

A Survey on Knowledge and Attitudes of Radiology trainees towards Artificial Intelligence (AI) in Radiology in South India

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Purpose:

The clinical field of radiology is seeing a tectonic shift with the rapid development and adoption of AI tools. This survey aimed to gauge the knowledge and attitude of radiology trainees at a single academic centre in south India towards AI.

Methods and materials:

An online questionnaire was circulated among a total of 60 radiology trainees, of which 39 responded. Twenty-one (54%), 6 (15%), 7 (18%) and 5 (13%) were in their first, second, third and fellowship year of training. The data was collated and analysed.

Results:

- Ninety-two percent of the responders had not received any formal training in AI.
- Everyone rated their knowledge of AI as none to basic.
- 63% and 68% of the respondents agreed that there were ethical and legal issues, respectively, arising due to the use of AI tools.
- 43% viewed the potential impact of AI in radiology positively, while 13% were neutral.
- 79% were concerned that AI would replace radiologists in the future. 87% were concerned about the potential diagnostic errors that may be caused by AI.
- 85% and 70%, respectively, considered it important for radiologists to adopt AI technologies and to incorporate these tools in their practice in the future.
- 79% were likely to pursue formal training in AI-related tools in the future.
- The majority of the respondents considered financial constraints, regulations, ethical concerns, and resistance to change to be issues in the adoption of AI in clinical practice.

	Question	Response	Percentage (n = 39)
1	How would you rate your current knowledge of AI in radiology?	Basic	49
		None	51
2	In your training, have you received any education specifically on AI in radiology	No, but I want to learn	92
		Yes, some	8
3	Do you think there can be any ethical issues while using AI tools in Radiology	Maybe	23
		No	13
		Yes	64
4	Do you think there can be medico-legal issues arising by using AI tools in Rad	Maybe	21
		No	10
		Yes	69
5	How concerned are you about AI replacing radiologists in the future?	Neither concerned nor unconcerned	10
		Somewhat concerned	52
		Somewhat unconcerned	10
		Very concerned	28
6	How concerned are you about potential diagnostic errors caused by AI?	Neither concerned nor unconcerned	8
		Somewhat concerned	38
		Somewhat unconcerned	3
		Very concerned	49
		Very unconcerned	2
7	How likely are you to pursue further education or training in AI-related skills?	Neither likely nor unlikely	15
		Somewhat likely	33
		Somewhat unlikely	3
		Very likely	46
		Very unlikely	3
8	How important do you believe it is for radiologists to adapt to AI technologies	Extremely important	59
		Extremely not important	2
		Neutral	13
		Somewhat important	26

Conclusions:

There is a general concern among the radiology trainees about potentially being replaced by AI tools. However, the majority accept the need to adopt and incorporate the new AI technology in their clinical practice. The majority understand there could be ethical and legal issues arising by the use of AI tools and the majority of the respondents would like to pursue formal training in AI. This survey highlights the need to start incorporating AI-related curriculum in radiology training.