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Short Communication

Association between nurses' perceived self-confidence in performing family witnessed resuscitation and implementation of the practice at Siaya County Referral Hospital in Kenya

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ABSTRACT

Objectives: This study aimed to identify the relationship between nurses' perceived self-confidence in performing family-witnessed resuscitation and the implementation of the practice among nurses and to describe nurses' preferences regarding family-witnessed resuscitation practice.
Methods: This study was a cross-sectional survey. A stratified random sampling design was used to obtain study participants from various units within the medical-surgical departments of the hospital. Data was collected using the Family Presence Self-confidence Scale designed by Twibel et al. Chi-square test and binary logistic regression were used to analyze the association between levels of perceived self-confidence and the implementation of family-witnessed resuscitation practice.
Results: There was a significant association between nurses' perceived self-confidence ($\chi^2 = 8.06$, $P = 0.01$) and the implementation of family-witnessed resuscitation practice. The nurses who were quite/very confident were 4.9 times more likely to perform witnessed resuscitation than those who were somewhat confident ($OR = 4.94$, 95% CI 1.07–22.71)
Conclusion: The perceived self-confidence in performing family-witnessed resuscitation varied widely among nurses. To achieve successful implementation of family-witnessed resuscitation practice, medical-surgical nurses should get higher levels of perceived self-confidence in the presence of patients' families through advanced specialized training and practice on resuscitation.

1. Introduction

Family-witnessed resuscitation (FWR) is a practice of offering family members a choice to be in attendance in a position that gives them visual and physical access to their member being resuscitated [1]. The terms family witnessed resuscitation, family presence during resuscitation (FPDR), and witnessed resuscitation are terms used synonymously [2].

Family-witnessed resuscitation concept was first practiced three decades ago when health professionals in Foote Hospital, Michigan gave the patient's family an option to witness the process of resuscitation of their family member [3]. According to guidelines by the American Heart Association (2020), approximately 209,000 cardiac arrests occurs in hospital while over 350,000 takes place out of hospital yearly in the US. Despite advancements in knowledge of resuscitation, the rates of the survival of the victims are 25% and 10% for in-hospital resuscitation and out-of-hospital resuscitation, respectively [4]. Therefore, offering families an option to stay with their loved ones could be the final chance for the members of the family to see their loved ones alive. A study conducted in Rwanda revealed that FWR practice appeared to be a new concept among nurses despite the concept having been introduced over 30 years ago. It was shown that in most healthcare settings, the patients' families are accepted at the patient's bedside but should there be a need for resuscitation, they are excluded during the procedure only to be informed of the outcome [5]. Here in Kenya, the government adopted American Heart Association (AHA) guidelines for cardiopulmonary resuscitation in training nurses on Basic Life Support (BLS) and Advance Cardiac Life Support (ACLS). The practice is not routinely implemented by nurses in Kenya

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despite the adoption of AHA guidelines that recommend the practice. When adopted as a routine practice, FWR practice improves patient safety [6], which offers the family an opportunity to be with their member during their last moments [7], and it reduces adverse psychological outcomes for the patients and the family [8]. To healthcare professionals, the practice gives the family a chance to witness that everything possible is being done; it offers an environment that upholds the patient's dignity and promotes the grieving process [9–11]. The practice encourages a strong bond between the family and resuscitation team, and family satisfaction with the care offered [12–15]. Cardiac arrest survivors have reported that they felt supported and comforted by the presence of relatives during resuscitation [12]. The family members prefer being present during resuscitation [16]. The families whose members underwent futile resuscitation wished they could have been present during resuscitation [17]. Despite the available evidence, nurses are reluctant to fully embrace the practice. More often, families initiate resuscitation attempts as they await the arrival of the emergency response team [18]. However, upon arrival of the team family is sent away from the resuscitation area only to be informed of the outcome, resuscitative care they initiated themselves. At the same time, resuscitation attempts frequently occur in medical and surgical units implemented by medical-surgical nurses. Yet, relevant studies which involve this cadre of nurses are limited. Therefore, the purpose of this study was to identify the nurses' perceived self-confidence levels in performing family-witnessed resuscitation, to explore the relationship between nurses' perceived self-confidence and performance of resuscitation in the family's presence, and to describe nurses' preferences regarding family-witnessed resuscitation practice.

