

Parent feedback: perception of parents and pediatric residents in Asian culture

Samart Pakakasama (✉ samart.pak@mahidol.ac.th)

Mahidol University Faculty of Medicine Ramathibodi Hospital

Jeroen Donkers

Maastricht University

Pongtong Puranitee

Mahidol University Faculty of Medicine Ramathibodi Hospital

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Abstract

Background

Residency programs have used feedback of parents as a part of multisource feedback to improve residents' skills. However, there is no evidence showing how parents can appropriately be engaged in pediatric resident feedback in our context. This study aimed to investigate: 1) the resident skills assessed by parents in perception of Thai parents and pediatric residents and 2) the parent characteristics making credible feedback in perception of Thai pediatric residents.

Methods

The participating parents were asked to rate their confident to assess residents' skills according to 17 items of the PARENTS questionnaire (Likert scale 1–5). To enhance the reasons of parent's confident, the parents responded to think aloud interviews. We conducted focus groups in order to explore the resident perception on parents' assessable resident skills and credible parent characteristics.

Results

There were 51 parents revealing the mean confident scores of 17 items ranged from 4.06 to 4.37. The parents felt confident to assess the residents' skills according to the questionnaire because they directly experienced the residents' performance during admissions. Five resident focus groups were conducted. In resident perception, residents' skills in communication, collaboration, leadership and professionalism were assessable by parents. The characteristics affecting the feedback credibility included parents' prior experience, personal behavior and confrontation to medical situation.

Conclusions

Thai residency programs may use parent feedback for residents' performance improvement as both parents and residents are able to identify the parents' assessable skills. The feedback process should consider the credible parents' characteristics to increase the acceptability and avoid the bias.

Background

In pediatrics, parents or caregivers often have direct interactions with pediatricians because they are always being with their children. They observe how physicians take care of the patients, communicate with them and other professions, and demonstrate professionalism [1]. Parents are willing and able to assess some physicians' skills. Pediatric residents positively react to parent feedback and used it for assessing and improving their performance [2, 3]. Parent feedback has been widely studied and used in Western countries whereas there are only inadequate studies in Eastern countries. Perceptions on using

parent feedback of pediatric residents with different cultural background may not be similar. It is therefore unclear how parents can be engaged in an Asian culture setting.

There are several studies showing that children and their parents or caregivers are able to give reliable feedback on physician competencies of medical students and residents. O'Keefe and Whitham demonstrated that parent evaluations provided useful feedback for interpersonal skills of medical students [4]. Parent evaluations in combination with faculty formative assessments were able to identify half of students who subsequently performed below the class mean in summative assessments. Crossley et al. developed a questionnaire for assessing doctor-patient interaction rated by children and their parents [5]. The authors showed that parents were able to provide reliable ratings of physicians' interactions with children. The Paediatric Carers of Children Feedback tool (PaedCCF) modified from the Sheffield Patient Assessment Tool (SHEFFPAT) is a questionnaire for assessing communication skills of physicians in United Kingdom [6]. The caregivers were asked to respond this assessment tool evaluating how well physicians interact with children and caregivers. The authors demonstrated favorable validity, reliability, feasibility, and acceptability of this tool. Parents, thus, are a trustworthy assessment source when we focus on interpersonal, communication, and confidentiality skills of the trainees within a non-specific pediatric workplace.

Apart from interpersonal and communication skills, parents perceive they are capable of assessing residents' nontechnical skills in the pediatric emergency department. These nontechnical skills include communication skills, comfort in a pediatric setting, adaptability, and collaboration [7]. This evidence was used for developing a tool for parents to assess residents' nontechnical skills in the pediatric emergency department, the Parents' Assessment of Residents Enacting Non-technical Skills (PARENTS) [8]. Pediatric emergency residents found that the feedback form this tool was encouraging. Residents considered that parent feedback was credible and valuable and could be used for improvement of their skills [3]. These studies demonstrate that parents can be effectively involved in resident assessment if appropriately assessable residents' skills are identified. It is therefore important to engage parents in the processes of assessment tool development.

Although physicians can use multisource feedback (MSF) for improving their professional practice, factors affecting effectiveness of using the feedback from parents as part of an MSF need to be considered. Physicians perceive that feedback is useful if the raters are familiar with their work and have experience of either working with them or observing their practice. They also prefer facilitated and narrative comments [9]. Medical students perceive that feedback from credible sources is more likely to alter behavior than feedback from non-credible feedback providers [10]. Pediatric residents are more probable to accept the patient feedback when it aligns with their self-perceptions or if they share this feedback with a mentor. In addition, wide variety and longitudinal relationship of the patients are positive factors for trusting the feedback [11]. These studies emphasize that physicians and trainees are more willing to accept and use feedback from the assessment sources that they believe to be credible.

Cultural differences have been shown to be involved in several aspects of medical education. The Hofstede model has been used to explain cultural differences between countries [12]. Hofstede classified cultural differences between countries using five dimensions: power distance, individualism, uncertainty avoidance, masculinity, and long-term orientation. The Hofstede's cultural dimensions theory describes the effects of a society's culture on values of its member and how these values relate to behavior. Suhoyo, et al. found cultural differences in feedback processes during clerkships comparing between Indonesian and Dutch medical students [13]. They found that students in the country with high power distance and low individualism (Indonesia in this case) preferred to receive feedback from specialists and perceived feedback from specialists and residents as more instructive than feedback from nursing and paramedical staff. In contrast, Dutch students valued the feedback from residents and specialists equally. They perceived the feedback from direct observation was more instructive. Moreover, cultural differences also influence the perceived learning value of feedback. Indonesian medical students recognized characteristics of four valuable feedback consisting of weaknesses mentioned by provider, comparing performance to a standard, explaining or demonstrating the correct performance, and preparing an action plan with the student [14]. Appraisal of good performance, another valuable characteristic of feedback, was not valued from Indonesian students. Cultural differences seem to influence the perception in credibility of feedback sources and characteristics of feedback of population in each culture. Thailand is classified to have high power distance dimension. Thai people are also more collectivist. This characteristics are opposite to the Western's cultural dimensions. The perception of parent feedback in such high power distance and collectivist culture has never been investigated.

