

## **Family Presence during Resuscitation in a Paediatric Hospital: Health Professionals' Confidence and Perceptions**

### **ABSTRACT**

**Aims and objectives:** To investigate medical and nursing staff's perceptions of and self-confidence in facilitating family presence during resuscitation in a paediatric hospital setting.

**Background:** Family presence during resuscitation is the attendance of family members in a location that affords visual or physical contact with the patient during resuscitation. Providing the opportunity for families to be present during resuscitation embraces the family-centred care philosophy which underpins paediatric care. Having families present continues to spark much debate amongst health care professionals.

**Design:** A descriptive cross-sectional randomised survey using the 'Family Presence Risk/Benefit Scale' and the 'Family Presence Self-Confidence Scale' to assess health care professionals' (doctors and nurses) perceptions and self-confidence in facilitating family presence during resuscitation of a child in a paediatric hospital.

**Methods:** Surveys were distributed to 300 randomly selected medical and nursing staff. Descriptive statistics, t-test and Mann-Whitney U tests were used to compare medical and nursing, and critical and non-critical care perceptions and self-confidence.

**Results:** Critical care staff had statistically significant higher risk/benefit scores and higher self-confidence scores than those working in non-critical care areas. Having experience in paediatric resuscitation, having invited families to be present previously and a greater number of years working in paediatrics significantly affected participants' perceptions and self-confidence. There was no difference between medical and nursing mean scores for either scale.

**Conclusion:** Both medical and nursing staff working in the paediatric setting understood the needs of families and the philosophy of family-centred care is a model of care practised across disciplines.

**Relevance to clinical practice:** This has implications both for implementing guidelines to support family presence during resuscitation and for education strategies to shift the attitudes of staff who have limited or no experience.

**Keywords:** Family-centred care, resuscitation, paediatrics, family presence, hospital, patient-centred, doctors, nurses.

---

What does this paper contribute to the wider global clinical community?

- Critical care staff perceived fewer risks, more benefit and were more confident in facilitating family presence during resuscitation than those working in non-critical care areas.
  - No difference was found between medical and nursing staff.
  - Implementation of guidelines to support family presence during resuscitation and education strategies should be targeted to shift the attitudes of staff who have limited or no experience in facilitating family presence in the paediatric setting.
- 

**Keywords:** Family-centred care, resuscitation, paediatrics, family presence, hospital, patient-centred, doctors, nurses

## **INTRODUCTION**

Caring for hospitalised children and their families has evolved over time with care not only centred on the child, but also incorporating the family. Family-centred care focuses on the participation of the family in the planning and delivery of patient care (Pruitt *et al.* 2008) and is a model of care which is well recognised in the paediatric environment (Watts *et al.* 2012). When children become critically unwell, families have requested to be present during resuscitation attempts (Davidson *et al.* 2007, Eichhorn *et al.* 2001, Tinsley *et al.* 2008) enabling visual and physical contact (Dingeman *et al.* 2007). Allowing and facilitating families to be present during resuscitation recognises that the family is the constant in that child's life. Information can be shared between the health care team and the family and the principles of family-centred care thus embraced. This practice remains controversial.

## **BACKGROUND**

Since its introduction in the 1980s, family presence during resuscitation has remained controversial with the focus of dispute being health professionals' perceptions and concerns around trauma that families may experience, legal implications, and interruptions by family members to the resuscitation process (Doyle, Post & Burney, 1987). Despite these continuing concerns many organisations have embraced the concept, endorsing the practice through policy, guideline, position statements and education (Fulbrook *et al.* 2007b). Importantly, families who have witnessed the resuscitation of family members have provided positive feedback about the experience, suggesting that being present was beneficial to their child, and that it helped them to understand their child's condition (Eichhorn *et al.* 2001, Mangurten *et al.* 2006). If given a choice, the majority of families would want to be present again if in similar circumstances (Halm 2005).

