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Trainee's Preparedness for Paediatric Work

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Abstract

Aim
Compare the opinion of paediatric consultants to paediatric Senior House Officers (SHOs) with regards their perceived level of preparedness for starting work in paediatrics.

Methods
A 5-point Likert scale questionnaire was administered to paediatric consultants and SHOs investigating how well they considered the SHO was performing and how well prepared the SHO perceived themselves for work in clinical paediatrics, respectively. Questions related to procedures, clinical examination, teamwork, history taking and OPD related activity.

Results
50 Consultants and 75 SHOs completed the questionnaire. Using a Mann-Whitney U test, both groups answered similarly to questions relating to clinical examination and history taking ($p=0.51$ and $p=0.15$). However, there were significant differences in their responses to questions relating to procedures, teamwork and OPD related activity ($p<0.05$).

Conclusion
There is a significant disparity between consultant opinion of ability and SHOs perception of preparedness for some of the same skills. More work, focusing on these specific aspects of undergraduate paediatric education needs to be carried out to improve graduate preparedness for this role.

Introduction

Every summer, teaching hospitals employ a new group of trainee doctors. For many new graduates, this will be the first occasion when they have responsibility for their interaction and treatment of patients. Whilst these doctors are still technically, 'in training,' there is an expectation that, in light of their undergraduate medical experience and knowledge, they will be able to perform many duties with limited supervision. A survey delivered to first-year residents in the U.S.A, "suggests the presence of a gap between what students learn during medical school and their clinical responsibilities as first-year residents [1]". There is also a reported discrepancy between graduates' self-assessment and their educational supervisor's assessment of their practice, suggesting possible lack of clarity of expected standards [2].

The process by which the standards of qualifying doctors are determined involves multiple stakeholders. The Irish Medical Council's eight domains of good professional practice [3] outline that doctors require competency in a range of skills in order to adequately perform their duties; scientific knowledge, clinical skills, empathy/compassion, interpersonal skills, ability to teach others, professionalism, management skills and the ability to independently continue their own professional development.

Consultants rely upon a supply of newly qualified doctors on a transitional, temporary basis in order to deliver a full range of services to their patients. Consultants rely upon medical schools or the postgraduate training bodies to guarantee the standard and competencies of the doctor in training that they employ. However, the purpose of the junior doctor is not merely to provide a service. The hospital consultant must provide mentorship, leadership, knowledge and experience to the junior 'under their wing' as part of the postgraduate development of this doctor. Front line hospital consultants often have limited input into undergraduate education and development.

The skills, competencies and training of newly recruited paediatric doctors are key to meeting the standards required in clinical practice. Graduating medical students are comprehensively assessed on their level of knowledge and specific skills, but their own perception of readiness for the role is not examined. In paediatrics, although graduating medical students do not enter the specialty immediately, most do not receive further training in paediatrics prior to starting as SHOs in the specialty.

The objectives of this study were to determine if consultant paediatricians deem that new SHOs starting with their service have been adequately prepared for their clinical role, to determine if doctors working in the role of paediatric SHO perceive they were adequately prepared for work in the field of paediatrics and and to compare consultant's opinion of SHO ability with SHOs' own perceived preparedness for their role.

Methods

This study was a prospective questionnaire-based study of practicing consultant paediatricians in Ireland, doctors entering the basic specialist-training scheme (BST) in paediatrics and new paediatric training SHOs starting in a tertiary paediatric centre (Children's University Hospital, Temple St). The paediatric SHO's included in the study have limited prior experience of paediatrics as they were either entering their first ever paediatric job or entering the training scheme (and so will have had less than 1 years previous experience).

Two similar questionnaires were designed. The first was delivered to current paediatric SHOs to assess how well prepared they felt they were for their job. The SHOs were asked, "My undergraduate training adequately prepared me for…" followed by 8 statements relating to IMC domains of good professional practice. The second was delivered to paediatric consultant physicians to assess how well they felt their current SHO was performing. The consultants were asked, "I feel that my current SHO is displaying the ability to perform at the expected level of an SHO with regards to…" followed by 10 statements, again reflecting IMC domains of good professional practice.

