

Parents' Perceptions and Experiences during Invasive Procedure among Paediatric patients in a Private Hospital

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Abstract - Invasive procedures might be frightening and painful experiences for both children and parents. However parental presence during painful procedures enhance family-centered care in pediatric practice and assist in minimizing the anxiety of both children and parents. This study aimed to determine the parents' perceptions and experiences during Paediatric invasive procedures at one of the private Specialist Hospitals in Kuala Lumpur. This descriptive quantitative design study includes 64 parents whose children were admitted to the pediatric unit at one of the private hospitals in Kuala Lumpur, Malaysia. In this study, the purposive sampling method was used to enroll eligible participants. Two validated self-reported multiple-choice questionnaires on perceptions and experiences were used for data collection. The data was collected face to face using a self-reported questionnaire by parents. Descriptive statistics and chi-square test was used for data analysis. Study findings revealed that most parents (53.1 %) preferred to be with their children during the invasive procedures.

The study findings revealed that 46.9 % of parents trusted the healthcare professionals to do the procedure in their absence. Most parents (56.3%) agreed to be present during the procedure to relieve the child's anxiety. The parents who were not keen to be present (48.4%) during the procedure were mainly because the parents trusted health professionals regarding the child's safety. Creating suitable educational programs for health professionals that emphasize the importance of the parental role and the necessity for its acceptance can help in this regard.

Keywords - Pain in children, pain management, parental presence, pediatric procedure, invasive procedure

I. INTRODUCTION

Young children are more likely to become ill because they have vulnerable immune systems [1]. Painful procedures are common in the emergency department, and in the in-patient paediatric wards were setting. Emergency department and ward settings procedures can also be distressing for children, parents, and health providers. Many parents are also anxious when their ill children need to undergo invasive procedures at the hospital. Adequate pain and anxiety minimizing strategies must be used consistently in settings where painful procedures occur for children [2].

When children undergo invasive procedures, they need to have their parents present to help them counteract their worries and fears [3]. Parents prefer to remain present and support their children during this painful procedure. There is much difference in the practice of the same in different hospital settings [5, 6]. However, the option for offering parents to stay with their children during invasive procedures remains a controversial practice [4]. Although parental presence during children's invasive operations is becoming increasingly common, it remains a contentious subject in providing family-centered care [7]. For various reasons, health care practitioners are cautious about allowing parental participation during children's invasive operations, ranging from tradition to the notion that the parent may genuinely hamper the care process. However, as healthcare consumers, parents demand taking a more active role in their children's health care. This transformation has resulted in feelings of uncertainty and unease among pediatric healthcare practitioners, necessitating evidence-based research to justify such [7].



The discussion on parental involvement during the invasive procedure is still ongoing. Researchers have released many papers on this topic worldwide. Most of these studies, however, focused on the attitudes and values of nurses and physicians. There is a lack of research aimed at parental perceptions and experiences. To the best of our knowledge, this is the first research from the Asian region to test parental willingness to engage in invasive procedures for their children.

II. METHODOLOGY

A. Design and sampling

This research used a cross-sectional descriptive design using a self-administered questionnaire to the parents. Any parent whose children underwent invasive procedures could complete the questionnaire regardless of the parent's age or the children's ages. Parents were excluded from the study if they were emotionally disturbed, involved in suspected child abuse, combative, or had altered mental health status. A total of 132 questionnaires were distributed to parents eligible to participate in the study. However, only 64 responded to the survey, which represented a 48% response rate.

B. Study tools

The questionnaire was divided into three parts. The first part of the questionnaire was on demographic profiles containing age, gender, number of children, marital status, level of education, and parents' employment status.

The second part of the questionnaire was a validated tool to assess parental perception that has been adopted and modified for this study [5]. This self-reported questionnaire had multiple-choice questions (4 items). The third part of the questionnaire was Picker Questionnaire[6], used to evaluate the parent's experience with five items. Picker Questionnaires used multiple-choice questions with Yes or No, don't know/can't remember.