The opinions of health professionals have varied and differences have been attributed to a number of factors. These have included the area in which one works (critical care or non-critical care), the type of role held (medical or nursing) and previous experience with having families present during resuscitation attempts (Duran *et al.* 2007, Helmer *et al.* 2000, Mangurten *et al.* 2006). Critical care areas have typically included emergency and intensive care settings, while non-critical care

areas have included medical and surgical wards. These factors appear to influence health professionals' perceptions towards the benefits and risks of having families present and resulted in either acceptance or disapproval (Twibell *et al.* 2008). The ability to confidently perform resuscitative efforts in front of families has also been associated with health professionals' acceptance of family presence (Fulbrook *et al.* 2007a, Mangurten *et al.* 2005, Perry 2009) a concept that has not been investigated in depth.

The hospital, in which this study was undertaken, has included family presence during resuscitation for 14 years (Paediatric Nursing Practice Manual, 2009). Despite this apparent established practice, it was not known how health professionals perceived family presence at resuscitation or how confident they were performing cardiopulmonary resuscitation in front of families. It is important for us to understand these views so that we may better understand the approach the patient care. In particular, it is important to understand the perceptions and confidence of staff working in ward areas, and how this impacts family's ability to be present during resuscitation.

This study investigated medical and nursing staff perceptions of, and self-confidence in facilitating family presence during the resuscitation of a child in a paediatric hospital. Findings have implications for practice, and education.

## **METHOD**

A descriptive cross-sectional randomised quantitative survey design was used. Ethics approval was obtained from the hospital (1713/EP) and university Human Research Ethics Committees (HR 127/2009). Participants were informed that participation was voluntary and consent was inferred by the submission of the completed surveys.

### **Setting**

A specialist tertiary referral hospital in Australia was the setting for this study. Critical care areas included the Paediatric Intensive Care Unit (PICU), the Neonatal

Intensive Care Unit (NICU) and the Emergency Department (ED). Non-critical care areas included the surgical and medical sub-speciality areas. The practice of allowing families to be present during resuscitation was supported by organisational policy/guidelines (PMH 2009).

### **Survey development**

Two scales were used: The 22 item 'Family Presence Risk/Benefit Scale' (FPR-BS) and the 17 item 'Family Presence Self-confidence Scale' (FPS-CS), developed by Twibell et al (2008). These scales were selected to measure nurses perceptions of family presence related to perceived risks and benefits and self-confidence. Both scales use five point Likert response options; the FPR-BS ranged from 1 strongly disagree to 5 strongly agree, the FPS-CS scale ranged from 1 not at all confident to 5 very confident.

Twibell et al., (2008) reported construct validity following maximum likelihood exploratory factor analysis with varimax rotation of both scales (Twibell *et al.* 2008). The FPR-BS was finalised with 22 items with only one factor identified accounting for 53% of variance in nurses' perceptions of risks and benefits of family presence. The FPR-BS Factor loadings ranged from 0.890 to -.0498 and internal consistency was Cronbach's Alpha 0.96 (Twibell *et al.* 2008). Only one factor was identified for the 17 items of the FPS-CS accounting for 52% of respondents' perceptions. The FPS-CS factor loadings ranged from 0.553 to 0.825 and internal consistency was Cronbach's alpha of 0.95 (Twibell *et al.* 2008).

All 39 items used by Twibell et al. (2008) were included for this study. Minor wording changes were required for the Australian context and to conform to the study site nursing resuscitation guidelines. For example; '*I could perform electrical therapies during resuscitation efforts with family members present*' was changed to; '*I could assist medical staff in performing electrical therapies during resuscitation efforts with family members present*' This reflects the policy at the study site for only medical staff to undertake defibrillation during resuscitation. Modifications were made to differentiate between the role of the doctor and nurse and to fit in with the participant

role. Separate nursing and medical questionnaires were created as the scales had initially been created for nursing staff only. Participant characteristics were collected and one open ended question was provided for comments.

