

Original Article

Pediatric Residents Perception of Pediatric Intensive Care Training During Post Graduation

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ABSTRACT

Introduction: Pediatric Intensive Care training is an integral part of Pediatric Postgraduate Program with scant data in the published literature on student's perception about training in Pediatric intensive care (PICU). We undertook this student (resident) survey to study the perception and prevalent opinion regarding the current status of PICU training in southern India.

Methods: 100 Pediatric residents of various institutions of South India with ≥ 3 months of PICU training were asked to respond to a set questionnaire by e mail, on line over a one year period. All residents who participated in ventilation workshop, conducted at SRMC and RI(Sri Ramachandra medical college and Rajiv Gandhi institute) during 2014 and 2015, were selected for the survey. Residents with PICU training of less than 3 months were not included in the study. Response of the 45 residents was finally put to analysis who responded with answering all questions during the survey.

Results: 55 % of the residents felt PICU posting was stressful. Regarding total duration of PICU posting 57% residents thought 6 months and 33% thought 8 months are required during post graduation. Only 77% were confident in recognising and managing critical care illness independently at the end of postgraduate training. 91% thought that undergoing BLS (Basic life support) and PALS (Pediatric advanced life support) training prior to PICU posting should be mandatory. Only 71% participated in Simulation Based Learning Programmes during post graduation.

Conclusion: All 45 residents felt that PICU training, though stressful, was interesting, increased the overall confidence and was very much needed as part of their post graduate training. Majority felt that undergoing BLS (Basic life support) and PALS (Pediatric advanced life support) training prior to PICU posting should be mandatory.

Key words: PICU training, pediatric, education, resident, post graduate, pediatric intensive care, medical education

Introduction

Pediatric Intensive Care training is a part of Pediatric Postgraduate Program. Very little data¹⁻³ is available on student's perception about their PICU training. Hence we decided to do this study.

Objective

To evaluate pediatric resident's perception regarding PICU training during their postgraduate program.

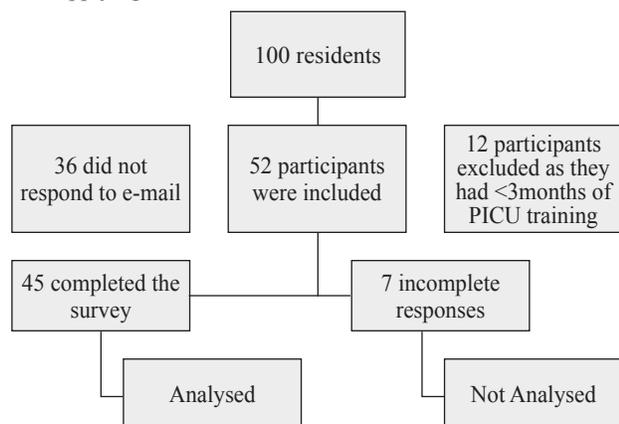
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Methods

Study design - A cross-sectional study, Source of data - Pediatric residents of various institutions of South India, Sampling method - Nonprobability sampling method., Sample size - 100 participants., Inclusion criteria - pediatric residents with ≥ 3 months of PICU training, Exclusion criteria - Pediatric residents with < 3 months of PICU training., Study duration - July 15th 2015 - August 15th 2015. Operating procedure for collecting the data (Fig1): 100 pediatric residents, who participated in ventilation workshop, conducted at SRMC & RI (Sri Ramachandra medical college and Research institute) during 2014 and 2015, were

Figure 1: Flow diagram of final inclusion of the participants after applying the exclusion criteria



selected for the survey. The need for conducting the survey was explained to the residents in the invitation e-mail, which also included the consent process. An online survey was conducted through a questionnaire through e-mail and the data was gathered. **Statistical analyses:** Response of the residents participated in the study was analysed by percentages.

Results

After exclusion (figure 1) total of 45 participants qualifies for data analysis. All the 45 participants thought that PICU posting must be mandatory as part of Postgraduate (PG) curriculum to manage sick children without fear. Most residents felt managing pediatric emergency independently was a great task. Few felt that post graduate training was incomplete without PICU training.

Regarding total duration of PICU posting, 27 (57%) residents thought 6 months and 15 (33%) thought 8 months, respectively are required during post graduation. Only 35 (77%) were confident in recognising and managing critical care illness independently at the end of postgraduate training.

Among the participants 71% were involved in counselling parents of critically ill children. 75.5% of residents participated in breaking the bad news to parents. 96% of residents wished to include formal communication skills training as a part of their training. 38% of the pediatric residents wanted to take up Pediatric critical care as their career.

55 % of the residents felt PICU posting was stressful.

Most common reasons being prolonged working hours, overworking with minimal guidance, seeing a terminally ill child suffer, skipping meals, lack of sleep, many sick children needing monitoring, less number of available personnel and too much of documentation.