C. Validity and reliability of the questionnaire

For this study, three experts, including one nurse educator, one clinical supervisor, and one nurse manager from the Paediatric ward, evaluated the face and content validity of the questionnaire. The researcher modified the questions accordingly based on suggestions from the experts.

The questionnaire was pre-tested to distinguish and improve unclear questions, which participants do not understand, or could not answer, or grammatical or wrong numbering. Plan for pre-testing is to be done among parents within two different departments from the Paediatric ward and accident and emergency department, not involved in the study. They were asked to complete the questionnaire and make comments. The purpose of this pre-testing by two different departments is to measure the consistency of the tool's scoring. A pilot study was conducted, and the questionnaire was administered to 12 participants, and they were excluded from the main study.

D. Procedures and data collection

The self-administered questionnaires were given to research participants face to face. Informed consent was obtained before data collection. The informed consent assured confidentiality of the survey findings, and their identity was not disclosed in the reports. The parents were also informed that if they refuse to participate, it will not reflect their attitudes or quality of care delivered, and all information will be kept confidential. The questionnaire was administered to the parents of children undergoing the invasive procedures venepuncture or intravenous (IV) cannulation in the paediatric ward and accident and emergency department. A total of 64 participants participated in this study. During the survey, the nurse educator or the clinical supervisor assisted the researcher in data collection. The data collection was conducted within two months, between February 2020 and March 2020. The parents were assured of their identity would not be disclosed in the reports.

E. Data analysis

Descriptive analysis was performed on parents' sociodemographic (age, gender, education, marital status, number of children, and employment status). The probability ratio and the corresponding 95 % confidence interval were determined for each possible explanatory variable concerning the outcome. Statistical analyses were conducted using the IBM SPSS for Windows, version 20, also known as Statistical Package for the Social Sciences.

F. Ethical considerations

The study was approved by the Research Management Centre (RMC) of the affiliated institution. Ethical clearance reference number: XXXXX/RMC/SON/EC/2020/259.

III. RESULTS

The purpose of the study was to identify: 1) the parent's perceptions towards the pediatrics invasive procedures at a Specialist Hospital, Kuala Lumpur. The perception included two different dimensions: the reasons for parents to attend the invasive procedures and the reasons for the parents to refuse to attend the invasive procedures 2) to describe the experiences of the parents whom their child undergoing the invasive procedures at the Specialist Hospital, Kuala Lumpur.

A. Demographic characteristics

As demonstrated in Table 1, female parents were the majority (62.5%). The majority (65.6%) were > 30 years and were married (87.5%). Around 89.1% had more than high school education, and 93.8% were employed. The majority (64.1%) of the respondents had at least two children.

Table 1: Demographic characteristics of parents (n=64).

Characteristic of Parents	Variable	Frequency (n)	Percent age (%)
Age	Less than 30	22	34.4
	More than 30	42	65.6
Gender	Male	24	37.5
	Female	40	62.5
No. of Children	Less than 2	41	64.1
	More than 2	23	35.9
Marital status	Married	56	87.5
	Single/Divorced/Widowed	8	12.5
Education level	<high school	7	10.9
	>high school	57	89.1
Employment status	Employed	60	93.8
	Unemployed	4	6.3

B. Perception towards parenteral presence during invasive procedures

As shown in Figure 1, most parents (53%) wished to stay with their children during the invasive procedures. However, 47% of the parents were reluctant to be with the child during the procedure.

