

# Current career perspective of pediatric cardiologists in India

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## ABSTRACT

A survey was conducted to ascertain the current situation of early–mid-career pediatric cardiologists (<20 years of experience) practicing in India. A formatted questionnaire was sent as a Google Form through email and WhatsApp link. Out of 275 eligible participants, 138 responses were received. Two pediatric cardiologists independently analyzed the data and responses are presented. Results showed pediatric cardiology is not considered a lucrative career option by most of the surveyed Indian pediatric cardiologists. Urgent remedial measures are needed to maintain the recently found momentum in the field in the country.

**Keywords:** Challenges, India, low- and middle-income countries, pediatric cardiologist

## INTRODUCTION

Pediatric cardiology as a branch itself is well-established in the West. The satisfaction level and economic returns of pediatric cardiologists in the Western world (developed countries) are the highest among all pediatric sub-specialties.<sup>[1]</sup> The US Federal Register does not consider India as a developing country anymore.<sup>[2]</sup> Pediatric cardiac care involves team effort that includes a pediatric cardiologist, cardiac surgeon, anesthetist, and intensivist. Pediatric cardiologist forms an indispensable component of the team. However, there is a mixed feeling among pediatric cardiologists across the country that the practice of pediatric cardiology is not up to the mark. However, data concerning such facts are lacking. This survey was aimed at early and mid-career pediatric cardiologists practicing across India, to determine the outlook toward their career.

## METHODS

A questionnaire was prepared, and the contents were cross-checked by two independent observers. The questionnaire was converted into a Google Form and was

sent through email and as a link in WhatsApp. We sent it to all the members of the Pediatric Cardiac Society of India and all the major teaching hospitals in the country. We targeted all the trained pediatric cardiologists and cardiologists working predominantly in pediatric cardiology. Pediatric cardiologists with 20 years or more experience after super specialization, pediatric cardiac surgeons, intensivists, and anesthetists were excluded from the study. The received responses were evaluated for completeness and were analyzed. We estimate around 275 doctors have a specific qualification in pediatric cardiology in India currently and we got responses from 138 pediatric cardiologists (50.1%).

## RESULTS

A total of 138 responses were received with age range between 31 and 50 years with experience ranging from 1 to 5 years ( $n = 45$ ) and more than 5 years ( $n = 93$ ). More than 50% of pediatric cardiologists are practicing in metro cities. Most of the pediatric cardiologists are practicing in institutions (private institutions  $n = 88$

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and public institutions  $n = 34$ ) with only 16 having established an individual practice. Geographically, most of the pediatric cardiologists are practicing in the Southern part of the country ( $n = 51$ ), followed by Northern ( $n = 39$ ), Western ( $n = 21$ ), and Eastern ( $n = 17$ ) parts of the country. Central India ( $n = 6$ ) and North-Eastern India ( $n = 2$ ) have the least number of pediatric cardiologists [Figure 1].

The majority ( $n = 78$ ) chose pediatric cardiology because of their passion and the remaining chose the specialty as they must do some sub-specialty ( $n = 24$ ) or due to the lack of cardiology exposure ( $n = 16$ ) during pediatric residency. Twenty percentage of participants received pediatric cardiology fellowship after doing adult cardiology training and the remaining obtained direct pediatric cardiology training. Most participants graded the aspects of clinical, hemodynamic, imaging, intensive care, and surgical understanding during their

training as good or excellent. However, fetal cardiology, electrophysiology, and understanding adult cardiology and coronary arterial disease were reported as average to poor by most of the participants [Figure 2]. Fifty-three percentage ( $n = 66$ ) of individuals had no difficulty in finding their first job although with some compromises on salary or location. The remaining 47% ( $n = 61$ ) found it difficult to secure even their first job. More than half of the participants (54%,  $n = 72$ ) recommended the need for further sub-specialization after basic pediatric cardiology training, and the remaining 46% ( $n = 60$ ) did not favor obtaining further sub-specialization to practice pediatric cardiology in India.

While reporting self-performance as a pediatric cardiologist, the majority of participants have good or excellent clinical and interventional practice. Work-life balance is good to average. However, financial growth and research participation are average to poor for the majority of participants [Figure 3]. Seventy-five participants produced  $<5$  academic publications and only 15 had more than 5 publications. The remaining participants never had any publications. Only a third of the participants are regularly involved in academics either for pediatricians or pediatric cardiologists. More than half of the participants recommended 3-year pediatric cardiology training after pediatric residency. One-fifth of participants suggested going for a 3-year adult cardiology training program, followed by 1-year pediatric cardiology training. The same number of participants are completely against pediatric cardiology as a career option for the younger generation.