Content and face validity of the adapted questionnaire were assessed by a panel of 20 experts that included doctors and nurses. The experts were chosen for their knowledge of the philosophy of family-centred care and family presence during resuscitation. Experts were drawn from various health care settings, and several states in Australia. The panel was asked to indicate if each item adequately represented the topic.

### **Sample Size**

A sample size of 150 participants was chosen to allow estimation of effects of moderate size at 5% significance level with 80% power (Tabachnick & Fidell 2007). A response rate of 50% was anticipated as a typical response rate generated from other studies utilising questionnaires (Baruch & Holtom 2008, Helmer *et al.* 2000, Jones *et al.* 2011, Meyers *et al.* 2000).

### **Sample**

Medical and nursing staff employed (part time or full time) in clinical areas where resuscitation was likely to occur, in both critical and non-critical care areas were included. Casually employed staff were excluded due to the inconsistent nature of their work, and staff working in psychological medicine and the ambulatory care setting were excluded, as resuscitation events in these areas are rare. A total of 922 (314 medical and 608 nursing staff) were eligible. The names of eligible staff were placed into a sampling frame and random selection of participants was undertaken.

### **Data collection**

A total of 300 questionnaires with pre-addressed return envelope were distributed via the internal mail system. Each medical and nursing questionnaire was coded (N1, M1) and those returned were recorded. If participants did not send back

questionnaires within a month, a reminder letter with another questionnaire and return envelope included and a poster was placed in clinical areas.

### **Data analysis**

Data were imported into SPSS Version 17.0 (SPSS Inc. Chicago, 1999) and descriptive statistics including frequency distributions were computed.

Negatively worded scale items were reverse coded. Participant mean scores for each scale were calculated. Shapiro-Wilk and Kolmogorov tests were conducted to assess the distribution of mean scores for each scale (Watson, Atkinson & Egerton, 2006). **Data were found to be normally distributed**, therefore differences between mean scores and between participants characteristics were compared using Independent *t*-tests. Chi-squared tests were used to compare differences between categorical data. Differences between two groups were compared using the Mann-Whitney test. Pearson's correlations were used to test for associations between scale items and variables. Level of significance was set at  $p < 0.05$ .

## **RESULTS**

Data were collected between 2009 and 2010. Of the 300 questionnaires distributed, 123 were returned (response rate 41%). Of the 123 respondents, 34 (27.6%) were critical care staff and 89 (72.4%) were non-critical care. A total of 81 (65.8%) nursing staff and 42 (34%) medical staff responded.

### **Participant characteristics**

The median number of years working in paediatrics was 10 years, (range 0.5 - 37 years). Half the respondents held a post-graduate qualification. Those who did not had all completed a bachelor degree. Ninety-nine (80.5%) had been involved in paediatric resuscitation, and of those, 55 (55.6%) had invited family members to be present during resuscitation. Comparisons between critical care and non-critical care participants are displayed in Table 1. Critical care participants respondents reported significantly more previous experience in paediatric resuscitation ( $p = 0.018$ ) and more experience inviting families to be present during resuscitation ( $p = < 0.001$ ).

INSERT Table 1 here

There was no difference between the two groups in resuscitation experience or inviting families to be present (Table 2).

INSERT Table 2 here

The critical care group mean scores were significantly higher than the non-critical care group for both the risk/benefit scale and the confidence scales ( $p < 0.001$ ) [Table 3.]. There was no difference between medical and nursing mean score for either scale. Those who had previous experience in paediatric resuscitation had a significantly higher mean score for the confidence scale ( $p < 0.001$ ). Having previous paediatric resuscitation experience resulted in no difference for the mean scores of the risk/benefit scale. For those who had invited families to be present during resuscitation there was a significantly higher mean score in both the risk-benefit ( $p = 0.001$ ) and confidence scales, ( $p < 0.001$ ).