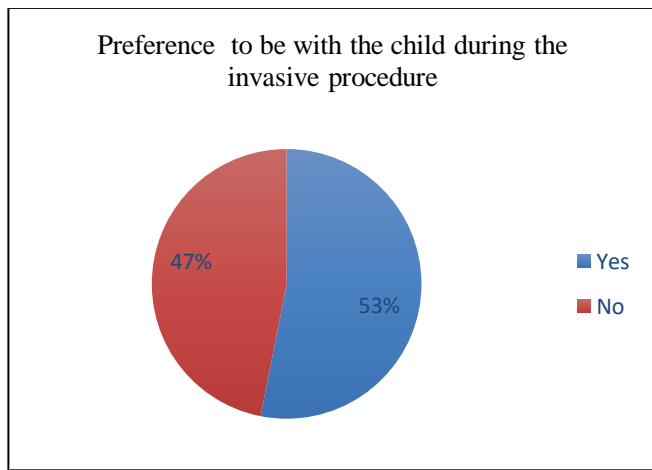


Figure 1: Preference to be with the child during the invasive procedure

Table 2 shows the reason for staying with the child during the procedures. The findings show that the most common reason for a parent to attend a procedure was to soothe the anxiety of their child. However, 20.3 % (13) of parents felt that their child was too young to undergo a medical procedure alone, and 14.1% (9) wanted to assist healthcare workers during the procedure.

Table 2: Reason for parents to attend the invasive procedure

Variable	Reasons to attend	Frequency (n)	Percentage (%)
Reason for parents to attend the invasive procedure	To relieve the anxiety of their child	36	56.3
	The child is too young to be alone	13	20.3
	To assist healthcare staff	9	14.1
	It is my right as a parent	4	6.3
	To assure provider competence	2	3.1

As shown in Table 3, the most common reason for the reluctance to stay with the child during an invasive procedure was their trust in the health professionals. About 9 (14.1%) of parents felt that their presence would make no difference to their child's outcome.

Table 3: Reason for parents to refuse to attend the invasive procedure

Question	Reasons to refuse	Frequency (n)	Percentage (%)
Reason for parents to refuse to attend invasive procedure	I cannot tolerate watching the procedure	10	15.6
	I trust health professionals	31	48.4
	My presence makes no difference to my child's outcome	9	14.1
	My presence can make the healthcare team anxious	8	12.5
	I might interfere during the procedure	6	9.4

C. Experiences of parents during invasive procedures

Explanation of procedures by doctors/nurses who performed the procedure.

Most parents want the best and are with their children, especially when it comes to painful procedures. Parents are often curious about what the healthcare provider does to their child when receiving treatment at the hospital. Table 4 shows that most parents' responses regarding the explanation given by the healthcare provider to them. The majority (95.3%) agreed that they had been provided with an adequate explanation before any procedures were performed on their children.

Table 4: Explanation of procedures by doctors/nurses who performed the procedure

Question	Reply	Frequency (n)	Percentage (%)
Did the doctors and nurses that you saw explain what they were doing in a way you could understand?	Yes	61	95.3
	No	1	1.6
	I did not need an explanation	1	1.6
	I don't know/can't remember	1	1.6

Explanation regarding child's condition

Table 5 shows parents were given clear information or response to their questions when they asked about the treatment given very important in Paediatrics patients. As a parent, they are eager to know how their child condition and the best treatment to treat them. Most of them (92.2%) answer 'yes' as they understood what was wrong with their child, and the others answer 'don't know/can't remember'. The mean score for this statement was 1.23 (*SD* = 0.811).

Table 5: Explanation regarding child's condition

Question	Reply	Frequency (n)	Percentage (%)
Did the doctors and nurses that you saw explain what was wrong with your child in a way you could understand?	Yes	59	92.2
	No	0	0
	I did not need an explanation	0	0
	I don't know/can't remember	5	7.8
	They did not know what was wrong with my child	0	0

Measures taken by the doctors and nurses do everything to calm and comfort their child.

Table 6 shows the parent's agreement of the adequacy of calming and comfort measures taken by doctors and nurses in comforting the child during the painful procedures. All the participants in this study agreed that the doctors and nurses did all they could to calm and comfort the child.

Table 6: Measures taken by the doctors and nurses do everything to calm and comfort their child.

Question	Reply	Frequency (n)	Percentage (%)
Do you think that the doctors and nurses did everything they could to calm and comfort your child?	Yes	64	100
	No	0	0

Measures taken by doctors and nurses to help with their child pain.