Participants were asked to judge to what extent they agreed with statements using a five-point Likert scale (1= strongly disagree, 2=disagree, 3= neutral, 4 = agree, 5= strongly agree). The questionnaires were administered as paper copies and were also available in Survey Monkey™ online software. (See appendix for copies of the questionnaires).

The SHO survey took place in the Royal College of Physicians Ireland (RCPI), Kildare Street, Dublin in October 2016 during the first of the paediatric 'BST' training days of that academic year. The Survey Monkey™ version was distributed to all paediatric SHOs working in Children's University Hospital, Temple Street (CUH) in February 2017, and eight weeks after they commenced their placement. The consultant questionnaire was distributed to all paediatric consultants employed by CUH and to all members of the RCPCI throughout Ireland via e-mail. The e-mails were sent out in February and March 2017 respectively, 8-10 weeks after the new SHOs had begun their latest job. Two new questions were added to the consultant questionnaire distributed to the whole RCPI to improve comparisons between the SHOs and their supervising consultants. Specifically, we added questions about 'history taking' and 'out-patient consultations' as these were also included in the SHO questionnaire.

Questionnaires were anonymous so neither consultant nor SHO could be identified. Ethical approval was obtained through the CUH and the RCPI Research and Ethics Committees'.

Results of the Likert scale questions were analysed using descriptive statistical analysis. Mann Whitney U used to test association between the SHO and consultant responses.

Results

Response

There were 51 consultant responses (from a total of 247 consultant paediatricians registered with the RCPI), 14 from CUH and 37 via RCPI e-mails (21% response rate). There were 75 SHO responses. Of a total of 79 paediatric SHO members of the RCPI paediatric BST training scheme, 66 completed paper copies (84% response rate). A further 9 SHOs currently working in CUH completed the questionnaire online, via SurveyMonkey™ from a total of 25 SHOs working in the hospital (some of whom had already completed the questionnaire at the BST study day).

Table 1. Number of responses per Likert score for each question on the SHO satisfaction questionnaire (n=75).

Question	Procedures	History Taking	Clinical Examination	Emergencies	Out-Patients	Teamwork	Prioritising	Continued professional development
Likert 1	19	0	0	7	3	7	5	1
Likert 2	27	0	4	30	17	12	20	5
Likert 3	15	8	8	18	12	17	19	13
Likert 4	13	47	47	17	39	33	29	41
Likert 5	1	20	16	3	2	6	2	15
Median Likert Score	2	4	4	3	4	4	3	4

The SHOs were asked, "My undergraduate training adequately prepared me for…" followed by 8 statements relating to IMC domains of good professional practice; procedures, history taking, clinical experience, emergencies, out-patients, teamwork, prioritising and continued professional development. Table 1 presents how the SHOs responded to these eight statements by use of a 5-point Likert scale.

Table 2. Number of responses per Likert score for each question on the consultant satisfaction questionnaire.