Only 73% of residents had undergone Basic Life support (BLS) training prior to PICU posting and 80% had undergone Paediatric Advanced Life support (PALS) training during post graduation. But 41(91%) thought that undergoing BLS and PALS training prior to PICU posting should be made mandatory. Only 71% of residents participated in Simulation Based Learning Programs during post graduation. But all 45 felt that PICU rotation was interesting leading to increase the confidence and it should be mandatory part of their post graduate training. Participants considered interactive rounds, skills training under guidance of faculty, morning reporting, PALS training as main strength of pediatric critical care training. Lack of standardized protocols, lack of trained personnel in pediatric critical care, inadequate equipment, early referral, not allowing PG to access central venous line were most commonly observed weakness of PICU training. Hands on skills for procedures, to follow unit protocols based on national and international guidelines for particular disease management, relieving night duty PGs early, PALS training in first year, regular simulation based training and communication skill training were most common suggestions made by residents to improve pediatric critical care training.

Discussion

To our knowledge there are no studies done worldwide regarding pediatric residents perception about their PICU training during their post graduation training period. Participants considered interactive rounds, skills training under guidance of faculty, morning reporting, PALS training as main strength of pediatric critical care training. This comes as no surprise. Lack of standardized protocols, lack of trained personnel in pediatric critical care, inadequate equipment, early referral, not allowing PG to access central venous line were most commonly observed weakness of PICU training. Weaknesses of such training programs as

described above need lot of work and understanding on the part of teaching faculty in such post graduate programs. Simulation as a teaching tool has recently gained popularity in the field of medicine.

Simulation is defined as artificial representation of a real world process to achieve educational goals via experimental learning. Simulation based medical education is defined as any educational activity that utilizes simulative aids to replicate clinical scenarios. Trainers can make mistakes and learn from them without harming or distressing patient. It helps to acquire procedural skills for beginners. Only 71% participated in Simulation Based Learning Programme during post graduation. But all 45 felt it is interesting, increases the confidence and it should be part of their training. Simulation has made great progress in revolutionising the medical training workshops, but it is currently not included as part of mandatory graduate or post graduate curriculum.

As expected, Hands on skills for procedures, to follow unit protocols based on national and international

guidelines for particular disease management, relieving night duty PGs early, PALS training in first year, regular simulation based training and communication skill training were most common suggestions made by residents to improve pediatric critical care training. Limitations of this study are mainly related to a small sample size and selection bias. Inaccurate and vague responses have also got to be considered as inherent flaws in all studies related to questionnaires.

Response rate of any online survey is usually poor but in our study 45 out of 100 participants (45%) who were considered for final analysis, was considered reasonably good by authors.

Conclusion

Pediatric residents perceive that there is need for Simulation Based Learning Program and formal training in communication skills. Most of them feel that BLS & PALS training must be made mandatory prior to PICU training. Many of them feel that PICU training was stressful due to prolonged working hours and need for more documentation. All 45 residents felt that PICU training, though stressful, was interesting, increased the overall confidence and was very much needed as part of their post graduate training.

Further studies are needed with larger population to know if residents perception and specific suggestions would help to modify and improve current training methods related to pediatric critical care.

Table 1: Level of PG training of participating residents at the time of study.

Current level of PG training	Number of PGs (45)	Percentage
1 st year	8	17.78%
2 nd year	16	35.56%
3 rd year	9	20.00%
Just completed PG	12	26.67%

Table 2: Response of postgraduates for the questionnaire

Questionnaire	Yes (n) (%)	No (n) (%)
1. Do you think that one would be confident in recognising and managing critical care illness among children independently at the end of postgraduate training ?	35 (77.7%)	10 (22.2%)
2. Were you involved in counselling parents in your PICU?	32 (71.1%)	13 (28.8%)
3. Were you involved in breaking the bad news (death) to parents?	34 (75.5%)	11 (24.5%)
4. Do you think that formal communication skills training is required during postgraduation including how to break badnews?	43 (95.5%)	2 (4.5%)
5. Do you think PICU posting was stressful? If yes please mention the reason.	25 (55.5%)	20 (44.5%)
6. Have you undergone BLS training prior to PICU training?	33 (73.3%)	12 (26.6%)
7. Have you undergone PALS training during postgraduation ?	36 (80%)	9 (20%)
8. Do you think BLS & PALS training must be mandatory prior to PICU posting ?	41 (91 %)	4 (9%)
9. Have you undergone any simulation based workshop during postgraduation?	32 (71.1%)	13 (28.8%)
10. Do you think that simulation based learning during the course will increase the confidence of postgraduate ?	45(100%)	-
11. Would you choose paediatric critical care as your career in future?	17(37.7%)	28(62.2%)

What this study adds?

1. Pediatric residents perceive that there is need for Simulation Based Learning Program and formal training in communication skills
2. Most of them feel that BLS & PALS training must be made mandatory prior to PICU training.

Conflict of Interest: None**Source of Funding:** None**References**

1. R.N.Srivastava, S.K.Mittal, Vinod K Paul, IAP guidelines for Postgraduate Medical Education in Pediatrics, Indian Pediatrics; 2001;38:847-862.
2. Medical council of India - Vision 2015, Post Graduate Medical Education
3. MG Geeta, P Krishnakumar, A Riyaz, Pediatric Postgraduate Training in India - Residents Perspective, Indian Journal of Pediatrics: July 2014: 745-746

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