Parents would be the ones who are the closest person to their children. Parents want to ensure that their child is always safe and comfortable. Table 7 showed the parents' response regarding whether the doctors and nurses do everything they could to help with their child's pain. Most parents (95.3%) answer with 'yes' and were satisfied with the measures taken by the doctors and nurses to relieve children's pain during the invasive procedures.

Table 7: Measures taken by doctors and nurses to help with their child's pain.

Question	Reply	Frequency (n)	Percentage (%)
If your child were in pain, did the doctors and nurses do everything they could to help with your child's pain?	Yes	61	95.3
	No	0	0
	This was not needed	3	4.7

Privacy provided during the procedures

Usually, children feel anxious before encountering medical professionals, as well as experiencing a hospitalization. When they see unfamiliar people around them will make them more fearful and anxious. Table 8 shows the analysis of where children examine and treated in private to reduce their fear in the hospital. The mean score for this statement was 1.30 (*SD* = 0.728). A total of 54 (84.4%) parents answer 'yes', which shows adequate privacy was ensured while performing invasive procedures.

Table 8: Privacy provided during the procedures

Question	Reply	Frequency (n)	Percentage (%)
Was your child examined and treated in private?	Yes	54	84.4
	No, but I didn't mind	2	3.1
	No, but I would have liked this	7	10.9
	I don't know/can't remember	1	1.6

D. Association between parents' perceptions and experiences during invasive pediatrics procedures.

Based on Table 9, the Pearson Correlation was used to measure the relationship between parents' perceptions and experiences during invasive Paediatric procedures. A sixty-

four of parents were surveyed about their perceptions of invasive procedures (*M* = 1.80, *SD* = 1.101) and average parents' experiences during the invasive procedures (*M* = 1.09, *SD* = 0.462). Meanwhile, most respondents (50%) preferred to be with their children and understand the explanation given by the healthcare provider. The remaining 29 (45.3%) prefer not to be with their child during the invasive procedure and had previous experiences being with their children during the invasive procedure.

In addition, the value of Chi-Square (χ^2) for this analysis was 0.056, with an associated significant level of 0.663 (*p* < 0.05). This might conclude that there is no significant relationship between the parents' perceptions and experiences during Paediatrics invasive procedure. Thus, it could be said that perceptions do not influence parents' experiences during Paediatrics invasive procedures.

Table 9: Relationship between perceptions and experiences during pediatrics invasive procedure

Perception	Experiences			
	Yes	No	I did not need an explanation	I don't know / can't remember
Yes	32 (50%)	1 (1.56%)	0	1 (1.56%)
No	29 (45.3%)	0	1 (1.56%)	0

$\chi^2 = 0.056$, *df* = 3, *p* = 0.66

IV. DISCUSSION

In this study, parents' perception during the Paediatric invasive procedure is found to be overall satisfactory. Previous studies have suggested that parents' presence can reduce child and parent anxiety, diminish their negative perspectives and improve parents' understanding of the invasive procedure itself [8,9]. Furthermore, whenever possible, the healthcare provider should offer the chance to be with their children while undergoing painful procedures [10]. In this study, there are 6.3% (4) of parents respondents answered that it was their right to be with their child during the invasive procedure. However, parents are frequently exempted by a particular healthcare provider, the majority by the nurses and residents, regardless of their wishes (Eissa, 2015). Parental presence during the invasive procedure can sometimes increase anxiety for healthcare providers and nurses, and clinicians [11, 12]. The reason for the healthcare professional to refuse the parents to be there with their children is to avoid any conflict and misunderstanding among health care's professional and parents. Most parents who participate in the study agreed that family presence during invasive procedure or resuscitation is

a traumatic experience for the family members. Parents want to be a resource and collaborate with nurses to reduce children's anxiety and fear. When parents were instructed to use effective diversion strategies, they had a lower distress reaction. However, despite the support and coaching of the parents, some children were still in distress [1].

