African Journal of Emergency Medicine 12 (2022) 259–263

Contents lists available at ScienceDirect

African Journal of Emergency Medicine

journal homepage: www.elsevier.com/locate/afjem

ORIGINAL ARTICLE

Family presence during patient acute deterioration: A survey of nurses' attitudes and reflection on COVID-19 in an African setting

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ARTICLE INFO

Keywords:
Nurses' perceptions
Family presence
Acute deterioration
Emergency centre
COVID 19
African relevance

ABSTRACT

Introduction: Acute deterioration refers to a patient who has become physiologically unstable requiring acute care. Family presence during resuscitation efforts has been widely supported by literature. Nurses are often the primary contact for the families of patients in the emergency centre, playing an important role in facilitating family presence during acute care. To describe nurses' attitudes regarding family presence during the management of acutely deteriorating patients in the emergency centre.

Methods: A descriptive quantitative study was conducted in the emergency centres of three public hospitals in the Eastern Cape, South Africa. A total sample of professional nurses (n = 57) were recruited, to complete the Emergency Department Family Presence (EDFP) survey. Statements about the negative effects of family presence during acute care of a deteriorating patient were presented and respondents were required to agree or disagree. Data were analysed using univariable and multivariable logistic regression.

Results: The majority of the nurses agreed with the items in the EDFP survey agreeing that present relatives may misinterpret activities of health care professionals (92.8%) which can result in complaints about the quality of care (91.1%). Nurses with more years of experience (11–21 years) were more likely to disagree with the statements on family presence having negative effects on patient care than nurses with fewer years of experience (0–10 years) (OR:6.92; 95%CI: 1.29–37.28).

Discussion: Nurses have the perception that family presence has a largely negative effect on patients, patient care and the families present during acute care. The contextual application of the practice of family presence during acute deterioration in an African setting needs investigation and the need for continued professional education on family centred care is emphasised. Alternative methods of facilitating family presence during the COVID-19 Pandemic must be considered as we advocate for the self determination of families and patients.

African relevance

- Family presence during acute deterioration of patients is an advancing practice globally, however the relevance and support for this practice in an African setting is not known.
- The barriers to family presence created by the COVID 19 pandemic highlighted the need for family presence, which is often a practice facilitated by nurses caring for acutely ill patients.
- In order to develop contextually relevant practice guidelines, it is important to understand the attitudes of health care workers required to implement family presence during acute care and describe the contextual nuances of our setting. Nurses form the largest majority of health care workers in South Africa and therefore their attitudes towards this practice can either facilitate or obstruct family presence during acute deterioration.

Introduction

Family presence during acute deterioration (FPDAD) of patients is an evidenced-based practice supported by its positive effects on patient care with varied health care professional's attitudes about its practice in acute care settings [1]. The benefits include the reduction of anxiety and improved long-term mental health of families; emotional support for patients as well as improved communication between the health care team and the family regarding health history, and health wishes related to the patient [2].

The concept of family presence has evolved. The origin of this practice began with family witnessed resuscitation which advocated for families to be present during the resuscitation of a loved one; including cardiopulmonary resuscitation or invasive procedures such as endotracheal intubation and now includes the care during acute deterioration [1,3].

While this study was conducted in the pre-COVID era, it is important to note the significant halt in the practice of family presence during

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https://doi.org/10.1016/j.afjem.2022.04.012
Received 30 September 2021; Received in revised form 24 March 2022; Accepted 29 April 2022
Available online 8 May 2022

acute care as a result of the COVID-19 pandemic. Visitation restrictions were implemented across the world for in-hospital patients in varying degrees, motivated by the need to mitigate the risk of viral transmission between visitors, patients and staff [4]. While the pandemic has been a significant barrier to family presence, the evidence which has emerged from the pandemic has proved to be of great support for the advocacy of the practice of FPDAD of patients. Even in the midst of imposed restrictions to physical presence, alternative methods for family presence have been proposed, including alternate methods of physical presence, virtual presence and surrogate presence of family members [6]. Multiple studies during the COVID-19 era have highlighted the need for families to be present with their loved ones [4–6].

Concerns surrounding FPDAD of patients include the health care professionals' fear of litigation, belief that family presence will produce negative effects on the family, the patient and the health care team, and the need for support for the family during witnessed acute care [7]. Evidence of this practice in this setting is scarce, with very few published studies originating from Africa, and countries like Rwanda reporting that family presence during acute deterioration of patients is not practiced at all, while in South Africa it is reported as an uncommon or inconsistent practice [10–12].

