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Patient safety culture

Radiographers' perceptions

Research to evaluate radiographers' perceptions about patient safety culture in Portuguese public and private imaging facilities found that overall perception is positive but the safety culture dimensions rating should guide culture development of safety culture improvement action plans.

Patient safety is defined as the avoidance of unintended or unexpected harm to people during the provision of healthcare. It is a process whereby an organisation makes care delivery safer to prevent healthcare users from being harmed by the effects of their services, thereby reducing the risk of unnecessary harm to the minimum acceptable (National Health Service 2004). While imaging facilities have become more effective they have also become more complex, with greater use of new technologies. Thus, patients should be treated in a safe environment and protected from avoidable harm.

The National Patient Safety Agency's *Seven steps to patient safety, the full reference guide* identifies the steps it considers essential to ensure patient safety: safety culture, lead and support professionals, manage risk in an integrated way, promote reporting, engage and communicate with patients and the public, learn and share safety lessons and implement solutions for harm prevention (National Patient Safety Agency 2004).

Patient safety is a core dimension of the quality of care provided. Unfortunately, in Portuguese healthcare institutions, there is still a lack of adequate knowledge regarding all the aspects of the organisational safety culture, which are essential for the implementation of effective measures to avoid and prevent errors and incidents that occur from the provision of healthcare to patients (Sousa 2013).

There is a need to promote a culture of safety in all areas of healthcare services, reflecting a collective consciousness related to values, attitudes, skills and behaviours that determine commitment to health and safety management, and to look at incidents not simply as problems, avoiding blaming those professionals who make unintentional mistakes, but seeing the situation as an opportunity to improve healthcare quality (Costa 2014).

Since radiographers in the performance of their duties are fundamentally involved in promoting,

maintaining, monitoring or restoring patients' health, the healthcare process is subject to the occurrence of incidents and adverse events that should be recorded and reported (Portuguese Health Portal 2011).

In Portugal in 2012 the General Directorate of Health (GDS) made available to all healthcare professionals and citizens the National Incident and Adverse Event Notification System (NIAENS). NIAENS is an anonymous, confidential and non-punitive management platform for incidents and adverse events occurring at healthcare facilities. The notifications are analysed to identify patterns and trends on patient safety and to develop solutions to avoid such incidents, based on Standard No 008/2013 of 05/15/2013 (GDS 2013).

“IN GENERAL, RADIOGRAPHERS HAVE A POSITIVE PERCEPTION ABOUT PATIENT SAFETY OF THEIR DEPARTMENTS”

It should also be considered that the imaging department is an area that favours the appearance of errors, especially due to the multiplicity of the techniques used, the various professionals involved and the complexity of the whole circuit involving examinations, associated with a rational use of human and economic resources, and the current organisational culture (Brandão et al. 2011; Pereira 2013). In addition, the fear of becoming victims of medical error may lead patients to avoid medical care, leading to a worsening of their health status (Pereira 2013).

Given the above, and considering the constant development of imaging departments and the search for continuous improvement, the main goal of this study was to evaluate radiographers' perceptions about patient safety culture in nationwide public and private imaging facilities and to compare them in order to identify the positive aspects of safety culture of each department and make improvement suggestions.

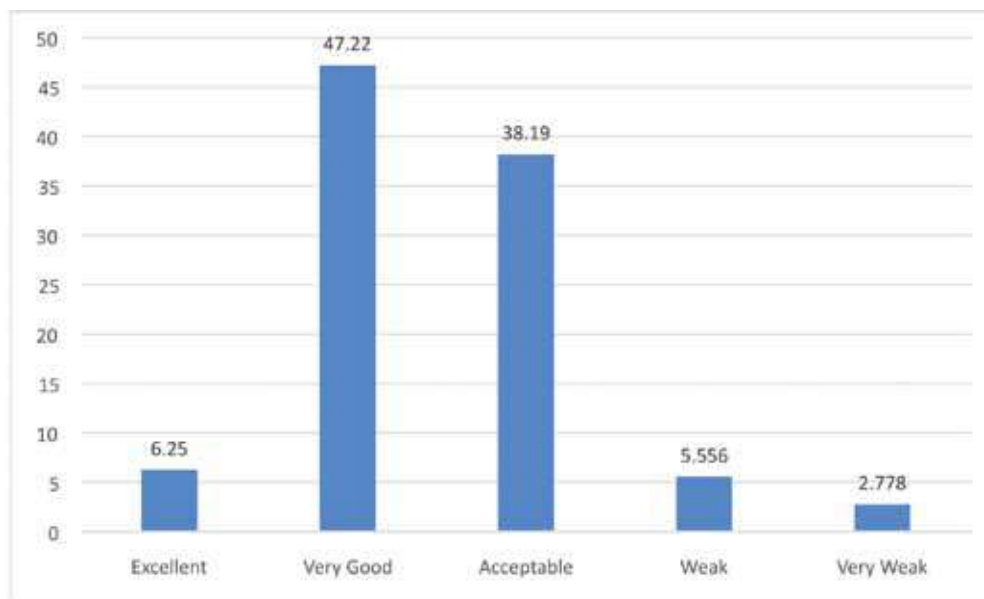


Figure 1. How radiographers classified the patient safety culture (%).

Web-based survey of Portuguese radiographers

For this study, a web-based survey composed by a sociodemographic characterisation was added to the translated and validated Portuguese version of the *Hospital Survey on Patient Safety Culture (HSOPSC)* (ahrq.gov/sops/quality-patient-safety/patient-safetyculture/hospital/index.html) and made available to all radiographers who wished to participate at a nationwide level.