Although parents were satisfied with how healthcare professionals communicated with them, each parent reported that miscommunication between healthcare professionals created conflict and parental mistrust [13]. Healthcare professionals must understand the parents' justification to reduce mistrust or misunderstanding in the future. Furthermore, not all parents come from medical backgrounds families. Therefore, simple and understandable words or sentences can be used to deliver the information to parents of an ill child to make them more understanding and willing to cooperate during the treatment. In addition, if healthcare providers are hesitant to set clear treatment goals and deadlines for a child due to their ever-changing condition, proactive contact with parents that acknowledges the potential confusion and impacts on parental stress may enhance the parent's understanding of information sharing. As a result, the responsiveness of healthcare professionals to and understanding of parental anxiety can have implications for creating approaches that promote the sharing of knowledge with hospital parents who are coping with the ambiguity of their child's illness and treatment plan.

Another common belief among health professionals is that parental involvement can harm decision-making abilities that adversely affect procedures or performance in critical situations [5]. Regardless of that, not all parents are willing to be with their child during the invasive procedure, but they have their reason as they cannot tolerate watching the procedure; they trust healthcare professionals. The parents also believe that their presence makes no difference to the child's outcome, and their presence also can make the healthcare team anxious, and might interfere during the procedure safely. These reasons can be accepted for specific conditions for parents during their child undergo the invasive procedure. From the result obtained by the researcher, 48.4% of parents, with a total number of 31 out of 64, choose to give trust to the healthcare professional to treat their child. Still, from the previous research, the most common reason for parents to refuse to attend the procedure was their intolerance of the scene (56%), followed by trusting the health professionals (22%) [5]. In contrast to health professionals' views, most parents in this research decided to participate in invasive procedures to help minimize their child's anxiety. This observation is reinforced by other researcher's findings on parents' experiences in similar circumstances [5, 14, and 15].

A validated care assessment experience representing what patients and families want and trust to receive treatment in the

hospital setting environment is essential in optimizing and ultimately providing the best quality care [16]. There is an increasing focus on documenting patient-reported results that represent experiences and healthcare satisfaction in hospital settings. Patients' perspectives concerning their health and the medical treatment they seek must be considered the main driver of any professional intervention. This experience can be described as the sum of all the experiences produced by an organization's culture that influence patient expectations through health care [6, 17]. However, evidence on Paediatric patient experience in the hospital environment remains minimal, focusing on parental perceptions of treatment.

Parents who are the closest person to their children and they always want the best for their children. As a parent, they experience a lot of condition when raising children, and they always make sure that their child is safe, especially when their child is sick and needs a proper treatment. Parents can rely upon the person who took care of their children that they trust. For example, they give the doctors and nurses permission to treat their ill child at the hospital. This study resulted in a specific Paediatric resource that focuses on parent-specific aspects of hospital care. Public reporting of performance measures is becoming more common for health care providers and organizations to create opportunities for quality improvement and transparency through greater accountability [16]. However, healthcare professionals should give a proper and straightforward explanation that can make parents understand what the doctors and nurses do to their child for further treatment.

A. Experience of parents regarding the invasive procedure

Parents are often concerned about what the health care provider does for their child while during treatment in the hospital. Parents who were provided adequate information to help them plan for their child's procedures showed higher clinical comprehension and emotional support [4]. From the research findings, 95.3% of parents were well informed, which agrees with a previous study in which 92.2% agree with the doctors and nurses [6, 17]. Frightening experiences can be reduced by providing the information and explanation positively and receiving treatment in safe hands [18].

To remain effective, nurses and parents need to share accurate and reliable information. It is essential to give parents specific facts or responses when they inquire about their care regarding the Paediatric patient. As parents, they are anxious to know how their child's condition is and how best to handle them [6, 13]. The researchers' findings suggested that the parents of the hospitalized children had little knowledge of the situations and care plans of their children. From this study, 92.2% were satisfied with the explanation provided regarding the treatment in a similar study 86.4% of the parents give the same opinion. [6, 19]. Young children are exceptionally responsive to the way a procedure is done. Venepuncture is a painful surgical procedure widely performed. From the researcher's

findings, all the parents agreed that the healthcare providers took measures to comfort the child during the procedure, which is consistent with the findings of [6].