For those with more experience (more years) working in paediatrics there was a significantly higher mean score on the risk-benefit means score ( $p = 0.001$ ,  $r = -0.326$ ). A moderate negative relationship was found between years working in paediatrics and the perceptions of risk and benefit. Therefore those with more experience perceived less risk. Paediatric experience did impact on the mean score of the confidence scale ( $p = 0.175$ ).

INSERT Table 3 here

## DISCUSSION

Providing families with the opportunity to be present during the resuscitation of their child is consistent with the principles of family-centred care. This provides parents with the ability to act as the child's support network, advocating for their needs and being involved in care decisions on their behalf (Dingeman *et al.* 2007). Health professionals working in paediatric settings have become increasingly accustomed



to having parents by the bedside during routine care, as well as more invasive procedures such as during resuscitation (Dingeman *et al.* 2007). Giving families the opportunity to be present therefore provides the family with an informed choice of participating in resuscitation, and supports the needs of families through crisis.

This study explored health care professionals' perceptions of and confidence in facilitating family presence during resuscitation. Those staff who had experience in paediatric resuscitation, as well as having experience in family presence during resuscitation perceived fewer risks, more benefits and were more confident in facilitating family presence. When compared with critical care staff, those staff working in non-critical care areas perceived more risk and were not as confident. There was no difference in perceptions or confidence between nursing or medical staff. This is different from previous studies that indicated nurses held more positive views of family presence (Duran *et al.* 2007, Jefferson & Paterson 2001, Kuzin *et al.* 2007, Perry 2009).

Given that the majority of medical staff participants indicated they supported family presence during resuscitation there maybe differences to account for this such as the inclusion of family centred care in the Australian undergraduate medical curricula (Gorter *et al.* 2010), and the recent implementation of a family presence during resuscitation practice guideline at the study hospital. Others have reported that effective implementation of a guideline has resulted in more positive staff attitudes (Mangurten *et al.* 2006, O'Connell *et al.* 2007). Education aimed at implementing guidelines to support family presence during resuscitation has been shown to be effective in improving clinicians' perceptions and behaviours (Kingsworth *et al.* 2010, O'Connell *et al.* 2007). It appears that family-centred care was a major influence on the perceptions of participants in this study. Although this study did not aim to establish the influence family-centred care had on the perceptions of participants, this model of care appeared to be working well at the study site.

Several demographic characteristics were found to significantly influence the findings. These included working in critical care, having experience in paediatric

resuscitation, having invited families to be present previously and greater number of years working in paediatrics. Firstly, critical care participants perceived more benefits, fewer risks and were more confident in facilitating family presence than non-critical care participants. Those who had experience with paediatric resuscitation and facilitating family presence also perceived family presence to be of greater benefit, and had greater confidence in its facilitation. Not surprisingly critical care participants had invited more families to be present during resuscitation. Being directly involved with families in this situation positively impacted on staff's attitudes, a phenomena other authors have also reported (MacLean *et al.* 2003, Sacchetti *et al.* 2003).

To assist staff with limited or no experience in resuscitation and family presence to shift their attitudes successful educational strategies using simulation have been reported. Simulation training is an approach that resembles real life patient care (Kakora-Shiner 2009) and provides participants with an opportunity to learn tasks in a safe learning environment (Kane *et al.* 2011). Simulation has improved teamwork and problem making skills (Kleinpell *et al.* 2006, Shapiro *et al.* 2004). Making decisions urgently whilst families are present in a simulation type scenario has been shown to increase the self-confidence of staff. Simulation has also been found to improve retention of knowledge and boost self-confidence amongst participants (Beauchesne & Douglas 2011). Debriefing following simulation training provides staff with the opportunity to discuss their fears and concerns regarding the presence of families, particularly those staff who are junior and who have indicated reluctance to have families present (Barata *et al.* 2007). Debriefing sessions can also provide educators with the opportunity to discuss relevant research findings regarding the experience of families, and their wishes to be present during resuscitation. This can provide participants with the opportunity to reflect on their performance and may aid in the learning process (Kane *et al.* 2011). Curley *et al.* (2012) found that simulation-enhanced workshops improved medical and nursing staff's ability to facilitate family presence during resuscitation. High realism training with paediatric mannequins and professional actors representing parents resulted in staff reporting more comfort in managing family presence (Curley *et al.* 2012). This study in particular highlighted

