

## Needs assessment for curricular reform of a post graduate paediatric training programme at a private university hospital in Karachi, Pakistan

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### Abstract

In order to make and sustain changes in the curriculum, needs assessment is the key. We conducted a need assessment survey using a questionnaire based on a 7 point Likert Scale by residents and alumni. Over all response rate in the study was 77.5%. Fifty eight percent participants were females. Highest level of agreement (mean score 5.7) was found between the alumni and residents regarding the need to revise the content, teaching and assessment strategies in the programme. Twenty seven alumni (n= 38, 71%) had cleared their FCPS exams. The alumni thought that the existing teaching and assessment strategies do not facilitate in passing professional certificate exams (mean score 3.6). The mean attempts required by the alumni for clearing this exam was 3.3, and 84.2% considered their weak clinical skills as the reason for their recurrent failure.

**Keywords:** Need assessment, Residency, Curriculum.

### Introduction

The structure and processes of a residency training programme is the cornerstone for producing competent physicians for society. It is a high-stake and vital stage of medical education in which trainees receive the appropriate clinical exposure and training under supervision and evolve as competent and capable individuals for the community.<sup>1</sup> Over the last decade the initiative to move to outcomes-based education has redefined the competencies physicians should acquire during training. The real challenge is to incorporate these competencies in the residency curriculum in terms of the curricular content, teaching, learning and assessment strategies. In order to make and withstand the changes in a curriculum, need assessment is a key step to align resources with the strategy, construct relationship among stakeholders, clarify the impact of the problem and give the vision for decision making.<sup>2</sup> It can be conducted using a questionnaire and direct interviews with different stakeholders (e.g. learner, faculty, programme directors etc.).<sup>2</sup> Considering this fact, the purpose of this survey was

to identify opinions and thereby the needs of the learner in order to revamp the curriculum for better outcomes.

### Methods and Results

This study was conducted at the Department of Paediatrics and Child Health, Aga Khan University Karachi from January - April 2017. All paediatric residents (year I-IV) and alumni who graduated from our programme during 2010 to 2014 were included. The study was approved by the Ethical Review Committee of the Institute. A questionnaire was designed and piloted in a voluntary test cohort and subsequently revised. The questionnaire was based on a 7 point Likert Scale (1= strongly disagree, 7 = strongly agree) and had four major sections including curriculum content, teaching, assessment and feedback in the Paediatric residency programme. There were two additional questions in the alumni questionnaire regarding the Fellowship of College of Physicians & Surgeons (FCPS) exam. The questionnaire was given in person to the residents while it was sent through email to the Alumni. Data were analyzed using SPSS version 20.0. Frequency and percentages were calculated and reported for the overall and segregated responses, gender, alumni who passed FCPS exam and reason for failing the exam. Mean scores and standard deviations were calculated for each of the item responses received from residents and alumni separately. Mean was also calculated for the number of attempts required by the alumni for passing the FCPS exam.

Fifty six residents and 55 alumni were included. Over all response rate was found to be 77.5%. Forty eight residents (85.7%) responded to the questionnaire while thirty eight alumni (69%) emailed their responses. Approaching through email may be the reason of the lower response rate in case of the alumni. Out of the total respondents, 58% were females. Mean scores of items showing highest and lowest degree of agreement are shown in Table. Substantial difference on degree of agreement was found between the two groups related to teaching (alumni mean score 3.6±1.2, resident mean score 4.0±1.2), and assessment strategies (alumni mean score 3.3±1.4, resident mean score 5.5±1.5) respectively. Both the groups were found to be agreed on the need of revising the

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**Table:** Summary of respondent's data.

Items	Mean scores (Std.dev) (Alumni)	Mean scores (Std.dev) (Resident)
<b>Residency curriculum content:</b>		
- Structured	4.7(±1.0)	4.0(±1.4)
- Facilitate in passing certificate exams	3.8(1.3)	3.6(1.4)
<b>Teaching and learning strategies:</b>		
- Active involvement of faculty in teaching	3.7 (±1.8)	3.6(±1.2)
- Opportunities of learning	4.6 (±1.8)	4.8(±1.1)
- Facilitate in developing good clinical skills	3.6 (±1.5)	4.0(±1.2)
- Facilitate in developing good subject knowledge	3.3(±1.4)	4.2(±1.3)
<b>Assessment:</b>		
- Pre- defined promotion criteria	5.5(±1.9)	5.7(±1.6)
- Derives learning to pass certificate exams	3.6(±1.4)	5.5(±1.5)
<b>Feedback</b>		
- Timely	3.9 (±1.6)	4.3(±1.6)
- Non discriminative	3.8 (±1.8)	4.2(±1.4)
<b>Curricular reform</b>		
- Needed	5.9(±1.2)	5.5(±1.6)
Content	6.0(±1.3)	5.8(±1.2)
Teaching strategies	6.1(±1.1)	6.5(±1.3)
Assessment strategies	6.3(±1.1)	5.9(±1.4)

(Std.dev): Standard Deviation.

curriculum in terms of the content, teaching and assessment strategies (alumni 5.9±1.2, resident 5.5±1.6). Of the respondents, twenty seven (n=38, 71%) alumni have been able to clear their FCPS exams. The mean attempts required by the alumni for clearing this exam is 3.3±1.4 and thirty two (84.2%) of alumni considered their weak clinical skills as the reason for their recurrent failure.

## Conclusion

In conclusion, this survey facilitates us in identifying the concerns of our trainees and areas which need improvement in our programme. We identified no major difference in the level of satisfaction of either gender which highlighted that the programme does not inculcate gender discrimination however we found declining level of satisfaction as the level of training is increased i.e. from year I to year IV. This finding may be related to increase

level of responsibilities and thereby less time for self-study as the training progresses. Another important observation is lack of faculty led teaching of residents in the programme. Teaching in the clinical environment comes with its own set of unique challenges; some key ones are time constraints, lack of incentives and rewards for teaching, work demands, teachers maintain other clinical, research or administrative responsibilities while being called upon to teach and deal with patient related challenges.<sup>3</sup> Motivation of clinical faculty is essential for effective delivery of teaching medical students and postgraduate trainees.

In our study, the differences which are found in the opinion of two groups regarding the teaching, learning and assessment strategies may be the result of the constant struggle by the programme directors for improving the quality of training programme. Though a satisfactory percentage of our Alumni respondents' have been able to clear the Fellowship of College of Physician and Surgeon (FCPS), efforts need to be directed towards improving strategies for clinical teaching which the alumni feel as the main hindrance in their exams. Through this need assessment survey, we were able to identify two important areas for faculty development which includes clinical teaching and feedback to the trainees. We recommend faculty development programmes to improve their skills of clinical teaching, mentoring and role modeling.

**Disclaimer:** This abstract has not been sent for publication nor presented in any conference.

**Conflict of Interest:** None.

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