To effectively engage parents to be a source of pediatric residents' MSF, parents on their side need to be confident to assess physicians' skills while pediatric residents need to trust parents as a credible source. The purpose of this study was to explore the perception of parents on their assessable physicians' skills and of pediatric residents on credibility of parent feedback in our context. This is an important topic to be studied because we will be able to use parents as a source of MSF in the most effective and appropriate way. The results of this study may be applied to other countries with the same cultural dimensions.

In order to respond to the purpose, this study asked the following questions:

1. In both Thai parent and pediatric resident perception, what pediatric residents' skills can be assessed by parents?
2. In Thai pediatric resident perception, what characteristics of parents make feedback credible for pediatric residents?

Methods

Setting

This study was conducted at the Department of Pediatrics, Faculty of Medicine Ramathibodi hospital, Mahidol University, Bangkok, Thailand. Our department has provided a 3-year pediatric residency training

program for more than 40 years. Most of the patients are here for secondary and tertiary care. Patients with chronic illnesses are the majority of admitted patients. Parents are allowed to be with patients at all time. The in-patient setting was selected for this study because parents always have direct opportunity to contact with pediatric residents for a period of time. The main responsibilities of residents include history taking, physical examination, investigation and treatment planning. Residents directly have contact with parents or caregivers and pediatric patients. They are available and working in the wards during days and nights.

Participants

Two groups of purposive participants were invited to the study.

1. Parents or caregivers of children and adolescents (age less than 18 years) with a history of more than two in-patient admissions due to acute or chronic illnesses: These parents are likely to be familiar to the hospital systems and roles of health care team members. These parents should thus be able to recognize the team members such as medical students, residents, faculty, and nurses because they have communicated and worked with them during their child admissions.

Parents were directly asked to participate in the study by the researcher. This study expected to recruit 50 parents or caregivers to participate in the quantitative part (responding to the questionnaire). Parents were also asked for a think-aloud interview after answering the questionnaire. The final number of parents in this qualitative part would be determined when the data was saturated.

2. Current pediatric residents, 1st to 3rd year: At the time the research took place, there were 15 residents present per year in the program. Residents are the key persons participating in patient care at the program.

Residents were informed about this study by the researcher after a morning educational activity. Residents, then, were invited via email. The final number of focus groups was determined when data saturation was reached.

Design

To explore the parent perception, this study used an explanatory sequential mixed methods consisting of two parts. The first part was a quantitative study. An existing parent feedback questionnaire was used to identify assessable physician skills. The second part was a qualitative study in order to further explore the parent perception on their confidence to providing feedback. To study the resident perception on parents' assessable skills of the residents and the credible parents' characteristics, we used a qualitative method.

Data collection

The quantitative part

Parent characteristics

Characteristic data of enrolled parents were collected. The data included age, relation to the patient (mother, father, or caregiver), number of children, educational background (high school, Bachelor, Master, or PhD degree), career, and economic status. Disease status of the patient (acute or chronic disease) was also recorded.

The PARENTS questionnaire

An existing parent feedback questionnaire assessing pediatric residents' skills was selected: **Parents' Assessment of Residents Enacting Non-Technical Skills (PARENTS)**. This questionnaire was developed from parent assessment of residents in a pediatric emergency departments [11]. The PARENTS consists of 17 close-ended and 2 open-ended items with 5-point Likert-type rating scales. This tool has been used to assess residents' skills including communication, comfort in a pediatric setting, adaptability, and collaboration. This tool showed high validity evidence. Although this questionnaire was developed in the emergency department setting, the items assessing resident skills were quite general. Therefore, this questionnaire should also be used in general pediatric setting. The original principle investigator of this questionnaire was asked for permission of use. Although this questionnaire is used for assessing residents' skills, this study used the questionnaire, however, not to judge residents, but to test the parents' confidence in answering the questions in the questionnaire. The questionnaire was translated from English into Thai language. The processes of translation were adapted from the guidelines for translating a questionnaire into a different language [17].

The questionnaire was administrated by the researcher. Parents were asked to read each item of the questionnaire. Then, parents responded how they felt confident to evaluate the residents' skills according to each item. The answer options of each item was a 5-level Likert scale ranging from "no confident" (score 1) to full confident (score 5). The parents replied with the level of their confidence to assess residents' skills but not actually judge the performance of residents. So this rating scale differed from the original scale of the PARENTS instrument.

The qualitative part

The qualitative part consisted of two tasks. The first task was to explore in-depth data on parents' confident of assessable skills. The second task was to investigate the perception of pediatric residents on parents' assessable skills and credibility of parents' feedback.