the impact that simulation education strategies can have on the attitudes of staff and its potential application in this context.

A number of study strengths exist. Participants were recruited using randomisation of all staff members eligible for inclusion (medical and nursing equally), providing a representative sample of the organisation. The majority of other studies evaluating health professionals' views employed convenience sampling to recruit participants (Knott & Kee 2005, McClenathan *et al.* 2002, Meyers *et al.* 2000). To our knowledge this is the first study conducted in the Australian paediatric setting that explored critical care and non-critical care, medical and nursing perceptions and confidence towards family presence during resuscitation. The findings add to the limited body of knowledge representing the views of non-critical care staff, medical staff and PICU staff (Dingeman *et al.* 2007). Recently The National Safety and Quality Health Service Standards (Australian Council on Healthcare Standards, 2012) were introduced to guide Australian health services to apply consistent and uniform safety and quality measures. Facilitating parental presence at resuscitation embraces several of these standards and is consistent with the overarching approach to safety and quality which emphasises the need to partner with consumers. Understanding the current views of health professionals towards known best practice is an important step towards achieving best practice and will enable governance of limited education resources to be targeted where most needed.

There were limitations relating to conduct of the study. We found interpretation of the meaning of the Risk/Benefit scale to be challenging. This relates to the use of both terms; 'Risk' and 'Benefit' (having opposite meanings) being used within the same construct. It is unknown whether participants were unclear about the concept that the scale intended to measure. An assumption was made that the two concepts go together, that being more risk and more benefit, rather than being able to discern the risks separately from the benefits. This may be problematic for others who intend to use the scale and could be clarified by creating two subscales, one for each concept, thus creating a clear meaning for each concept. This potential limitation had not been detected previously by Twibell *et al.* (2008), or by the panel of experts asked to

review the scales, prior to use in this study. **In addition measuring internal consistency of the adapted questionnaire is recommended.** Data were collected from a single institution, so transferability may be limited.

## **CONCLUSION**

Understanding the needs of families in a traumatic event, such as resuscitation, is an important aspect of caring for families in the paediatric environment. It is clear that families want to be present while their child is being resuscitated, and their presence has had positive outcomes for those who have had the opportunity to do so. Despite this, family presence during resuscitation remains a controversial subject amongst health professionals in the paediatric setting. Medical and nursing staff have shown reluctance to allow families to be present for fear of interference from family members, and concern over the psychological well-being of families who witness resuscitation attempts. Many of these concerns have not been supported by evidence. The key findings from this study are that staff working at this paediatric hospital supported the presence of family members during the resuscitation of their child. Both medical and nursing staff understood the needs of families during resuscitation and the philosophy of family-centred care is a model of care practised across disciplines.

## **RELEVANCE TO CLINICAL PRACTICE**

Staff who had experience in paediatric resuscitation and facilitating family presence were found to have more confidence, perceived more benefits and less risks than those without experience. This has implications both for implementing guidelines to support family presence during resuscitation and for education strategies to shift the attitudes of staff who have limited or no experience. Strategies such as simulation training have been shown to be effective.

