Assessment of educational needs and factors influencing the level of digital skills of TR/RTTs - a stakeholder perception

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01 Introduction

In an era of healthcare digitalisation, a high level of digital skills in the professional practice of Therapeutic Radiographers/Radiation Therapists (TR/RTTs) is vital to ensure patient safety and quality of care.[1,2]
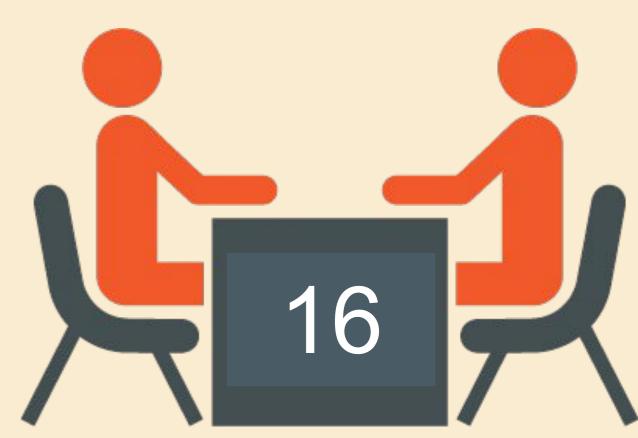
02 Aim

This study aimed to assess stakeholders' perceptions regarding the digital skills of TR/RTTs in Radiotherapy (RT).

03 Methods

- Semi-structured focus-groups (n=3x4) and interviews (n=4) were conducted online via Microsoft Teams with Portuguese RT stakeholders (the most represented country in a previous European survey)[3], using an interview script.
- Stakeholders (TR/RTTs practitioners, managers, educators, students, professional bodies and software suppliers' representatives) were asked to identify the factors influencing digital skills and suggest ways to improve the less developed skills identified in the Treatment Planning, Management and Research dimension in the previous survey.[3]
- Interview transcripts were carried out independently and NVivo (v12) was used for thematic analysis.

INTERVIEWS 16

04 Results

"The truth is, our experience as students is little or none." INT5

" I think the biggest factor is the lack of time and permanence in that area.." INT10

"..we do not have a dedicated structure in terms of research." INT1

Education/occupation factors

- Lack of:
  - time dedicated to Treatment planning skills within the degree programme
  - rotation among the professionals in different areas of RT practice
  - protected time for research

"..there is already an age gap, i.e. younger people find it easier to deal with technology..." INT5

"..technology has advanced more than people training.." INT11

"..training in Europe is not ideal, it differs a lot from country to country." INT5

Challenges for a high level of digital skills

- Age
- Rapid technological developments
- Lack of standardisation in Education across Europe

"..Information technology skills could be integrated into education and on-the-job training.." INT10

"I think it's important that we introduce the basics of computer programming." INT2

"learn what big data and artificial intelligence are, what tools are now at our fingertips.." INT1

Emerging skills

- Information technology (IT)
- Computer programming
- Artificial intelligence
- Big data

05 Conclusion

- It is necessary to ensure that TR/RTTs develop the essential digital skills that enable them to adopt the best patient care.
- TR/RTTs' education must provide them with digital skills training, including specific training in software commonly used in RT and research. Some of these skills can also be reinforced through some forms of continuous professional development programmes.
- Training in AI is essential for future practice.
- Lastly, TR/RTTs should gain experience in all areas of RT practice.

Disclaimer

References

[1]Barbosa B, Bravo I, Oliveira C, Antunes L, Couto JG, McFadden S, et al. Digital skills of therapeutic radiographers/radiation therapists – Document analysis for a European educational curriculum. *Radiography*. 2022;28(4):955-963. doi:10.1016/j.radi.2022.06.017

[2]Boon IS, Au Yong TPT, Boon CS. Assessing the role of artificial intelligence (AI) in clinical oncology: utility of machine learning in radiotherapy target volume delineation. *Medicines* 2018;5(4):131. https://doi.org/10.3390/medicines5040131.

[3]https://www.safeeurope.eu/wp-content/uploads/2022/05/WP7-presentation_an-European-survey_EFRS-conference.pdf