Parent perception

The parents were invited for think-aloud interviews in order to in-depth explore on their confident of assessable skills. The parents voluntarily participated in the interview part after answering the questionnaire. The researcher used probe questions eliciting detailed information beyond the answers given by the parents. The probe question of each item was "why did you answer this option?". After

finishing all 17 items, the researcher asked “which any other skills or abilities of residents do you think you can assess?”. The interviewing was audiotaped and transcribed verbatim.

Resident perception

The researcher invited pediatric residents for focus groups in order to get information from different participants’ opinion. Each group consisted of 6–8 participants. The members of each group were the same year residents in order to avoid power differences. Almost all involved residents were females (41 females and 4 males) and all first year residents were females. Therefore, there was no equal male/female ratio possible in each group. The researcher was an interviewer or moderator and a colleague was an observer. The observer helped picking up significant non-verbal communication in the group. Although there was a power distance between the residents and interviewer, it could only have minimal effect on the interview process because the discussion issues did not involve the relationship between the residents and moderator. The discussion guide with a list of questions was prepared in advance [16]. The interview guide is shown in Table 1. The expected time for each focus group was about 45 minutes to one hour. The content of interviews and focus groups was audiotape recorded and transcribed verbatim.

Table 1
Interview guide for focus group

Types of question	Questions
Opening questions	<ul style="list-style-type: none"> • Do you have a chance to interact with parents of your patients every day?
Introductory questions	<ul style="list-style-type: none"> • Can you describe a typical encounter which you usually have with parents of your patients?
Transition questions	<ul style="list-style-type: none"> • What do you think about the roles of parents involving in pediatric resident training?
Key questions	<ul style="list-style-type: none"> • Can anyone describe our physicians’ skills which parents can evaluate or assess? • Why do you think this (specific) skill cannot be assessed by parents? • Can anyone describe characteristics of parents which you can give credibility if the parents give feedback on your skills? • Why do you think this (specific) characteristic is so important?
Ending questions	<ul style="list-style-type: none"> • Is there anything that you would like to say that we have not mentioned?

Data analysis

Quantitative part

Characteristics of the parents were presented by category and frequency. The mean (S.D.) of the confident scales of each item and mean overall score were calculated. Comparison of the mean overall scores of selected parents' characteristics were analyzed using t-tests.

Qualitative part

Data collection and data analysis occurred concurrently. The new data or information might emerge and was used for formulating new questions or performing member checking [17]. Iterative data collection and analysis was continuously performed until reaching data saturation.

Using content analysis approach, data analysis was performed by coding and categorizing from participants' narratives [18]. Finally, categories formed themes. A second researcher with experience in conducting qualitative research coded and categorized transcripts independently. Then, we met to compare and discuss the coding and categorization. Reflexivity was recorded on diary during data collection and analysis.

Ethics

This study was approved by Ethical Committee for Research of Faculty of Medicine Ramathibodi hospital before collecting the data. Each participant was asked for written informed consent.

Results

Parent perception on residents' assessable skills

There were 51 parents participated in this study. The mean age of the parents was 40.7 years. Most of caregivers were mothers. Sixty percent of the parents graduated higher education degrees. All of the admitted patients were diagnosed with chronic diseases and most of them had history of more than 10 admissions. The characteristics of the parents are shown in Table 2.

Table 2
 Characteristics of parents (n = 51)

Characteristics	N (%)
Gender	46 (90.2)
- Female	5 (9.8)
- Male	
Mean age (years) (SD)	40.7 (7.6)
Relation to the patients	43 (84.3)
- Mother	5 (9.8)
- Father	3 (5.9)
- Others	
Education	7 (13.7)
- Primary school	13 (25.5)
- Secondary school	6 (11.8)
- Diploma	21 (41.2)
- Bachelor degree	4 (7.8)
- Master degree	
Household incomes (Baht/month)	10 (19.6)
- < 10,000	21 (41.2)
- 10,000–29,999	12 (23.5)
- 30,000–49,999	5 (9.8)
- 50,000–99,999	3 (5.9)
- 100,000 +	
No of admissions	20 (39.2)
- 2–9	31 (60.8)
- 10 +	

Parent response to PARENTS questionnaire

Parents read the PARENTS questionnaire and checked their confident scores from 1 to 5 for each item. Most parents felt confident at the level of 4 or 5 for each item ranging from 82.3–96.1% (Table 3). The mean (SD) of the overall scores was 4.18 (0.80). No more than 2% of the parents selected the confident

level 1 or 2 for any of the questions. For questions 4, 10, 13, and 15, more than 10% of the parents answered level 3. For two questions, 3 and 9, more than 40% of the parents answered level 5.

Table 3
The percentage of parent's level of confidence response of the PARENTS questionnaire

Item	Questions	Percentage of response (n = 51)				
		1	2	3	4	5
1	Did the resident identify him/herself as a resident?	2.0	2.0	7.8	64.7	23.5
2	Was the resident's ID badge or nametag visible?	2.0	2.0	2.0	54.9	39.2
3	Did the resident wash his/her hands?	0.0	0.0	7.8	49.0	43.1
4	..... enter the room with some basic knowledge of your child's condition?	2.0	0.0	11.8	62.7	23.5
5	..... listen to you and allow you to speak without interruption?	2.0	0.0	5.9	60.8	31.4
6	..... appear to understand what you had to say?	2.0	0.0	9.8	62.7	25.5
7	..... explain what he/she was doing for your child and why?	0.0	2.0	5.9	64.7	27.5
8	..... interact with you comfortable?	2.0	0.0	7.8	51.0	39.2
9	..... interact with your child comfortable?	2.0	0.0	3.9	47.1	47.1
10	..... be flexible in his/her thinking and approach depending on your needs and those of your child?	2.0	2.0	13.7	52.9	29.4
11	..... show concern for your feelings and those of your child?	2.0	0.0	2.0	56.9	39.2
12	..... pay attention to you and your child during your interactions with him/her?	2.0	0.0	7.8	56.9	33.3
13	..... explain your child's treatment or prescribed medication, including possible side effects?	2.0	2.0	11.8	52.9	31.4
14	..... determine next steps about care or treatment with you, including any follow-up plans?	2.0	0.0	9.8	51.0	37.3
15	..... discuss what to do if your child has any problems or complications related to his/her condition?	2.0	2.0	11.8	52.9	31.4
16	..... answer your question?	2.0	0.0	5.9	64.7	27.5
17	..... explain things in a way that you could understand?	2.0	0.0	5.9	62.7	29.4