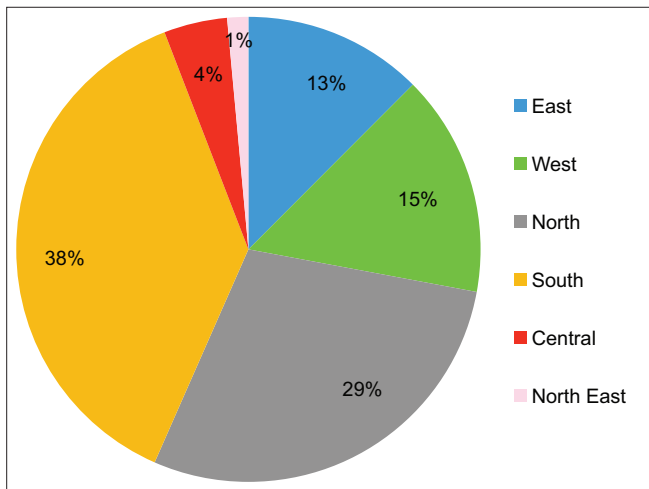


Figure 1: Geographic distribution of pediatric cardiologists in India according to the survey conducted

## DISCUSSION

Pediatric cardiology needs high-quality care for a successful outcome. Challenges reported by pediatric

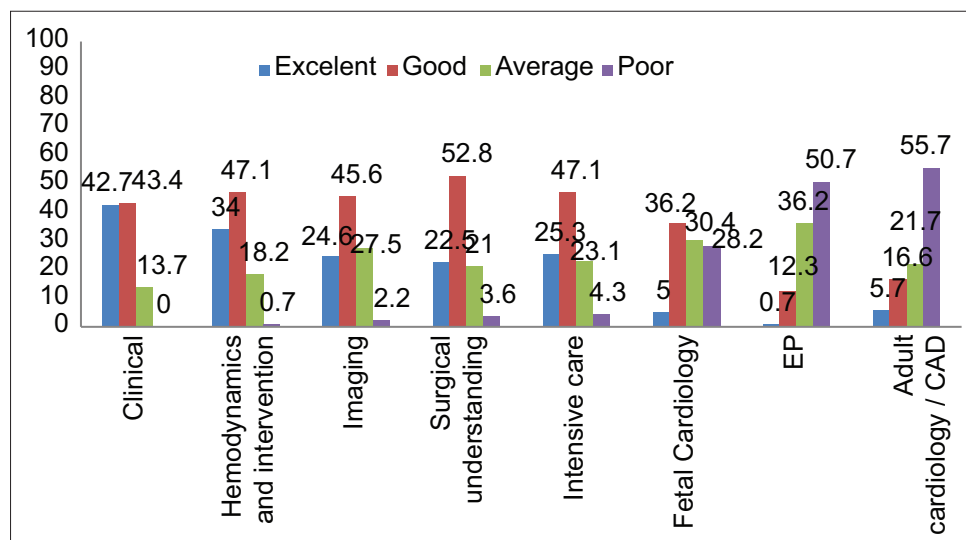
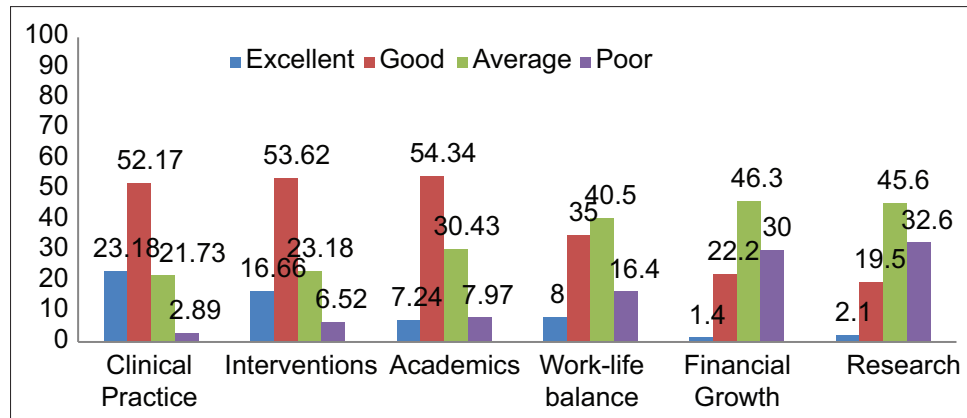


Figure 2: Bar diagram showing responses of pediatric cardiologists toward grading their training in percentages



**Figure 3: Bar diagram showing responses of pediatric cardiologists toward reporting their performance**

cardiologists from training are lack of proper exposure to pediatric cardiac subspecialties such as fetal cardiology and electrophysiology. The challenges encountered during practice included the poor socioeconomic status of the patient's families, lack of proper insurance for congenital heart defects, lack of public funding, and lack of dedicated pediatric cardiology units in public hospitals with all facilities.<sup>[3]</sup> These factors pose a huge challenge to pediatric cardiologists in ensuring a good patient outcome.

A few suggestions for improvement of pediatric cardiac care in India from this survey reported are:

- Compulsory basic exposure to all pediatric sub-specialties during the training period. This is possible by student exchange programs within the institute and country
- Initiatives from the government to establish dedicated pediatric cardiac units like the pediatric heart team in major public hospitals
- A sustainable government scheme both for the patient and practitioner should be entertained for the sustainability of the highly challenging and resource-intensive pediatric cardiology branch. Although the government proposed the need for insurance for congenital heart defects, making it practically viable is very important
- Training pediatric cardiac surgeons along with pediatric cardiologists to reduce the burden of congenital heart defects in India
- Congenital heart disease from fetal to adult is to be

managed under the guidance of a qualified pediatric cardiologist.

## CONCLUSIONS

The present survey suggests that pediatric cardiology may not be a lucrative career option for present-day Indian pediatricians. It is high time to think about the future survival of pediatric cardiologists in the country. Senior fraternity and the Pediatric Cardiac Society of India should step in to change the job scenario of Indian pediatric cardiologists.

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### Conflicts of interest

There are no conflicts of interest.

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