Being the primary contact for families upon arrival and throughout the duration of care in the emergency centre, nurses may act as advocates or barriers to the presence of families during the management of an acutely deteriorating patient [6]. While higher-income countries are able to support this practice by ensuring adequate staffing to support the family during the process of witnessing the care of their loved one and recently facilitate virtual presence during the COVID-19 restrictions, it is of importance to consider differences in the context of low resourced settings. Countries that are poorly resourced may not have the capacity to facilitate family presence and therefore, contextual relevance in the development of implementation policies must be evident. The facilitating factors and barriers such as the attitudes of the nurses and capacity of the facility must be investigated in order to ensure contextual relevance in our approach to family presence during acute deterioration [13,14].

Methods

The study used a descriptive quantitative survey design. The study was conducted in the emergency centres (EC) of three public hospitals in the Eastern Cape. All three hospitals are tertiary teaching hospitals with 570, 910 and 512 beds respectively and are part of the largest hospitals in the province. Situated in the poorest province (Eastern Cape) of South Africa [15] where resource shortages, staff shortages, and lack of highly trained nurses is not uncommon [16], the ECs in these hospitals see an average of 2000 polytrauma and medical emergency patients (from children to geriatrics) in a week combined.

A total population sampling method was used to recruit 56 Nurses. Nurses with more than one year of experience in the EC, registered with the South African Nursing Council were included. Data were collected during day and night shift between February and April 2019. Analysis and write up of the results for publication began at the forefront of the pandemic and therefore this article discussed the results with a reflection of the implications of the COVID-19 pandemic.

A validated tool called the Emergency Department Family Presence (EDFP) survey was used with permission from the authors for data collection [17]. The tool was published in the Emergency Nursing Journal and was used in a study published by the same journal, demonstrating its' reliability and validity [2]. The tool has 13 items across four domains that measure the attitudes of the ED nurses regarding family presence during the management of an acutely deteriorating patient including; negative (i) effects on patient care; (ii) effects on the patient; (iii) effects on the family; and (iv) effects on the individual health care provider [17]. The tool presents statements identifying negative consequences or effects as a result of family presence to which nurses are asked to agree or disagree with. Disagreement would therefore indicate a positive attitude toward the practice family presence during acute deterioration.

A pilot study was conducted with five nurses from one of the selected hospitals to assess contextual relevance. No modifications on the tool were needed, therefore results from the pilot study were incorporated in the study. Internal consistency for the four domains in the EDFP was calculated using Cronbach's alpha. All domains scored above the accepted threshold of ≥0.70 (0.85) showing good internal consistency and thus the EDFP was considered a reliable measurement tool for the study context [18].

To describe the demographic characteristics of the study sample, frequencies were reported. To report response frequencies on nurses' attitudes, three categories were created that denote: agreement (by combining strongly agree and agree), neutral (using 'not sure') and disagreement (by combining strongly disagree and disagree). Age groups were also collapsed from eight groups to four groups. This was due to the small sample size and to facilitate data presentation. To determine the association between nurse's demographic characteristics and their attitudes towards family presence, univariable and multivariable logistic regression models were fitted for the four factors of the EDFP survey. All analysis was conducted at the 5% significance level using Stata version 14.0 as the analysis software.

Ethical approval to conduct the research was attained from the Eastern Cape Department of Health Research Committee, the research committee of each hospital, and the Human Research Ethics committee of the affiliated academic institution.

Participants were given information leaflets outlining full details of the study and participation in the study was voluntary. Completed questionnaires were deposited in a sealed box that was placed in a safe area in the EC's. Only the researchers, supervisor, and the statistician had access to the completed questionnaires.

Results

A response rate of 100% was achieved (100%, $n = 56$). Of the sample, 83.93% of the nurses were female ($n = 47$)) with the majority in the age group 41–60 years (64.29%, $n = 36$). More than half the sample had no postgraduate qualification (57.14%, $n = 32$) and 53.57% of the study sample had 0–10 years of experience as a professional nurse ($n = 30$).

Overall, 77% of nurses agreed with items in the EDFP survey. Nurses agreed that family presence during the management of an acutely deteriorating patient had broadly negative effects on patient care (see Table 1 below, item 1–6), on the patient (see Table 1 below, item 7–9), on family (see Table 1 below, item 10–11) and on the individual health care provider (see Table 1 below, item 12-13).

Years of experience as a professional nurse was independently associated with ($p < 0.05$) nurses' attitudes towards family presence regarding effects on patient care (see Table 2 below). Nurses with eleven to 21 years of experience were more likely to disagree with statements on family presence having negative effects on patient care than nurses with zero to ten years of experience (OR:6.92; 95%CI: 1.29–37.28).