There was no association between educational level or number of admissions and the mean scores (Table 4). The mean of the overall scores of parents with high school graduation or less (4.05) was not different with the mean of the overall scores of parents with higher education graduation (4.27). Parents

experiencing 10 or more admissions had the mean of the overall scores of 4.17 which was comparable to the mean of the overall scores of parents with less than 10 admission experiences (4.22).

Table 4
Comparison of the mean score of the parents' characteristics

Characteristics	Mean score (SD)	95% CI	<i>p value</i>
Education	4.05 (0.77)	3.69–4.41	0.91
- High school or less	4.27 (0.39)	4.13–4.41	
- Higher			
Admission	4.22 (0.38)	4.04–4.39	0.31
- Less than 10	4.17 (0.67)	3.92–4.35	
- 10 or more			

Parent think-aloud interview on residents' assessable skills

A total of 21 parents were interviewed. These parents were asked to explain how they were or were not confident to assess residents' skills designated in each item of the questionnaire. Parents' perception and quotes are shown in Table 5. Quotes are translated from Thai, individual parents are indicated anonymously by [Px].

Table 5
Parents' responses to the think-aloud interview

Item	Parents' perception	Quotations
1	<p>Parents experienced that residents introduced themselves to parents and patients.</p> <p>Parents of patients with chronic diseases were familiar to the residents because these patients were admitted multiple times.</p>	<p>"...They (residents) introduce their names and tell that they will take care of my child during this admission. They explain everything and come to see her every day." [parent (P) 16]</p> <p>"My daughter has been admitted so many times. I know who are residents, fellows or staffs." [P17]</p>
2	<p>Parents easily saw residents' nametags because they wore them during on duty.</p>	<p>"They (residents) usually hang nametags and the letters are clearly visible." [P11]</p>
3	<p>Parents always paid attention to the residents when they touched their child. There were alcohol bottles beside the patients' beds. Parents were able to identify whether the residents washed their hands or not.</p>	<p>"If someone (resident) comes to touch my daughter, I will watch carefully. I know who wash hands or not. Someone may come by but does not touch my child." [P17]</p>
4	<p>Previous medical history or past illness of the patients was considered to be the basic knowledge of the patients by parents. Residents could read medical records before seeing their patients.</p> <p>Parents noted that some residents might not have any knowledge of their child's conditions because the residents asked questions which parents thought they were supposed to know.</p>	<p>"..... they (residents) read medical records and know my child's current health condition very well. They can precisely tell the past medical information." [P7]</p> <p>"..... they may not know they (residents) ask as taking a medical history at first diagnosis." [P13]</p> <p>"..... Sometimes they (residents) have a lot of patients. I understand they have to read the medical records in front of me and ask a lot of questions." [P12]</p>
5	<p>Parents were appreciated when residents listened to them. Residents asked questions and let parents conveniently responded.</p>	<p>"Yes, they (residents) listen to us and take notes. Then, I think they will use the information for treating my child." [P12]</p>
6	<p>Most parents felt that the residents understood what they wanted to say. If parents asked questions, the residents would find answers or solutions for them.</p> <p>However, some parents were not confident that the residents understood their needs.</p>	<p>"They (residents) listen to us. If they listen to us, they will make correct diagnosis and provide appropriate treatment." [P5]</p> <p>"..... I am not confident. I am not sure whether they (residents) understand what I say to them." [P6]</p>
7	<p>Residents informed parents about procedures which they were going to do with the patients. Investigations and plan of treatment were also the two most frequent issues which residents discussed with parents and patients.</p>	<p>"Yes, she (resident) explains to us. Like today, my son will have lumbar puncture and bone marrow aspiration. She told me yesterday. She will use sedative drugs to make my son sleeping. She also gives treatment information at the same time." [P18]</p>