## REFERENCES

- Barata I, LaMantia J, Riccardi D, Mayerhoff R, D'Abbracci P, Livote E, Litroff A, Frances M & Sama A (2007): A Prospective Study of Emergency Medicine Residents' Attitudes toward Family Presence during Pediatric Procedures. *The Internet Journal of Emergency Medicine* **3**, 4-14.
- Baruch Y & Holtom BC (2008): Survey response rate levels and trends in organizational research. *Human Relations* **61**, 1139-1160.
- Beauchesne MA & Douglas B (2011): Simulation: Enhancing Pediatric, Advanced, Practice Nursing Education. *Newborn & Infant Nursing Reviews* **11**, 28-33.
- Curley M, Meyer E, Scoppettuolo L, McGann E, Trainor B, Rachwal C & Hickey P (2012): Parent Presence during Invasive Procedures and Resuscitation. *American Journal of Respiratory and Critical Care Medicine* **186**, 1133-1139.
- Davidson JE, Powers K, Hedayat M, Kamyar, Tieszen M, Kon A, Alexander, Shepard E, Spuhler V, Todres D, Levy M, Barr J, Ghandi R, Hirsch G & Armstrong D (2007): Clinical practice guidelines for support of family in the patient-centred intensive care unit: American College of Critical Care Medicine Task Force 2004-2005. *Critical Care Medicine* **35**, 605-622.
- Dingeman R, Mitchell E, Meyer E & Curley M (2007): Parent Presence During Complex Invasive Procedures and Cardiopulmonary Resuscitation: A Systematic Review of the Literature. *Pediatrics* **120**, 842-854.
- Duran CR, Oman KS, Koziel VM & Szymanski D (2007): Attitudes Toward and Beliefs About Family Presence: A Survey of Healthcare Providers, Patients' Families and Patients. *American Journal of Critical Care* **16**, 270-279.
- Eichhorn DJ, Meyers T, Guzzetta C, E, Clark AP, Taliaferro E, Klein J, D & Calvin A, O (2001): During Invasive Procedures and Resuscitation: Hearing the Voice of the Patient. *American Journal of Nursing* **101**, 48-56.
- Fulbrook P, Latour JM & Albarran JW (2007a): Paediatric critical care nurses' attitudes and experiences of parental presence during cardiopulmonary resuscitation: A European survey. *International Journal of Nursing Studies* **44**, 1238-1249.
- Fulbrook P, Latour JM, Albarran JW, Graff dW, Lynch F, Devictor D & Norekval T, M (2007b): The Presence of Family Members During Cardiopulmonary Resuscitation: European federation of Critical Care Nursing associations, European Society of Paediatric and Neonatal Intensive Care and European Society of Cardiology Council on Cardiovascular Nursing and Allied Professionals. *The World of Critical Care Nursing* **5**, 86-89.
- Gorter JW, Visser-Meily A & Ketelaar M (2010): The relevance of family-centred medicine and the implications for doctor education. *Medical education* **44**, 332-334.
- Halm M (2005): Family Presence During Resuscitation: A Critical Review of the Literature. *American Journal of Critical Care* **14**, 494-512.
- Helmer SD, Smith S, Dort J, M, Shapiro W, M & Katan B, S (2000): Family Presence during Trauma Resuscitation: A Survey of AAST and ENA Members. *The Journal of Trauma: Injury, Infection, and Critical Care* **48**, 1015-1025.

