

# THE STATE OF PEDIATRIC RADIOLOGY RIGHT NOW IN PAKISTAN: A CONFERENCE-BASED SURVEY

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PJR October - December 2023; 33(4): 187-190

## ABSTRACT

**PURPOSE:** The lack of knowledge, resources, and development in the field of pediatric radiology leads to the need for this survey to be conducted to know the perception of Pediatric Fellowship in Pakistani radiology residents and their interests and expectations. **METHODS:** Ethics approval was obtained from Radiological Society of Pakistan. Survey was given to all residents attending the 38<sup>th</sup> annual radiology conference of RSP, held from 25<sup>th</sup>-27<sup>th</sup> November, 2022 at Karachi, Pakistan in different scientific sessions. Each survey assessed knowledge about the pediatric fellowship and expectations from this fellowship. **RESULTS:** A total of 111 responses were collected from the residents and consultants of radiology. Upon asking the basic questions regarding pediatric exposure in the department and throughout residency 73.8% people said yes on pursuing pediatric imaging in their hospitals. Majority of participants 56.7% disagreed with the amount of exposure to pediatric radiology during their training. 55.8 % disagreed with not developing pediatric radiology as a sub-specialty in Pakistan. People also agreed and strongly agreed (35.1%, 58.5%), that pursuing a career in the field of pediatric radiology and doing a fellowship is a must. To the best of our knowledge, this is the first survey done to evaluate the interest of doctors in pediatric radiology as a subfield and their expectations. As we lack in this subspecialty field, this study was also to seek the interest of the students in pediatric radiology.

**Key Words:** Pediatric Radiology; Pakistan; Survey; Interest; subspecialty

## Introduction

There are now a lot of open positions in the field of radiology, and this number is anticipated to rise over the coming years.<sup>1</sup> Although only 5.5% of the radiology workforce is in pediatric radiology, this trend in this subspecialty is easily seen by the rise in positions available over the past three years that have been advertised on the Society for Pediatric Radiology

(SPR) and American College of Radiology (ACR) job boards.<sup>2</sup>

International data show that fewer residents are interested in pursuing pediatric radiology, which raises the question of where we are going as a subspecialty. The number of yearly graduates from accredited pediatric radiology fellowships is decreasing, and

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Submitted 15 November 2023, Accepted 15 November 2023

fellowship spots are going vacant.<sup>3</sup> It is disappointing for any specialty to not be established in the nation for a variety of reasons, but more importantly, it serves as a stark warning for our field and radiology in general.<sup>4</sup>

In a survey of program directors done in 2020, by the Radiology Research Alliance commissioned the most frequently cited reasons for decreased interest in pediatric radiology are call responsibilities, a perception of lower pay compared to other subspecialties, and a lack of exposure to the field. Due to schedule conflicts, many residents may not have had enough exposure to pediatrics before the fellowship selection process.<sup>5</sup>

This study is conducted to see the interest of the residents in pediatric radiology, and the deficiencies they are facing in our country because of the lack of developed pediatric fellowship programs, that can be addressed in the future for an international standard-recognized pediatric fellowship program to establish. To our knowledge, this survey-based study is the first of its kind to apprehend the need for pediatric radiology fellowship as a subspecialty.

## SURVEY DESIGN

Ethics approval was obtained from Radiological Society of Pakistan. Survey was given to all residents attending the 38<sup>th</sup> annual radiology conference of RSP, held from 25<sup>th</sup>-27<sup>th</sup> November, 2022 at Moven Pick Hotel, Karachi, Pakistan.

A paper survey was given which was to be filled by the radiology residents, consultants and program directors. The survey was designed such that it contains the basic questions regarding pediatric fellowship knowledge, inspired by Jacob Therakathu et al,<sup>6</sup> a paper published in India in 2021. After seeking verbal consent from the participants, data collectors distributed the questionnaires to the participants and collected them at the end of the conference day. The questionnaire was pre-checked and tested by the 5 senior consultants. Changes were made in the questionnaire accordingly.

Participants were informed that each survey was anonymous and the data collected would be used for research purposes only.

## STUDY POPULATION:

The survey population therefore represents a portion

of the entire cohort of residents in the conference, and qualified consultants as well as program directors attending the conference.

## Results

A total of 111 responses were collected from the residents and consultants of radiology. 44 (39.6%) were male and 67 (60.3%) were females (Chart 1).

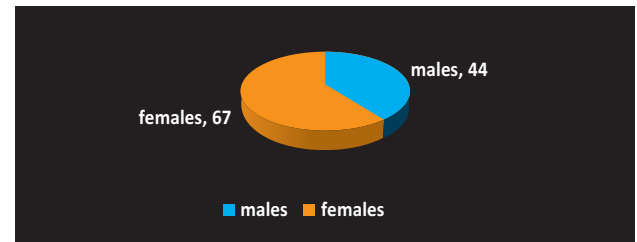


Chart 1: Demographics

41.6 % were consultants and 58.5% were residents. Among the consultants, 12 (26.0% n= 46) have done some fellowship. Most residents were from the fourth year of residency (29.0%, n=65).