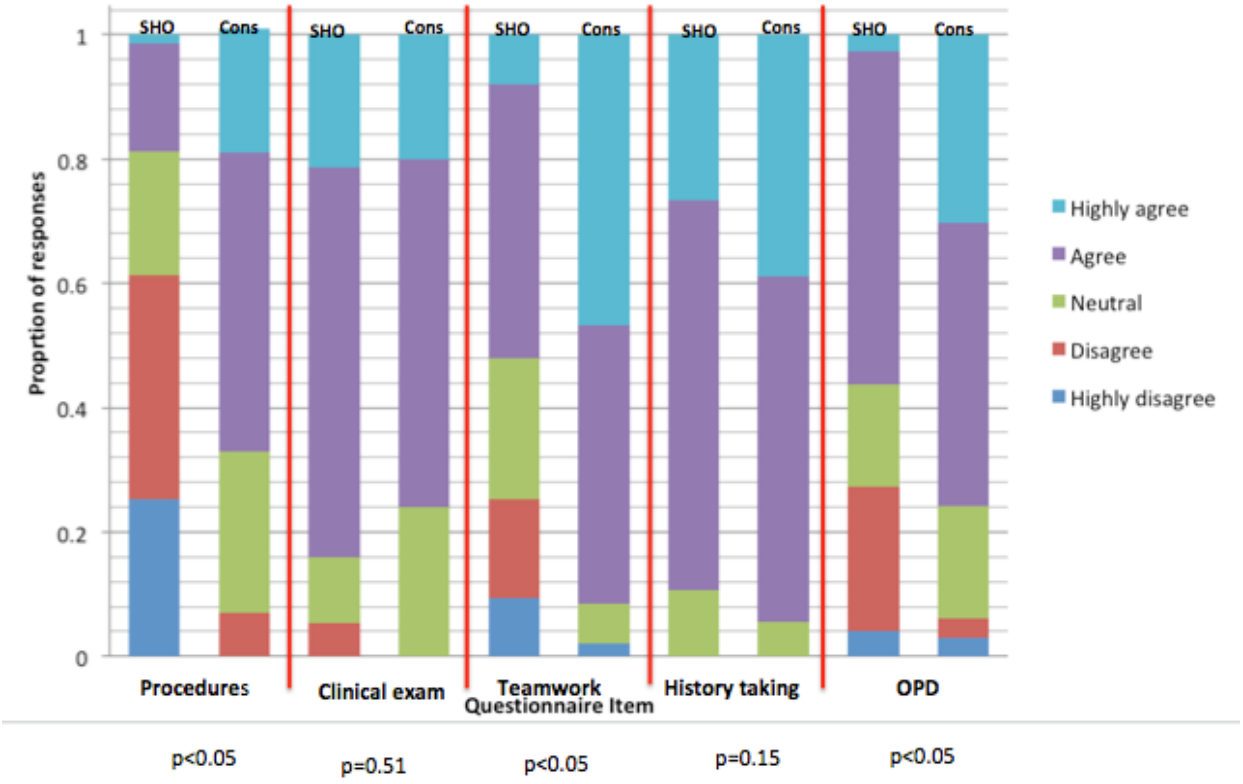
Question	Safety (n=51)	Communication (n=51)	Team work (n=51)	Work load (n=51)	Knowledge (n=51)	Professionalism (n=51)	Clinical Exam (n=51)	Procedures (n=51)	History Taking (n=37)	Out-Patients (n=37)	Relating to patients (n=14)
Likert 1	0	0	1	1	0	0	0	0	0	1	0
Likert 2	0	1	0	1	2	0	0	3	0	1	0
Likert 3	4	6	3	9	8	8	12	12	2	6	2
Likert 4	24	25	21	23	30	17	28	22	20	15	7
Likert 5	23	19	22	14	9	25	10	9	14	10	4
Median Likert Score	4	4	4	4	4	4	4	4	4	4	4

The consultants were asked, "I feel that my current SHO is displaying the ability to perform at the expected level of an SHO with regards to…" followed by 10 statements, again reflecting IMC domains of good professional practice; safety, communication, teamwork, workload, knowledge, clinical examination, history taking, out-patients and relating to patients. Table 2 presents how the consultants responded to these ten statements by use of a 5-point Likert scale.

Comparison of consultant satisfaction with SHO satisfaction comparison

There were five questions, which appeared on both the SHO and consultant satisfaction questionnaires. These related to: 1. Procedures 2. Clinical examination 3. Teamwork 4. History taking 5. Out-patient consultations.

Figure 1. Proportion of responses to the questions, which appear on both the SHO and consultant satisfaction Likert scale questionnaires, with comparison between SHO and consultant responses to the same question (Mann-Whitney U).