Discussion

Nurses' attitudes about FPDAD of patients in this study was negative across all domains of the survey. The perception that family presence during acute care presents more risk than benefit supports findings from other low- and middle- income earning counties (LMIC) including Jordan [19], Iran [20,21], Greece [22] and Pakistan [23], where health services may be constrained. However, even in some high income-earning countries such as Germany [24], France [25] and Sweden [7] nurses' attitudes to family presence were found to be negative citing policy, health care training and cultural influences as contributors to the attitudes of this practice. The negative attitude of nurses in the study support the un-

Table 1
Distribution of nurses' attitudes towards family presence during the management of an acutely deteriorating patient in the emergency centre.

	Disagree		Not sure		Agree	
	n	%	n	%	n	%
EFFECTS ON PATIENT CARE						
1. The presence of family members during a deterioration episode interrupts patient care.	9	16.07	4	7.14	43	76.79
2. The presence of family members during a deterioration episode interferes with patient care.	4	7.14	5	8.93	47	83.93
3. The presence of family members during a patient's episode of deterioration would inhibit the team from communicating freely.	4	7.14	7	12.50	45	80.36
4. The presence of family members during a patient's episode of deterioration makes it more difficult for the team to do their job.	5	8.93	2	3.57	49	87.50
5. Family may misinterpret the activities of the health care professionals if present during patient's episode of deterioration.	3	5.36	1	1.79	52	92.85
6. Family presence during a patient's episode of deterioration may result in complaints about quality of care.	5	8.93	0	0.00	51	91.07
EFFECTS ON THE PATIENT						
7. Patients may not feel able to voice their true feelings (re: care plans) with their family present.	6	10.71	6	10.71	44	78.57
8. Having their family present during an episode of deterioration will cause increased levels of anxiety for the patient.	13	23.21	9	16.07	34	60.72
9. Having their family present during an episode of deterioration will cause increased levels of stress for the patient.	16	28.57	10	17.86	30	53.57
EFFECTS ON THE FAMILY						
10. Witnessing deterioration is emotionally traumatic for the patient's family.	3	5.36	1	1.79	52	92.85
11. Witnessing deterioration of the patient is stressful for the patient's family.	3	5.36	1	1.79	52	92.85
EFFECTS ON THE INDIVIDUAL HEALTH CARE PROVIDER						
12. I would feel an increased level of anxiety having the family members present during an episode of deterioration.	17	30.36	3	5.36	36	64.29
13. I would feel an increased level of stress having family members present during an episode of deterioration.	17	30.36	4	7.14	35	62.50

Table 2
Univariable description and multivariable logistic regression analysis results showing the association between demographic characteristics of nurses and their attitude regarding the effects of family presence on patient care.

Outcome 1: Effects on patient care				
	Univariable analysis		**Multivariable analysis**	
Characteristics	**OR (95% confidence interval)**	***p*-value**	**OR (95% confidence interval)**	***p*-value**
Gender				
Male	1.61 (0.25–10.29)	0.614	2.85 (0.32–25.12)	0.346
Female	1	1	1	1
Age (years)				
21–40	0.34 (0.06–1.84)	0.212	0.97 (0.12–8.18)	0.981
41–60	1	1	1	1
Years of experience as a registered nurse				
0–10	1	1	1	1
11–21	6.92 (1.28–37.28)	0.024*	8.07 (0.99–65.29)	0.050

Key: *=statistical significance ($p < 0.05$)

common and inconsistent approach to the practice of family presence during acute care in Africa [10–12].

Further research would be needed to determine which factors play a role in the South African context. This should include the effect of the COVID-19 pandemic. This discussion will include a reflection on how the pandemic has affected the emerging literature related to family presence during acute care.

Data analysis indicated that years of experience was a predictor that independently correlated with nurses' attitudes regarding the patient care factor. Nurses with eleven to 21 years of experience indicated that family presence when treating an acutely deteriorating patient does not have a negative effect on patient care while nurses with less experience believed that family presence would negatively affect patient care. This finding was supported in international and local studies reporting that health care practitioners with more years of experience or higher qualification tended to be more confident and therefore comfortable with the presence of family during acute care [26,27].

Despite the positive correlation between experienced nurses and family presence, the overall attitude regarding patient care factor remained negative. The regression analysis showed no significant association between the nurses' demographic characteristics and nurses' attitudes towards family presence during the management of an acutely deteriorating patient regarding effects on the patient, effects on the family and effects on the individual health care provider.

A large majority of nurses felt that it would be difficult for the team to communicate and execute the required interventions effectively when the family members are present. Other studies on health care provider attitudes of FPDAD of patients confirm fear of divulging confidential information in the presence of family members and being watched by family members is commonly reported [11,13]. Fears of family members becoming emotional and interfering with clinical interventions and clinical decision making is not unwarranted and therefore clear guidelines and support for families present during acute care is recommended [14].