Upon asking the basic questions regarding pediatric exposure in the department and throughout residency 73.8% people said yes. Regarding pediatrics exposure in their hospitals, 30.6 % agreed and 12.6 % strongly agreed that their exposure to pediatric imaging is adequate while the majority of 43.2% disagreed and 13.5% strongly disagreed with this statement. 55.8% strongly disagreed with not developing pediatric radiology as a sub-specialty in Pakistan. People also agreed and strongly agreed (35.1%, 58.5%), that pursuing a career in the field of pediatric radiology and doing a fellowship is a must. 52.2% strongly agreed on the scholarship program (Chart 2). There

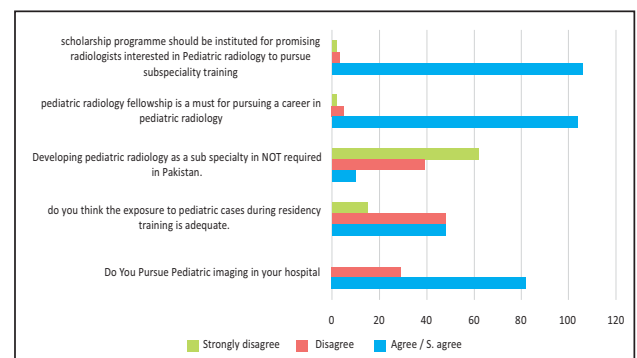


Chart 2:

was a 50-50 tie on pursuing a pediatric Fellowship with 52.2% saying yes, if it becomes a subspecialty field (Chart 3). As we lack in this subspecialty field, this study was also to seek the interest of the students toward pediatric radiology. Because of being uncommon the main reason for this according to the participants were lack of trained radiologist 50.4%, following lack of trained technicians 18.9% followed by the lack of dedicated equipment 17.1% (Chart 4).

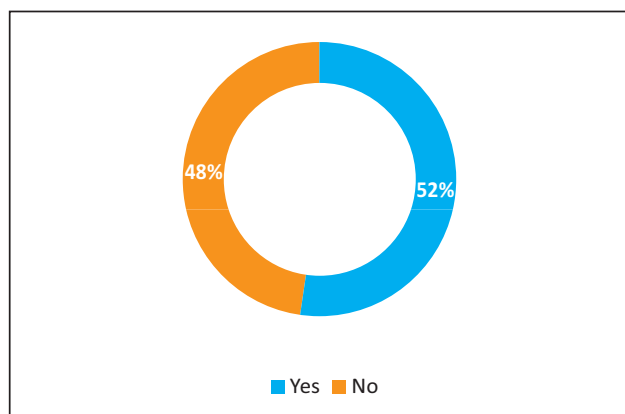


Chart 3:

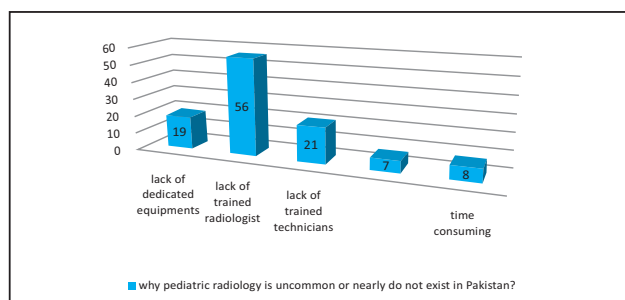


Chart 4: Why pediatric radiology is uncommon or nearly do not exist in Pakistan?

## Discussion

The Advisory Board Company's analysis highlights the need for expanded subspecialized practice globally, since it projects a rise in radiological examination numbers in the future.<sup>18</sup> Based on their estimates, the number of pediatric MRI and USG exams will rise by 8% and 17%, respectively, between 2014 and 2024.<sup>6</sup>

Because of the growing demand for specialized work, pediatric radiologists are in great demand in all kinds of practice settings. Since 2017, there have been 50% and 60% increases in the number of pediatric

radiography employment available, according to the SPR and American College of Radiography (ACR) job sites.<sup>5</sup>

Only roughly 5.5% of radiologists work in pediatric radiology, despite the increasing demand for radiologists.<sup>3</sup>

Why is the question. Why is pediatric radiology a less well-liked field of study than it was in the past? What factors influence resident's decision not to pursue a career in pediatric radiography, and how effectively are these challenges being addressed? Are we stuck in a never-ending cycle where more and more pediatric imaging procedures are performed by radiologists without fellowship training?<sup>4</sup>

Our results were similar to the Jacob et al,<sup>6</sup> study stating 56% of respondents were considering career in pediatric radiology, in our study 52% of respondents said yes for it. It's good to see that 52% of respondents were considering a career in pediatric radiology; this could indicate a shift in opinions.

56.7% respondents disagreed on adequate exposure to pediatric radiology during their residency period. While a national medical education policy has been developed by the government of Pakistan, there is no specific policy to address the need or mechanisms for determining the number and areas for specialties in medical education. These can include developing and promoting formal collaboration between public and private institutions, for example with exchange programs for faculty and students and funding for research.<sup>7</sup>

According to the majority of responders in our study, there is much space for improvement in the field of pediatric radiology training. Majority had a view that there is lack of qualified pediatric radiologist in the country, that affect directly or indirectly on the structured training and their final choice of sub-speciality. The variables influencing a radiology trainee's decision to pursue a specific sub-specialty field of study require more investigation. To decide educational orientation and strategy, a deeper understanding of Pakistan's demographics and the need for sub specializations in the region is required.

**Conflict of Interest:** None

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