Item	Parents' perception	Quotations
8	Parents could recognize whether the residents interacted with them conveniently or not.	".... Resident of this ward gives good care for my child but other residents do not easily talk to us like him." [P10]
9	Most residents comfortably communicated with children. Parents could feel whether the residents sincerely care their child or not.	"I think I can assess some doctors (residents), not familiar to us, may not comfortably communicate with us compare to our doctors." [P10]
10	Parents saw residents' flexibilities of their thinking and approach when they asked the residents for changing the plans of investigations or treatment.	"My daughter gets venipuncture every morning. She suffers a lot. So I ask the doctor (resident) to collect a bunch of tests at one time" [P11]
11	<p>Pediatric residents frequently asked about parents' and patients' well-being and supported them. Parents saw the resident's facial expression and felt their empathy.</p> <p>Some parents felt that primary doctors of their children showed more concern compared to the residents.</p>	<p>"I can touch that feeling. When we feel sad, we always receive support from them (residents)." [P11]</p> <p>"Yes, they concern but it may be not similar to our relatives or primary doctor of my child" [P13]</p>
12	Residents listened to the parents and their child and focused what they needed.	"When they (residents) come to talk to us, they always pay attention." [P19]
13	Residents explained detail of treatment to the patients. Medications, administrations and possible side effects were frequently informed to the parents before discharge.	"She (resident) does explain to us. This time, my daughter has to get injections of white blood cell stimulation drug. She tells us that my child may have body ache or bone pain." [P18]
14	<p>Most patients had their own primary specialists. Pediatric residents could inform the plan of treatment after discussion with staffs. Parents were aware of the consultation system of the pediatric department.</p> <p>The complicated patients received care from multiple specialties. Arranging appropriate follow-up appointments was an important issue for caregivers.</p>	<p>"I know that she (resident) has to discuss my child's plans with staffs. I see they discuss as a team and then, she comes to tell us what we have to do next." [P17]</p> <p>"I (parent) can recognize the differences between the residents in term of making next appointments for my child. Some resident explains to us clearly but some can't. They may not well coordinate." [P6]</p>
15	Parents recognized that residents needed to consult staffs or primary doctors when the patients had problems or complications. Most of the times, the residents told the parents that they already discussed with primary staffs or other specialists.	"They (residents and staffs) will have conferences. They speaks a lot of medical words so I don't understand all of them. But I know they are discussing about my child's condition. Then, they come to explain to us." [P13]
16	Parents felt anxious and had many questions during their child's admissions. Parents commonly asked about the patients' symptoms and plans of treatment. Residents answers every questions from the parents.	"They are willing to answer. One night, my child had severe headache with high blood pressure. The resident came to see her and answers all questions I had." [P12]

Item	Parents' perception	Quotations
17	Parents accepted that they did not understand a number of medical terms. Most residents did not use medical terms when they talked to the parents. Parents would ask residents to repeat their explanation in the language that they would understand.	"..... Sometimes, residents use some medical terms. I don't understand so I ask them (residents) to explain to me again." [P11]

Residents' perception on assessable skills

Thirty six residents participated in focus groups. There were 5 focus groups: group 1 (n = 7) and group 2 (n = 8) of pediatric resident year 1, group 3 (n = 8) of year 2 and group 4 (n = 7) and group 5 (n = 6) of year 3. The participating residents identified four skills which would be able to be assessed by parents including communication, collaboration, leadership and professionalism.

Communication skills

All residents perceived that parents could well assess their communication skills. Residents described the daily activities they interacted with patients and parents which needed effective communication. They frequently informed medical information including clinical progression, results of investigations, plans of treatment and prognosis. Moreover, the residents spent more times with anxious parents and complicated cases. The residents highlighted components of communication skills which parents were able to assess: (1) abilities to make parents understanding the medical information; (2) active listening skills; and (3) empathy expression.

Residents' abilities to make parents understanding the medical information

Residents informed the significantly medical information to parents every day. Parents could realize how well they understood the information they received from the residents. Parents' understanding the medical information was the main objective of residents' routine communication with parents.

"We (residents) don't aim to give knowledge to them (parents). How we can clearly explain to them and make them understanding, I think it shows our communication skills." [focus group (FG) 3]

Residents' active listening skills

Parents could assess how the residents paid attention to them and their child. Active listening was an important skill because the residents could receive correct patients' information for making diagnosis and also recognized what the family's concerns were. Parents could observe residents' listening skills when the residents performed history taking and gave advices about the diseases and plans of treatment.

"We (residents) need to have good listening skills. Parents and patients want to have somebody who listen what they want to say or want to have something." [FG3]

Residents' empathy expression

Residents had opportunities to confront with the parents and sick children. During interaction with the families, the parents could recognize how well residents understood and care them.

“When we (residents) interact with children and parents, we need to understand how they feel or what they worry about.” [FG1]

Collaboration skills

The participating residents identified collaboration as intra-professional health care team or working among physician colleagues. Because most patients were chronic complicated cases so they were treated with multiple specialties. Residents responded for primary health care of these patients. Treatment of specific diseases or conditions were provided by specialists. Residents discussed and consulted with senior physicians or staffs for patient management. Residents thought parents could assess collaboration skills of residents from: (1) providing identical information; and (2) informing consultation process.

Residents' providing identical information

Parents might not see residents' consultation in front of them. The residents frequently consulted senior residents, fellows or staffs by phone calls or meetings. The parents knew whether residents effectively worked with others as a team if everyone in the team gave the identical medical information such as plans of treatment and follow up.

“..... Most of them (parents) know that we have already discussed and made plans for the patients. When specialty teams come to see the patients and inform the same plans as we told them.” [FG1]

Residents' informing consultation process

Residents informed parents that they did made consultation or had meetings with the team. The parents often were told that residents were going to work with several health professions for making their children better. Some parents favored residents who consulted specialists they would like to have.

“Sometimes, parents are overanxious. They like us to consult too many specialists although the patients' condition is benign. If some residents do not respond to their needs, they may feel uncomfortable with the residents.” [FG2]

Leadership skills

Residents indicated that there were several levels of physicians in a team. Commonly, one team consisted of 7–8 medical students, 1–2 junior residents, a senior resident and a staff in a general pediatric ward. Therefore, it might be difficult for parents to assess leadership skills of residents taking care of their children: “It is difficult to assess There are many doctors as well as students. Maybe they (parents)

can't identify whose jobs are" The participating residents were appreciate if the assessable skills were defined according to their levels. Parents could assess how residents demonstrated the skills of: (1) supervising medical students or junior residents; and (2) making decision of treatment.