2. Methods

2.1. Study setting and participants

This study was a quantitative, cross-sectional analytical survey. The study was conducted in Siaya County Referral Hospital (SCRH), Kenya. The data was collected between December 2021 and March 2022. SCRH is a level five hospital with 92 registered nurses with different qualifications working in various departments within the hospital. The study participants were registered nurses working in medical-surgical units. All registered nurses were included in the study, and nurses who were on leave during the period of the study were excluded. A sample size of 75 respondents was obtained using the Yamane formula [19].

2.2. Data collection

An anonymous self-administered questionnaire was used to collect data. The researcher adopted the validated version of Twibell's Family Presence Self-confidence Scale (FPSC scale) [20]. The permission to use the original questionnaire was granted through written permission by the original authors upon request. The questionnaire had three sections. Section A collected data on sociodemographic characteristics, including age, marital status, years of nursing experience, and professional organization affiliation. Section B collected data on nurses' perceived self-confidence when performing nursing care in the family presence. The participants were asked to rate their self-confidence in performing nursing care, such as drug administration, cardiopulmonary resuscitation, and upholding patients' dignity, among others. This section had 15 items on 5-point Likert scale. The responses ranged from 1 (Not all confident) to 5 (Very confident), with a higher score indicating a greater level of self-confidence in performing family-witnessed resuscitation. Section C collected data on nurses' preferences regarding family-witnessed resuscitation practice. The nurses' preferences and opinions were assessed by asking a set of 6 questions regarding whether they would prefer their own family member to observe and be present if they were to be resuscitated, who should decide on whether the family should be present during their kins resuscitation and whether this directive should be made in advance. The FPSC Scale was pretested in 10% of the sample from Busia County Referral Hospital. The Cronbach's α coefficient of the tool was 0.7. The questionnaire was reviewed by peers and research supervisors for content and face validity. Ethical clearance to conduct this research was obtained from Mount Kenya University Institutional of Ethics and Review Committee. Permissions were also obtained from the participating hospital and appropriate offices within Siaya County. Participation in the study was voluntary, and participants signed informed consent.

2.3. Statistical analysis

SPSS version 26 was used to analyze the data. Frequency and percentage were used to describe categorical data. The responses from FPSC scale were collapsed into three groups; Not at all/not very confident (range 1.00–2.60), somewhat confident (range 2.61–3.40), and Quite/very Confident (range 3.41–5.00). Chi-square test and binary logistic regression were used to analyze the association between levels of perceived self-confidence and the implementation of family-witnessed resuscitation practice. The significance level of P-value ≤ 0.05 was set.

3. Results

3.1. Sociodemographic characteristics of the respondents

A total of 75 nurses were sampled for this study. Seventy-one nurses filled and returned the questionnaires, with a response rate of 94.7%. Most of the respondents were female (80.3%), aged between 25 and 39 years (64.8%), with a median age of 30 years.

Most of the respondents were married (71.8%). More than three-quarters had attained a diploma education (80.3%), Bachelor's (18.3%), and Master's degree (1.4%). The majority of the respondents were working in the Pediatric ward (21.1%), Medical ward (19.7%), Intensive care unit (18.3%), Accident & emergency (16.9%), Outpatient department (12.7%), and Surgical Ward (7.0%). Nearly half of the participants (47.9%) affirmed being affiliated with professional organizations (i.e. National Nurses Association of Kenya and Kenya Progressive Nurses Association).

3.2. Nurses' perceived self-confidence in performing the nursing procedure in the family presence and association with the implementation of the practice

From results determined from the FPSC Scale, 77.5% of the respondents were Quite/very Confident. The rest were somewhat confident (16.9%) and Not at all/not very confident (5.6%).

The nurses' perceived self-confidence was proved to have a relationship with the implementation of the practice ($\chi^2 = 8.06$, $df = 2$, $P = 0.01$). See Table 1. From results of the binary logistic regression analysis, the adjusted odds ratio indicates that nurses who were quite/very confident were 4.9 times more likely to implement family-witnessed resuscitation than those who were somewhat confident ($OR = 4.94$, 95% CI 1.07–22.71).

3.3. Nurses' preferences regarding family witnessed resuscitation

When asked about their preferences, most nurses (69.0%) would recommend that their own family member be present when they

Table 1
Nurses' perceived confidence and implementation of family-witnessed resuscitation practice ($n = 71$).