It is necessary to understand the onset and effect of pediatric procedure distress when evaluating intervention approaches. Some hospitals would involve their psychologist before reducing the anxiety for both parents and children [20]. As an example from the previous research, the psychologist persuaded parents to take particular behaviors during the treatment. The intervention significantly decreased parental anxiety, child distress activity, and child pain (parent-reported but not child self-reported). This finding suggests that increased planning and encouragement has improved the parent's perception of their child's distress, likely by decreasing parental anxiety (Brown et al., 2018). In addition, these research findings show that most parents (95.3%) were happy with the pain relief measures provided.

Most of the parents were happy with the privacy provided during the procedure, similar to previous study findings [6]. Healthcare professionals, especially nurses, are encouraged to include families in caring for children in hospitals. Evidence has shown that children's stress and pain are caused by their separation from their parents [11]. Although parental involvement means that care is planned around the parents, the parents are part of the supportive team. Nevertheless, nurses are required to play a leading role in creating this form of relationship to build a supportive atmosphere that enables nurses to fulfill the daily needs of the family and children in the hospital.

B. The Relationship between Parents Perceptions and Experiences during Paediatrics Invasive Procedures

Perceptions and experiences of parents have been found relatively no influenced during the pediatrics invasive procedure. The participants' interpretation in their study shows that the parents can only have perceptions of the invasive procedure but cannot be the same as their experiences during their painful child events [21]. This is because the parents believed that not all good perceptions give positive experiences during the invasive procedure. From the finding, it seems likely no significant relationship between the perceptions and experiences of parents during the invasive procedures.

In addition, when statistical analyses were done, they revealed that perceptions had not influenced the experiences during the pediatrics invasive procedure. Parents are more willing to be with their children during the invasive procedure regardless of their experiences. This finding of this study was similar to the study conducted by Eissa [5]. The majority of the respondents had given good perceptions as they were willing to attend the invasive procedure with their child and most of the parents who attended were female.

However, for the experiences, the results showed that most

parents had positive experiences during the pediatrics invasive procedure as most of them could understand and cooperate with the healthcare professional. Every parent might experience different situations for their child; not all parents are willing to see all the procedures they undergo every time they are brought to the hospital. The unfamiliar environment and confusion about care appeared to cause feelings of distress [6, 19]. This indicates that familiarity with the hospital and procedures may not automatically remove or decrease a child's reaction to hospitalization. Every child and parent will face different experiences throughout their procedure and treatment. Thus, the studies from this research can be concluded that there was no significant relationship between parent's perceptions and their experiences.

V. LIMITATIONS AND RECOMMENDATIONS

Limitations of the study can be defined as those characteristics of design or methodology that impacted or influenced the application or interpretation of the results of your study. They are the constraints on the generalizability and utility of findings. The samples were only taken from one private Specialist Hospital in Kuala Lumpur, and the respondents were chosen randomly. Researchers could not collect the data on large samples during practical posting due to the pandemic Covid-19 cases spreading widely. Further studies are recommended to improve healthcare professionals' understanding of the importance of knowing what perceptions and what they experienced from their child's invasive procedure.

The overall parent had positive perceptions and good experiences during their child's invasive procedure. Therefore, irrespective of their sociodemographic background, all parents should be encouraged to be exposed to invasive procedures, especially pediatric. The majority of the parents did not perceive the distress of the health professional during the invasive procedure. Thus this was not a justification for them to deny attendance. These research findings from parent's perceptions can also be related to the hospital setting and policy to make the family member understand. Healthcare professional, for example, nurses, should be more aware of what family member or parents' wants for their child.

VI. CONCLUSION

The majority of the parents in the private Specialist Hospital preferred to be with their child during the invasive procedure. Gender and level of education influenced the perceptions and experiences. Only parents around the age of fewer than 30 years old were the most likely to refuse.

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