Residents' supervising medical students or junior residents

Junior residents (the first year residents) lead service ward rounds and supervise and teach medical students and interns in the team. The residents demonstrated physical examination and identify important findings to students. The parents could recognize how residents teach and advice their students.

Residents' ability to make decision or solve problems or concerns

Parents of children with chronic diseases or multiple admissions would know the leader of the team. Senior residents (the second or third year residents) helped the team in case of complicated or complex cases, difficult situations or general consultation as needed. The parents always came to senior residents if they had some major concerns. The parents expected senior residents to make decision especially on treatment plans.

"In case of unsolved problems or concerns, we (senior residents) will jump in and help our junior residents sometimes, they can't deal with parents or parents come forward to talk to us. I think parents can see how we can help them (parents)." [FG5]

Professionalism

Participants discussed how residents demonstrated their professionalism to parents in daily practice. Residents thought parents could assess their manner, dressing or personality.

"When we (residents) interacted with them (parents and patients), they can see our manner how we talk to them politeness and trustable." [FG4]

Resident perception on parent characteristics

The participating residents discussed several characteristics of parents which made the feedback credible. Three major themes were identified: (1) parents' prior experience or knowledge, (2) residents' perceptions of parent personal characteristics; and (3) parents' confrontation to medical situation.

Parents' prior experience or knowledge

The parents' experience in admissions and caring the patients or knowledge of hospital and care team systems were important characteristics affecting residents' trust and using the feedback. These characteristics included:

Primary caregiver

Residents trusted main persons who primarily responded to patients' care. Reliable assessors should be parents or caregivers regularly taking care of the patients. The parents closely looking after the patients would be with the patients all the times. They would directly observe how residents interacted with the patients.

"..... Parents who assess us should be the ones being with the patients during admission can be grandparents or others be the ones who raise the patients." [FG5]

Experience with in-patient admissions

Children with chronic diseases mostly have had multiple admissions. The parents of these children would know the system of care team and hospital facilities. They were able to recognize students, residents, fellow or staffs. They knew the roles of junior and senior residents. They also were familiar to the treatment and medications. They would know if some residents practiced below the standard.

"They (parents) meet a number of residents so they know how we work. They also can compare some skills between each residents." [FG5]

"For patients with chronic diseases, have suffered with their diseases for a long time. Their parents or caregivers already have knowledge of their diseases and treatment. They know all medications." [FG3]

Adequate contact time

Residents thought parents and their children should be admitted for a long period of time which both parents and residents were familiar to each other. The residents also had opportunity to make relationship with the patients. The parents would see how residents could manage or treat the patients in different situations.

"I have seen their (parent's) child for a while, not just meet them one or two times and then they are discharged home. In that cases, they can superficially assess me." [FG1]

"I will better trust parents of chronic patients or patients under my continuity care." [FG1]

Multiple parents

Residents indicated that parent assessment would be credible if they receive feedback from multiple parents.

"We need to collect feedback from a large number of the parents. I will doubt if I get a bad feedback from one parent but good feedback from ten parents. The one giving me the bad feedback may be unsatisfied to other aspects, not me." [FG2]

Residents' perceptions of parent personal behavior

The participating residents recognized that personal behavior of parents involved in the credibility of feedback. The residents considered parents with open-minded and reasonable, appropriate expectation and stable emotion were trustable assessors.

Open-minded parents

Residents would like to have open-minded and reasonable parents giving them feedback. The parents who listen to the residents would understand what they did for the patients. The parents should ask questions or concerns so that the residents could answer the questions and correctly responded to their concerns. They would precisely judge residents if they opened their mind and actively listened to the residents.

“..... they (parents) should have conscious and open their mind to listen to us give us opportunity to explain and ask their questions not just imagine.” [FG2]

Appropriate parents’ expectation

Each parent had different levels of expectation to the service and treatment outcome. Our center is a government hospital so the environment and service might not be luxurious as private hospital. Some parents who experienced using private hospital service might have high expectation. If they felt disappointed to the service, they could give residents’ imprecise feedback.

“It is not about education. It is about attitude or biases. We can get unreliable feedback if they (parents) have bad attitude to us, hospital or anything.” [FG3]

Parents tended to be satisfied if they got what they wanted. They would preferred giving good feedback to residents who followed their needs.

“..... They (parents) will like residents who can give them everything or medications they want. In contrast, they unlike residents who try to explain for 15 minutes why their children don’t need the medications.” [FG3]

Stable parents’ emotional background

Parents’ personality or emotional background could affect residents’ feedback. There was a high chance to have conflict with parents having high anxiety or over concern.

“..... If we get a negative feedback which we don’t agree with, we may need to look at assessors. They (parents) may have high anxiety making them feel uncomfortable. For example, they are not satisfied with the treatment offered to their children.” [FG2]

Parents’ confrontation to medical situations

Parents in difficult situations or worsening outcome of treatment

Frequently, parents confronted with difficult situations such as having children in crisis health conditions or unexpected treatment outcome. These parents might not be mentally ready to assess residents.