Discussion

The purpose of this study was to compare the opinions of paediatric SHO doctors and consultants with regard SHOs preparedness for work in paediatrics. It was therefore important to capture these opinions near the beginning of their first job when the SHO's experience of paediatrics was limited and would reflect what they were taught in their undergraduate degree. Overall, we found a disparity in the opinion of SHOs and consultants with regards how well prepared they were for work in paediatrics.

Consultants expressed satisfaction with current SHO performance in all areas reflecting aspects of the IMC's domains of good professional practice. This is reassuring as, ultimately; patient safety is the highest priority when supervising a colleague. In contrast to our findings, the literature shows that program directors have had concerns in the past with regards to medical students' preparedness for clinical work [4]. A common theme found is that they are more prepared for the affective aspects and not so much the cognitive aspects [5]. The difference between these studies and our own is that they investigated undergraduate students prior to commencing work whereas we investigated the opinion of consultants on a qualified doctor, eight weeks into their latest job.

There is limited literature exploring specifically a paediatric trainee doctor's view on their undergraduate experience and preparedness for the job. However, it is well known that undergraduate experience is very important when deciding on a career in paediatrics [6]. In two studies of postgraduates views on their preparedness for work, less than 60% of graduates agreed that their medical school had prepared them for the medical jobs undertaken when qualified [7, 8]. A study at the University of Edinburgh set a questionnaire based on 13 major 'foundation programme' [9] learning outcomes, administering it to both graduates and their own educational supervisors. Graduates felt well prepared for consultation and communication skills but less prepared for acute care and prescribing [10].

This is consistent with our study, which demonstrated that paediatric SHOs were most satisfied with 'history taking' and 'physical examination' but least prepared for 'emergencies' and 'procedures'.

A UK study from 2006, similar in methodology to our own, demonstrated that many of the affective domain aspects of performance were rated highly, however, performance in the cognitive aspects was rated lower [11]. These UK house officers rated their own ability higher than their consultants' rating of their ability, which is in contrast to our findings. This could be due to our consultants not being fully aware of their SHOs cognitive capabilities and being overly generous in their responses. This is borne out in the finding that SHOs rated their preparedness for 'procedures', 'teamwork' and 'outpatients' as significant lower than the consultants.

The results of our study are limited by the relatively poor response rate, particularly for the consultant questionnaire. However, we consider the sample size of 51 consultants to be sufficient from which to draw conclusions and make comparisons to the 75 paediatric SHOs. Another limiting factor is that there is no appropriate standardised questionnaire available. To the best of our knowledge, there have been no previous studies investigating paediatric doctor's views on their undergraduate preparation and so this was a novel questionnaire.

Our study adds to the literature as most other studies tend to suggest that consultants more commonly view the juniors 'ability' less than the junior perceive themselves. These results identify potential issues for new doctors starting in paediatrics that may reflect confidence levels rather than ability and warrants further investigation at both under- and postgraduate level.

In conclusion, consultants were satisfied with all aspects of their SHO performance. SHOs, on the other hand, consider themselves underprepared for many aspects of their job, particularly in 'procedures', 'emergencies' and 'prioritising'. There is a significant disparity between consultant opinion of ability and SHOs perception of preparedness for some of the same skills ('procedures', 'teamwork' and 'out-patients'). More work, particularly at undergraduate level, focusing on these specific aspects of paediatric education needs to be carried out to improve graduate preparedness for this role.

Due to shift-patterns and ever-increasing work demands, consultant may have limited direct interaction with many of their trainee doctors and therefore do not have an accurate knowledge of their ability only 8 weeks into post. We should also consider that trainees might set too high an expectation upon themselves, one that is not set by their consultant supervisors. In practice, it is likely to be a combination of both these factors. In the future, expectations of SHOs should be made explicitly clear when they start their new job. This can be achieved by having a formal educational meeting with their designated consultant supervisor to discuss their new role with regular review of their progress throughout the post. This would ensure that expectations are shared between both parties and made clear clear. These meetings also allow the opportunity for formative feedback to ensure that set standards are met.

Declaration of Conflicts of Interest:

I confirm there are no conflicts of interest related to this paper.

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