- Jefferson R & Paterson B (2001): Efficient or family-centred? Practitioners' goals in decisions regarding parental presence during invasive procedures. *CACCN* **12**, 14-20.
- Jones BL, Parker-Raley J, Maxson T & Brown C (2011): Understanding Health Care Professionals' Views of Family Presence During Pediatric Resuscitation *American Journal of Critical Care* **20**, 199-207.
- Kakora-Shiner N (2009): Using ward-based simulation cardiopulmonary training. *Nursing Standard* **23**, 42-47.
- Kane J, Pye S & Jones A (2011): Effectiveness of a Simulation-Based Educational Program in a Pediatric Cardiac Intensive Care Unit. *Journal of Pediatric Nursing* **26**, 287-294.
- Kingsworth J, O'Connell K, Guzzetta C, E, Edens Curreri J, Atabaki S, Mecherikunnel A & Brown K (2010): Family Presence During Trauma Activations and Medical Resuscitations in a Pediatric Emergency Department: An Evidence-Based Practice Project. *Journal of Emergency Nursing* **36**, 115-121.
- Kleinpell R, Hravnak M, Werner K & Gizman A (2006): Skills taught in acute care programs: a national survey. *Nurse Practitioner* **31**, 7-11.
- Knott A & Kee CC (2005): Nurses' beliefs about family presence during resuscitation. *Applied Nursing Research* **18**, 192-198.
- Kuzin JK, Yborra JG, Taylor MD, Chang AC, Altman CA, Whitney GM & Mott AR (2007): Family-Member Presence During Interventions in the Intensive Care Unit: Perceptions of Pediatric Cardiac Intensive Care Providers. *Pediatrics* **124**, 895-901.
- MacLean SL, Guzzetta C, E, White C, Fontaine D, Eichhorn DJ, Myers TA & Desy P (2003): Family Presence During Cardiopulmonary Resuscitation and Invasive Procedures: Practices of Critical Care and Emergency Nurses. *American Journal of Critical Care* **12**, 246-258.
- Mangurten J, Scott SH, Guzzetta C, E, Clark AP, Vinson L, Sperry J, Hicks B & Voelmeck W (2006): Effects of Family Presence During Resuscitation and Invasive Procedures in a Pediatric Emergency Department. *Journal of Emergency Nursing* **32**, 225-233.
- Mangurten J, Scott SH, Guzzetta C, E, Sperry J, Vinson L, Hicks B, Watts DG & Scott SM (2005): Family Presence: Making Room. *American Journal of Nursing* **105**, 40-49.
- McClenathan, Torrington & Uyehara (2002): Family member presence during cardiopulmonary resuscitation: a survey of US and international critical care professionals. *Chest* **122**, 2204-2211.
- Meyers TA, Eichhorn DJ, Guzzetta C, E, Clark AP & Taliaferro E (2000): Family Presence During Invasive Procedures and Resuscitation: The Experience of Family Members, Nurses, and Physicians. *American Journal of Nursing* **100**, 32-44.
- O'Connell K, Farah MM, Spandorfer P & Zorc JJ (2007): Family Presence During Pediatric Trauma Team Activation: An Assessment of a Structured Program. *Pediatrics* **120**, 565-574.
- Perry SE (2009): Support for parents witnessing resuscitation: nurse perspectives. *Paediatric Nursing* **21**, 26-31.

- PMH (2009) Family Presence During Resuscitation (Health CaA ed.). Paediatric Nursing Practise Manual, Subiaco.
- Pruitt LM, Johnson A, Elliot C & Polley K (2008): Parental Presence during Paediatric Invasive Procedures. *Journal of Pediatric HealthCare* **22**, 120-126.
- Sacchetti AD, Guzzetta C, E & Harris RH (2003): Family Presence During Resuscitation Attempts and Invasive Procedures: Is There Science Behind the Emotion? *Clinical Pediatric Emergency Medicine* **4**, 292-296.
- Shapiro M, Morey J, Small S, Langford V, Kaylor C, Jagminas L, Suner S, Salisbury M, Simon R & Jay G (2004): Simulation based teamwork training for emergency department staff: does it improve clinical team performance when added to an existing didactic teamwork curriculum? *Quality Safety Health Care* **13**, 417-421.
- Tabachnick BG & Fidell LS (2007) *Using Multivariate Statistics*. Pearson International, Boston.
- Tinsley C, Hill B, J, Shah J, Zimmerman G, Wilson M, Freier K & Abd-Allah S (2008): Experience of Families During Cardiopulmonary Resuscitation in a Pediatric Intensive Care Unit. *Pediatrics* **122**, 799-804.
- Twibell RS, Siela D, Riwtis C, Wheatley J, Riegle T, Bousman D, Cable S, Caudill P, Harrigan S, Hollars R, Johnson D & Neal A (2008): Nurses' preceptions of Their Self-confidence and the Benefits and Risks of Family Presence During Resuscitation. *American Journal of Critical Care* **17**, 101-111.
- Watts R, Zhou H, Shields L, Taylor M, Munns A & Ngune I (2012): Family-centred care for hospitalised children aged 0-12 Years: A systematic review of qualitative studies. *JBI Library of Systematic Reviews* **10**, 3917-3935.