“ In acute crisis such as having fever with convulsion, the patient has seizure and come in emergency department. The parents would be very anxious. They would be frustrated or unsatisfied if we (residents) reassure and discharge the patient back to home. It is not a good time asking them to assess us.” [FG3]

Discussion

Parent perception on residents' assessable skills

In this study, parent perception was explored using the PARENTS questionnaire and subsequently the think-aloud interview. The PARENTS questionnaire was selected to use for this study because it was specifically developed for pediatric residents and aimed to assess the integration skills of communication, collaboration, and professionalism [8]. We used the questionnaire to measure the confidence of parents in answering the questions. From the questionnaire results, more than 80% of the parents answered 4 or 5. This data implied that Thai parents felt confident to assess the non-technical skills of the pediatric residents. Although there were several groups of the parents in this study (Table 2), we did not find any differences in overall confidence levels. The educational levels or admission experiences could not predict the confidence of assessing residents' skills. Using clear questions may help the parents to clearly understand and answer each item. In a previous study, the parent demographic data did not relate to their attitude to rating student's skills in a pediatric ambulatory setting [19].

We observed some discrepancies of the percentages of the parents' confident levels between 17 questions. More than 40% of the parents answered level 5 for questions 3 and 9. These 2 questions were related to close observation of residents' behavior. The parents clearly stated that they easily could observe residents' hand washing because the alcohol gel bottles were provided at bedside (question 3). The parents stayed with their child all the time therefore they could observe the interaction between the residents and the patients (question 5). More than 10% of the parents gave level 3 for questions 4, 10, 13, and 15. These questions asked how well the residents communicated with the parents and their child. However, the content for communication of these questions connected to medical knowledge or knowledge of patients' background. Some parents might not feel highly confident to assess these aspects within the questions.

The think-aloud method allowed the parents explained the processes they used to reach the answer of each item. Our parents expressed the direct experience with the residents' skills described in the questionnaire items. They could explain why they gave either positive or negative response. The information received from our parents' responses support the assumption that parents are appropriate

assessors because they are always besides their children and able to observe residents' performance [8, 9]. The parents also demonstrated that their families had long-term relationships with the health care team. They recognized the team members and each member's roles. Increasing patient's understanding of the roles and training levels of physicians caring for them may impact on patient's satisfaction because they will have accurate expectation to each individual [22, 23]. Our parents could identified the residents as their primary physicians. The parents were mostly satisfied with the residents who took care of their child.

Although there is a wide gap between doctors and patients in our culture, the parents in this study revealed that they were able to assess these residents' skills. Several reasons may explain our findings. First, the participating parents were familiar to the residents because more than half of them had in-patient experience more than 10 times. They encountered a number of residents and other medical staffs. They could recognize residents' activities and compare the abilities between residents. Second, the non-technical skills identified in the questionnaires were obviously seen by the parents. The parents did not have to have any specific knowledge to assess these skills. The residents used these interpersonal skills for taking care of their patients daily. Third, it is possible that the characteristics of Hofstede's culture dimensions of Thais may gradually change due to the effects of globalization [12]. Currently, the power distance may be not very large so people feel more equal. The evidence of this finding was demonstrated in Egyptian culture. The power distance index decreased from 80 in mid-1990 to 29.6 in 2011 in Egyptian context [22]. However, this assumption need to be further investigated in other cultures.

Resident perception on assessable skills

The participating residents perceived that the parents were able to assess several physicians' skills including communication, collaboration, leadership and professionalism.

Patient-doctor communication is a vital component of health care so communication skill is the main physicians' skills assessed by patients and parents [4, 5, 9]. Physicians and medical trainees accepted that patients are capable of giving feedback on their communication skills. Patient feedback is positively accepted and used for physicians' improvement of performance [9]. In this study, communication skill was the first parents' assessable skill which the residents presented to the groups. The residents proposed that parents could assess their communication skills in terms of abilities to make parents understanding the medical information, residents' active listening skills and residents' empathy expression. These are components for being a good communicator as described by CanMEDS framework [23]. However, some components of communication skill may vary according to the different workplaces. In the pediatric emergency setting, the assessable communication skills included residents' abilities to introduce themselves, use of appropriate language, active listening skills, keep parents informed about their child's care and translate medical information to children and their parents [7].

The second assessable skill perceived by the residents was collaboration. There were two mentioned components of this skill: residents' providing identical information and informing consultation process. The data implied that the participating residents might think of the results of the collaboration process.

The collaboration requires trusted relationship, respect and sharing of decision-making among the care team members [23]. Our residents only paid attention to the definite plans of treatment and how the parents could receive these information. In our setting, the patients had their own sub-specialized physician as their primary physician so the patients and parents expected that the residents would consult their primary physician every visits or admissions. Therefore, the residents might try to identify the concrete actions showing their inter-professional collaboration. However, the abilities to collaborate with parents were not proposed in our residents' focus groups. This abilities was considered to be assessable by parents in the emergency care setting [10]. Having the parents and patients as a part of the teams would improve doctor-patient cooperation and make better family satisfaction [24]. The large power distance culture may influence the residents' beliefs that physicians should work and make decision together and then give the information or conclusion to the patients.

The participating residents perceived that leadership skill was able to be assessed by the parents. The parents could judge how well the residents showed their abilities in supervising medical students or junior residents and making decision or solving the patients' problems. In in-patient setting, junior residents lead medical students for making rounds and teach medical students at bedside. Senior residents have both clinical service and academic responsibilities covering two teams in a ward. Therefore, the residents transferred the components of leadership skills from the daily working activities. As a social expectation, being a leader means abilities to demonstrate collaborative leadership and management within the health care system [23]. The leadership performance postulated by the residents might represent their collaborative leadership and management skills. However, the hierarchy in our system is also shown in the residents' perception. They considered the power of seniority in teaching junior trainees and making decision on significant patients' problems.

