harm the patient, but does not, it is reported	41	29.9
D3: Supervisor/manager expectations and actions promoting patient safety		53.47
Manager says a good word when he/she sees a job done according to established patient safety procedures	85	61.3
Manager seriously considers staff suggestions for improving patient safety	74	53.3
Whenever pressure builds up, my manager wants us to work faster, even if it means taking shortcuts	71	51.1
My manager overlooks patient safety problems that happen over and over	67	48.2
D4: Organizational learning and continuous improvement		48.66
We are actively doing things to improve patient safety	94	67.9
Mistakes have led to positive changes here	77	55.5
After we make changes to improve patient safety, we evaluate their effectiveness	106	76.6
We are given feedback about changes put into place based on event reports	14	10.2
We are informed about errors that happen in the facility	47	34.3
In this facility, we discuss ways to prevent errors from happening again	66	47.5
D5: Teamwork within units		70.6
People support one another in this facility	93	67.1
When a lot of work needs to be done quickly, we work together as a team to get the work done	109	78.8
In facility, people treat each other with respect	95	68.6
When one area in this unit gets really busy, others help out	94	67.9
D6: Communication openness		42.13
Staff will freely speak up if they see something that may negatively affect patient care	70	50.4
Staff feel free to question the decisions or actions of those with more authority	39	28.5
Staff are afraid to ask questions when something does not seem right	66	47.5
D7: Nonpunitive response to error		36.5
Staff feel like their mistakes are held against them	49	35.8
When an event is reported, it feels like the person is being written up, not the problem	56	40.9
Staff worry that mistakes they make are kept in their personnel file	45	32.8
D8: Staffing		34.76
We have enough staff to handle the workload	67	48.9
Staff in this facility work longer hours than is best for patient care	22	16
We work in crisis mode trying to do too much, too quickly	54	39.4
D9: Management support for patient safety		51.07
Management provides a work climate that promotes patient safety	60	43.8
The actions of management show that patient safety is a top priority	79	56.9
Management seems interested in patient safety only after an adverse event happens	58	42.3
Units work well together to provide the best care for patients	85	61.3

Table 3 Scores and items of the 10 dimensions of patient safety culture (Concluded)

Items of patient safety culture dimensions	Absolute frequency (n)	Average positive response (%)
D10: Teamwork across units		45.95
There is good cooperation among units that need to work together	75	54.7
Units do not coordinate well with each other	55	40.1
It is often unpleasant to work with staff from other units	55	40.1
Things “fall between the cracks” when transferring patients from one unit to another	53	38.7
Important patient care information is often lost during shift changes	83	59.8
Problems often occur in the exchange of information across units	58	42.3

responses was highest for teamwork within units (70.6%). The lowest scores were for frequency of event reporting (27.7%), staffing (34.76%) and nonpunitive response to error (36.5%).

Factors associated with PSC

The dimensions of PSC were not significantly associated with sex, professional title, or work experience. Two factors were associated with PSC dimensions: frequency of AEs reported was significantly higher among participants involved in risk management committees ($P = 0.02$); and overall perception of safety was significantly higher among nurses working in urban compared with rural districts ($P = 0.03$).

Discussion

To our knowledge, there have been no studies of PSC among nurses working in primary healthcare in Tunisia. Therefore, the present study was conducted to assess nurses' PSC in Tunisian primary healthcare centres. The dimension of teamwork within units had the highest score (70.6%). Three dimensions had low scores, namely, frequency of event reporting (27.6%), staffing (34.76%) and nonpunitive response to errors (36.5%). Two factors were associated with PSC: participation in risk management committees, and district of the primary care centre.

Recently, patient safety in primary care has been given increasing attention (22), and many studies have shown a high level of AEs with negative consequences (1,6,7,23). Given the importance of assessing PSC to enhance patient safety in primary care, several studies have sought to determine professionals' PSC in this setting (1,5,9,24–26). Many studies have focused on nurses, in the belief that understanding nurses' perceptions are crucial for policy-makers to address PSC in relation to nurses' staffing policies (12,14,15). The dimension of overall perception of safety had a score of 53.65%. This reflects the lack of safety standards in the primary healthcare centres and the need to implement corrective measures to increase awareness of this issue among professionals. Indeed, 59.1% of nurses confirmed that they had problems with security in their workplace.

We found that the dimension of teamwork within units had the highest score (70.6%) and this was similar

to previous studies (1,25,27). However, when it came to critical care areas such as operating rooms (10) and intensive care units (28), this dimension had a low score (41.7% and 46.99%, respectively). This may be due to the fact that primary healthcare centres are small buildings with fewer staff compared to hospitals and critical care units and are unsophisticated environments that encourage teamwork (29).

Staffing had a positive score of 34.76%, and most nurses reported that they did not have enough staff to handle the workload, and that they worked longer hours than are best for patient care. This situation may have severe negative consequences for patient safety and quality of care. O'Brien-Pallas et al. investigated the relationship between nurse staffing, workload and patient outcomes. They found that nurse staffing (fewer registered nurses), increased workload, and an unstable nursing environment was linked to negative patient outcomes, including falls and medication errors (30). They also reported that when nursing demand/supply levels exceeded 80%, negative outcomes increased for nurses themselves and hospitals, as well as patients.

The dimension that had the lowest score was frequency of events reported (27.7%). This under-reporting can be explained by the fact that the commission of error is always considered to indicate lack of skill and rarely seen as a learning opportunity. Several barriers exist to reporting AEs, including insufficient time to report, lack of feedback, fear of blame and damage to reputation in a competitive environment, and loss of patient confidence (11,31). This dimension was similar to nonpunitive response to error, which also had a low score (36.5%). Nurses reported that they felt that their mistakes were held against them and their involvement in the AE was being highlighted rather than the AE itself. This problem of under-reporting AEs must be taken into consideration and treated with vigilance; nurses should be encouraged to report AEs and even rewarded for so doing. It is essential to establish a culture in which individuals are supported to identify and report AEs without threat of punitive action or blame. Reporting of AEs is an integral part of a continuous cycle of improving patient safety and quality of care that includes error identification, reporting, analysis and corrective actions (32).