While the risk must be acknowledged, evidence supporting family presence suggests that families present during acute care act as subjective advocates can increase the safety of patients due to their vigilance leading to a decrease in medical errors or negligence [28]. It is notable that facilities that have adopted this practice before the COVID -19 pandemic have been reported as successful in improving their overall health care performance while those who have continued restriction on family presence reported stagnation or decline in performance related to user satisfaction and patient outcomes [28].

A significant number of nurses believed that patients might not be able to express their true feelings and that stress and anxiety might be elevated when the family is present. However, research indicates that there is no evidence of harm in family presence during acute deterioration of a patient. In fact, in a study by Waldemar et al., it is reported that family presence had neither a positive nor negative effect on the

outcome of the clinical intervention [29]. Conversely, there is a proven negative effect from the restriction of family presence on the physiological well-being of patients, including an increased incidence of delirium [30], decreased nutritional intake, increased incidence of pain, and psychological manifestations of loneliness, agitation, aggression and depressive symptoms [5].

Participants in this study indicated concerns about the effect this has on the emotional well-being of the family. Over 90% of nurses thought that the experience of witnessing the management of an acutely deteriorating patient may cause emotional trauma and stress for the patient's family. It is true that families experiencing the acute deterioration of a loved one may become emotional and require additional support [14] and are even at risk of developing Post Traumatic Stress Disorder [31]. These situations may place health care practitioners in a difficult position and while consideration for the support of families during this process is vital, there is a lack of objective data supporting these concerns and the risk should not hinder the implementation of good practice [26,32]. Fundamentally, studies show that family members prefer to be given a choice and strongly believe that it is their right to be present [26,31]. Family centred care is not only about physical presence but also about self-determination and allowing the family and patient the right to choose [33]. During the COVID pandemic this could be facilitated by ensuring that visitation policies include guidance for families on the correct use of personal protective equipment (PPE), social distancing and encouraging vaccination to ensure that they are able to make informed decisions about the care of their loved one [33]. Alternatives to physical presence such as virtual presence may not be accessible in low resourced settings and the increased need for PPE for family members must be considered in planning for implementation of this practice.

The context and level of qualification of health care providers is a key consideration. In LMICs, the capacity for staff to support families and carry out clinical interventions simultaneously is decreased. Less experienced nurses may also find it difficult to support the family and therefore a contextually relevant plan for implementation of family presence and family support is required. In an African context, it is also important to understand the cultural nuances underlying family practices. Understanding whom to communicate with as well as what kind of information to divulge is the nuances of tradition that need to be explored when developing culturally sensitive policies which are flexible and adaptable to the context in which it is implemented [34,35].

Although family members prefer to be present, concerns about the detrimental effects that such a practice might have on the health care providers are cited in multiple studies [26,36–38]. In this study, nurses feared that family presence may cause stress and anxiety due to the pressure of being watched. In a study by Hassankhani et al. [14] one participant found that being watched during acute care left them psychologically drained with reduced confidence and increased anxiety which may result in medical errors and ineffective cardiopulmonary resuscitation. Notably, many of the nurses in this study are less experienced and family presence might increase performance anxiety and affect clinical decision making. The general public's view of nurses as sub-professional, which is often built on chronic media reports and experiences of poor treatment by nurses [39,40], might contribute to this challenge.

The sample size of the study (n=56) was small and only focused on EC nurses and therefore the results cannot be generalised to the whole population of nurses in South Africa. Data collection for this study took place before the COVID-19 pandemic began and only focused on nurses, therefore it would be recommended that the attitudes of health care workers regarding family presence during acute deterioration be investigated as attitudes may have been influenced and changed during this time.

Conclusion

This study presents evidence about the attitudes of nurses towards family presence during acute patient deterioration when the concept was still new in South Africa and nurses in this study have not been exposed to this new practice. Therefore, they did not hold strong views about it, hence, the negative attitudes. However, In the midst of an ongoing pandemic that has significantly halted the progression of family presence during acute care, it is important to reflect on the attitudes of nurses in order to develop contextually relevant policies and continuing professional education that will propel family centred care forward. Although the attitudes may have not changed evidence emerging during the COVID-19 pandemic suggests the need for family presence and has highlighted the positive effect on the patient, the family, the performance of health care and the health care provider. The pandemic has left much devastation, however, nurses caring for the acute and critically ill have the opportunity of facilitating family presence, reducing ill effects on the mental health of families. The findings of this study highlight the gaps that need to be addressed in order to move this practice forward. Further research on the contextual nuances of family-centred care in an African setting is needed

Dissemination of results

Results from this study have been available on the university repository and to all data collection sites.

Declaration of Competing Interests

The authors declared no conflicts of interest.

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