Perceived self-confidence	Implementation of FWR	
	Yes	No
Not at all/Not very confident	0	4
Somewhat confident	3	9
Quite/Very confident	32	23

Note: $\chi^2 = 8.06$, $df = 2$, $P = 0.01$.

were to undergo resuscitation. Additionally, 38.0% of the respondents affirmed having ever been present in the room when a relative was being resuscitated. More than three-quarters of the respondents (78.9%) affirmed that decisions regarding family presence should be part of advance directives. When followed up on whom they thought should be making that decision, 60.6% responded that it should be made jointly by the resuscitation team. The rest believed that the patient should decide in advance before resuscitation (14.1%), the patient's family (11.3%), the nurse (9.9%), or the doctor (4.2%). Nearly half of the nurses (49.3%) had ever invited a family member to be present during resuscitation, and the rest (50.7%) had never. Among those who had ever invited a family member during resuscitation, nearly half (45.7%) had invited over 6 times, 22.9% invited 4–6 times, and close to a third of them had invited on 1–3 occasions.

4. Discussion

Family and patient center care is rapidly gaining attention across the globe as a transformation mechanism in health care aimed at improving patient satisfaction, safety, and outcomes. The nurses, like other healthcare experts, are obligated to offer the patients emotional comfort as well as the family. The findings of this study depict a relatively young nursing workforce; most of the respondents were aged between 25 and 39 years. The perceived self-confidence increases with experience in resuscitation; as a result, this could be the reason for the inconsistent implementation of family-witnessed resuscitation practice. The nurses should advocate for caring for the family as a whole, and isolating them from their sick members undermines the principles of family-centered care. The medical-surgical nurses are relied upon to lead the implementation of family witness resuscitation practice in line with their bedside care and their vital role in maintaining the patient-family unit. In this study, more than a third of the nurses rated themselves as quite/very confident in performing resuscitation in the presence of patients' families. This is consistent with the findings in Kingdom of Saudi Arabia, by De Beer and Moleki in which healthcare professionals reported high levels of perceived self-confidence towards family-witnessed resuscitation yet, only 25% reported that they had experience with family-witnessed resuscitation and 15% had participated in resuscitation in the family presence [21,22]. Despite high levels of perceived self-confidence reported in this study, 49.3% of the nurses had invited patients' families to witness resuscitation, which is higher than the findings from the Kingdom of Saudi Arabia. This could be attributed to the high level of qualification of the participants in this study; for instance, the minimal qualification reported in this study was a diploma, and the highest qualification was a master's degree in nursing. This study has demonstrated an association between the level of perceived self-confidence and the implementation of family-witnessed resuscitation practice. For instance, nurses who were quite/very confident were 4.9 times more likely to implement the practice than those who were somewhat confident. This finding is consistent with that done in Kentucky by Tudor et al., which revealed an association between nurses' perceived confidence and implementation of the practice [9]. The nurses with higher perceived self-confidence in cardiopulmonary resuscitation skills demonstrate better performance in the presence of the patient family [23]. The acceptance of family members was significantly associated with the ability to confidently perform resuscitation in family members' presence [9,24,25]. With increased perceived self-confidence, the nurses can improve their resuscitation skills and perform better in the presence of the patient's family. In Korea, a study revealed that the higher the self-confidence levels among nurses in performing resuscitation in the presence of the family, the more they were willing to implement family-witnessed resuscitation practice [26]. More self-confident nurses invited more family members to witness loved ones' resuscitation than their less self-confident counterparts [24]. An increased perceived self-confidence level was observed in nurses who had undergone advanced training in resuscitation practice. Trained healthcare professionals managed resuscitation in the presence of the patient's family with confidence and were more willing to invite patients' family members. When the nurses were asked about their preferences, more than half affirmed that they would recommend that family members be present when they were to undergo resuscitation. Additionally, about two third of the respondents asserted that decisions regarding family presence should be part of advance directives. When followed up on whom they thought should be making that decision, more than half responded that it should be made jointly by the resuscitation team. Resuscitation is teamwork; none of the healthcare professionals should have the upper hand in making decisions about whether the patient's family should be present. This study has shown that nearly half of the nurses have participated in resuscitation events during their nursing careers. This means nurses are well-placed to implement family-witnessed resuscitation.