The sociodemographic data included professional experience (years), the nature of the imaging facility (public or private), geographical area, weekly working hours and the professional category (band).

The HSOPSC was composed of 52 questions/items grouped into twelve dimensions evaluated on a five-point Likert scale, which evaluates 3 main components (organisational culture, safety culture and reported errors). The original items have been validated by the Agency for Healthcare Research and Quality (AHRQ) for the USA hospital setting and Factor analysis resulted in the following 12 factors (dimensions):

- D1 Teamwork across units
- D2 Supervisor/manager expectations and actions promoting patient safety
- D3 Organisational learning – continuous improvement
- D4 Hospital management support for patient safety
- D5 Overall perceptions of safety
- D6 Feedback and communication about error
- D7 Communication openness
- D8 Frequency of event reporting

- D9 Teamwork within units
- D10 Staffing
- D11 Hospital handoffs and transitions
- D12 Nonpunitive response to error

The final sample was composed of 144 radiographers (27.78% from private imaging departments and the remaining 72.22% from public facilities). Data was also divided according to the six main regions of Portugal: 13.89% from Algarve, 6.94% from Alentejo, 27.78% from Lisbon, 14.58% from Central region, 34,72% from the North region and 2.08% from the islands.

This study followed the ethical considerations of research. Respondents were free to exercise their right to participate and answer the questionnaire at their will. Information obtained is solely for research purposes and is held with utmost confidentiality. Anonymity of both the respondents and hospitals/clinics were honoured in the study to protect the data and names of the subjects. The data gathering was done accordingly and to the convenience of the institutions without hindering their daily operations. For data analysis, Statistical Package for the Social Sciences (SPSS) V.23 was used.

Results: how do radiographers perceive patient safety culture?

The internal consistency of the questionnaire assessed by the Cronbach's alpha was excellent ($\alpha=0.927$). Only 9 radiographers classified the patient safety culture as excellent, whilst 68 radiographers classified the safety culture as very good and 55 classified it as acceptable

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(Figure 1). The remaining participants classified safety culture as weak (8) or very weak (4).

It should also be noted that an expressive number of 58 radiographers did not file any error in the last 12 months in the risk management system.

To identify the differences between public and private imaging facilities, t-student-test was used and it was verified that for the private facilities some dimensions scored statistically higher than in the public sector, namely in Teamwork across units ($p=0.03$), Hospital management support ($p=0.013$), Feedback and communication about error ($p=0.008$), Teamwork within units ($p=0,001$) and Hospital hand-offs and transitions ($p=0.00$).

To verify the differences between the geographical areas, the Kruskal Wallis test was used and no statistically significant differences were found ($p>0.05$).

A Pearson correlation test was performed to verify the existence of relationships between the degree that defines the safety culture of the imaging facilities and the organisational culture, safety culture and reported errors. Regarding the organisational culture, there are three significant negative correlations between the dimension referring to Teamwork across units ($r = -0.554$; $p = 0.000$), Organisational learning ($r = -0.636$; $p = 0.000$) and Teamwork within units ($r = -0.517$; $p = 0.000$). There is also a significant moderate negative correlation between the Hospital handoffs and transitions ($r = -0.363$; $p = 0.000$) and a significant weak negative correlation with respect to the Staffing ($r = -0.201$; $p = 0.015$).

In relation to the safety culture there are three significant negative correlations between the dimension Supervisor/manager expectations and actions promoting patient safety ($r = -0.554$, $p = 0.000$), Hospital management support for patient safety ($r = -0.525$, $p = 0.000$) and Overall perceptions of safety ($r = -0.595$, $p = 0.000$).

Relative to reported errors, there are two significant negative correlations with the dimensions Feedback and communication about error ($r = -0.531$; $p = 0.000$) and Communication openness ($r = -0.520$, $p = 0.000$); and two significant moderate negative correlations between the dimensions Frequency of event reporting ($r = -0.444$, $p = 0.000$) and Non-punitive response to error ($r = -0.343$; $p = 0.000$).

Conclusion

Safety culture has received increasing attention in the recent past. This can be seen when healthcare facility members prioritise safety and when this becomes

part of their professional culture. From this increase in awareness, a strengthened safety culture will allow safer patient care.

In general, radiographers have a positive perception about patient safety of their departments. Despite this perception, in some dimensions, there are failures, more evident in the areas of Feedback and communication about errors and Staffing. The first weak dimension results from the cultural sense of error as a reason for punishment instead of an opportunity for improvement. The second weak dimension results from the concern regarding the number of hours worked, which was considered to be excessive by the participants.

It is noteworthy that private healthcare imaging departments have significantly higher scores in several dimensions of patient safety, which allow us to conclude that the investment in patient safety was higher or at least more evident in this sector.

Adverse events are not reported frequently, and almost half of participants revealed that they have not fulfilled any error report. This does not mean that the errors did not occur, but it means that they were not relevant, which shows that this awareness for safety improvement must be developed or participants were afraid of revealing them. Despite the existence of some weaker dimensions, the overall safety perception of radiographers is positive. ■

KEY POINTS



- ✓ Radiographers have an overall positive perception of patient safety culture in most of the evaluated dimensions
- ✓ Core areas such “Feedback and Communication about errors” and “Staffing” are negatively listed by radiographers and should be further analysed
- ✓ Manager support for patient care is scored higher in private radiology facilities than in the public sector
- ✓ Safety culture dimensions rating should guide future development of safety culture improving action plans



REFERENCES

For full references, please email edito@healthmanagement.org or visit <https://iii.hm/r16>