**Table 1 Critical care and non-critical care participant characteristic and comparisons**

		Critical Care <i>n</i> (%)	Non-critical care <i>n</i> (%)	<i>*p</i>
Years				
worked	<i>Mdn</i> (range)	6(0.6 -30yrs)	12(0.6-37yrs)	0.013
Post-grad qualification	Yes	18(52.9)	44(49.4)	
	No	16(47.1)	45(50.6)	0.728
Have previous experience in resuscitation	Yes	32(94.1)	77(75.3)	
	No	2(5.9)	22(24.7)	0.018
Have invited families to be present	Yes	29(85.3)	26(38.8)	
	No	3(8.8)	41(61.2)	< 0.001

*Note* \*Chi-squared test for categorised data; Mann Whitney U test for numeric data  
\*\*Nursing data



**Table 2 Medical and nursing participant characteristic and comparisons**

		Medical <i>n</i> (%)	Nursing <i>n</i> (%)	<i>*p</i>
Years worked	<i>Mdn</i> (range)	10(0.6 -35yrs)	10(0.4 -37yrs)	0.245
Post-grad qualification	Yes	27(64.3)	46(56.8)	0.027
	No	15(35.7)	35(43.2)	
Have previous experience in resuscitation	Yes	37(88.1)	62(76.5)	0.125
	No	5(11.9)	19(23.5)	
Have invited families to be present	Yes	19(51.3)	35(43.2)	0.789
	No	18(48.6)	28(34.6)	

Note \*Chi-squared test for categorised data; Mann Whitney U test for numeric data

\*\*Nursing data

**Table 3 Comparison of demographic characteristics and mean total scores of the risk/benefit and confidence scales**

		<u>Risk benefit</u>			<u>Confidence</u>				
		<u>M (SD)</u>	<u>p</u>	<u>t</u>	<u>df</u>	<u>M (SD)</u>	<u>p</u>	<u>t</u>	<u>df</u>
Post Graduate qualification									
Yes		3.13 (.38)	0.909	-.112	123	2.81 (.62)	0.361	-1.377	123
No		3.14 (.37)				2.71 (.58)			
Have previous experience in resuscitation									
Yes		3.14 (.39)	0.651	0.340	123	2.87 (.58)	<0 .001	3.585	123
No		3.11 (.30)				2.33 (.49)			
Have invited families to be present at resuscitation									
Yes		3.31 (.33)	<0 .001	4.947	105	3.11 (.50)	< 0.001	4.478	105
No		2.96 (.34)				2.51 (.55)			
Years worked in paediatrics									
		-0 .326	< 0.001			- .123	0.175		
* r									
Member of a professional Nursing organisation									
Yes		3.22 (.34)	.180	1.352	79	2.80 (.59)	0.651	0.454	79
No		3.11 (.38)				2.73 (.59)			
Occupation									
Nurse		3.18 (.36)	.084	1.740	121	2.78 (.61)	0.722	0.357	121
Doctor		3.06 (.39)				2.73 (.59)			
Area of work									
Critical Care		3.36 (.28)	< 0.001	4.161	122	3.07 (.47)	< 0.001	3.044	122
Non-Critical Care		3.05 (.37)				2.64 (.61)			

Note \*= Pearson's correlation coefficient