The American Board of Pediatrics provided the principles for teaching and evaluation of professionalism for residency training in pediatrics including honesty and integrity, reliability and responsibility, respect for others, compassion or empathy, self-improvement, self-awareness, communication and collaboration and altruism and advocacy [25]. However, residents' understanding of professionalism was extensively various. The common definition of professionalism given by residents was respect, compassion, empathy or integrity [26]. In our residents' focus groups, the professionalism components were shortly discussed. The residents' perception of the assessable components of professionalism focused on the appearance of the residents. The politeness and reliability were also considered to be the assessable aspects of professionalism in this study. Our resident seemed to think of the obvious characteristics seen by parents. In a comparison study of the professionalism expectations, the important attributes of professionalism prioritized by residents and patient families were not identical although some of them overlap [27]. Patients valued communication skills and compassion more important than appearance and acknowledgement of their family members [28]. However, the parent perception of residents' professionalism was not directly asked in this study. We could not compare the similarity or distinction of parent and resident perception on professionalism.

Resident perception on credible parent characteristics

Although parent feedback as a part of MSF should be formative, the credibility and specificity of the feedback are crucial components. Trainees will use the feedback for guiding their learning and practice improvement if they perceive the feedback is accurate and comes from credible sources [10, 29, 30]. In this study, our participating residents revealed several characteristics causing either positive or negative credibility.

Firstly, the residents perceived that parents' experience in caring their child was important. The primary caregivers were the persons who the residents trusted that they had direct observation on the residents' skills. Feedback is more likely to be used when physicians perceive that the assessors are familiar to their work and observe their practice [33–35]. The experience with in-patient admissions was considered to be a significant factor for being credible in our residents' opinion. Because of the existence of multiple levels of trainees in the program, the parents would recognize each trainee's roles if they have had several admission experience. Residents accept the feedback from the assessors who know their roles and responsibilities [34]. Increasing opportunities for the parents to make relationship with the residents was another positive component for the credibility. Resident tend to trust the feedback coming from the patients they have longitudinal relationship with [11]. The relationship needed an adequate interaction time between the residents and parents. The parents might see the residents in different aspects during the different situations. In addition, the residents mentioned that they would like to trust the feedback from multiple parents representing multiple perspectives for high reliability and validity [11, 35].

Secondly, the residents paid attention on the parents' personal behavior affecting the assessment. The parents' mental background and expectation were considered to be the significant components of parents' characteristics. The residents did not think the parents with high anxiety or over concern would give them the credible feedback. In a previous study, residents would like to disregard the feedback from assessors who seem uneasy or to have poor interpersonal skills [11]. In addition, feedback may be influenced by patient's diagnosis, hospital system issues or team decision making [11]. This usually occurs when the outcomes do not meet the families' expectation. As a result, the parents may not correctly assess the residents based on their own skills. Parent standards would be vary according to several factors such as prior experience, expectation and emotional background [36]. This is also a reason to use a large number of parents to provide reliable feedback.

Lastly, the residents considered that parents facing with difficult medical situations might not be appropriate assessors. Their mental status would not be ready for assessing residents because they definitely focused on their child's conditions. A study of parent feedback in a pediatric emergency department excluded parents who had a child requiring resuscitation [3]. Obviously, the parents would be stressful if their child's life is in crisis. Therefore, the appropriate time or situation to request the parent feedback should be specifically considered in individual setting.

Limitation

There are several limitations in this study. This study was conducted in a single residency training program. Our institute contains specific patient types and resident's training activities. These conditions

may be not similar to other institutes in Thailand so it may not represent the perception of Thai parents and pediatric residents. Multicenter study may increase the generalizability of the findings. Language barrier is one of the important issues of this study. There are several translation processes occurring in this research. The PARENTS questionnaires are translated from English to Thai. The qualitative data of parents and residents perception are translated from Thai to English. Some meanings of words or sentences may not be perfectly matched. Some miscommunication is undeniable.

Conclusions

Involving parents in assessment of residents' skills is challenging. This study is an initial research exploring the perception of parents and residents regarding the issues in parent feedback in Thai culture. The participating parents were confident to give resident feedback on communication, collaboration and professionalism. The residents recognized several parents' assessable skills including communication, collaboration, leadership and professionalism (Research question 1). The credible parent characteristics were being a primary caregiver, having admission experience and adequate contact time with the residents. Parents with high expectation, narrow-minded, emotional instability and being in difficult medical situation may provide biased feedback. Multiple parents were deemed needed to make reliable feedback (Research question 2). The data of this study may urge researchers to investigate how parents can be involved in pediatric resident assessment in their own cultures.

Abbreviations

P: parent; FG: focus group

Declarations

Availability of data and materials

The data used in this study are available from the corresponding author on reasonable request.

Ethics approval and consent to participate

This study obtained ethical approval from the Institutional Human Research Committee, Faculty of Medicine Ramathibodi Hospital, Mahidol University (MURA2018/831). Informed written consent was obtained from all participants.

Consent for publication

Not applicable

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Authors' contributions

SP was responsible for the concept and design of the study, data collection, data analysis and interpretation, and manuscript drafting. JD contributed to the study design, data analysis and interpretation, and critical revision of the manuscript. PP contributed to the study design, data collection, data analysis and interpretation. All authors read and approved the final manuscript.

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