Study Limitations. Using a self-report tool could have resulted in potential response bias despite measures to ensure anonymity. The study findings may not be generalized to reflect the view of the entire medical-surgical nurses in the country because of the small sample size, given that the samples were selected in one county referral hospital.

Recommendations. Further studies need to be conducted to establish the perceptions of other healthcare professionals involved in resuscitation. The nurses need to improve their perceived self-confidence levels through advanced specialized training on resuscitation and participation in activities of professional bodies, and this would provide greater exposure to evidence-based practices related to family presence. Nurses need to be continuously involved in active learning; this improves skills and boosts confidence in family presence.

5. Conclusion

The perception of self-confidence varied widely among nurses. To successfully implement family-witnessed resuscitation practice, medical-surgical nurses should exhibit higher levels of perceived self-confidence in the presence of patients' families. Overall, this research study has shown that nurses who were quite/very confident were 4.9 times more likely to implement family witnessed resuscitation than their counterparts who were somewhat confident. Most of the respondents affirmed that the decision to allow the patient's family to be present when their member is being resuscitated should be made jointly by the resuscitation team members.

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CRediT authorship contribution statement

Andrew Angute: Conceptualization, Methodology, Validation, Data collection, Formal analysis, Data curation, Writing - original draft, Writing - review & editing. **Daniel Muya Gachathi:** Conceptualization, Methodology, Validation, Investigation, Resources, Supervision, Writing - review & editing. **Ramalingam Ramani:** Conceptualization, Methodology, Validation, Investigation, Resources, Supervision, Writing - review & editing.

Data availability statement

The datasets used and analyzed during the current study are available from the corresponding author on reasonable request.

Declaration of competing interest

All authors declare no competing interest.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ijnss.2022.12.016.

References

[1] Tomlinson KR, Golden IJ, Mallory JL, Comer L. Family presence during adult resuscitation. Adv Emerg Nurs J 2010;32(1):46–58. https://doi.org/10.1097/tme.0b013e3181cbe902.
[2] Porter JE, Cooper SJ, Sellick K. Family presence during resuscitation (FPDR): Perceived benefits, barriers and enablers to implementation and practice. Int Emerg Nurs 2014;22(2):69–74. https://doi.org/10.1016/j.ienj.2013.07.001.
[3] American Association of Critical Care Nurses. Family presence during resuscitation and invasive procedures - AACN. https://www.aacn.org/clinical-resources/practice-alerts/family-presence-during-resuscitation-and-invasive-procedures. [Accessed 20 April 2021].
[4] Go AS, Mozaffarian D, Roger VL, Benjamin EJ, Berry JD, Borden WB, et al. Heart disease and stroke statistics: 2013 update: a report from the American Heart Association. Circulation 2013;127(1):e6–245. https://doi.org/10.1161/cir.0b013e31828124ad.
[5] Havugitanga P, Brysiewicz P. Exploring healthcare professionals' perceptions regarding family-witnessed resuscitation in a hospital in Kigali. Rwanda. S Afr J Crit Care 2014;30(1):18. https://doi.org/10.7196/sajcc.174.
[6] Leske JS, McAndrew NS, Brasel KJ. Experiences of families when present during resuscitation in the emergency department after trauma. J Trauma Nurs 2013;20(2):77–85. https://doi.org/10.1097/JTN.0b013e31829600a8.
[7] Hassankhani H, Zamanzadeh V, Rahmani A, Haririan H, Porter JE. Family presence during resuscitation: a double-edged sword. J Nurs Scholarsh 2017;49(2):127–34. https://doi.org/10.1111/jnu.12273.
[8] Erogul M, Likourezos A, Meddy J, Terentiev V, Davydkina D, Monfort R, et al. Post-traumatic stress disorder in family-witnessed resuscitation of emergency department patients. West J Emerg Med 2020;21(5):1182–7. https://doi.org/10.5811/westjem.2020.6.46300.
[9] Tudor K, Berger J, Polivka BJ, Chlebowy R, Thomas B. Nurses' perceptions of family presence during resuscitation. Am J Crit Care 2014;23(6):e88–96. https://doi.org/10.4037/ajcc2014484.
[10] Chapman R, Watkins R, Bushby A, Combs S. Family-witnessed resuscitation: perceptions of nurses and doctors working in an Australian emergency department. ISRN Emerg Med 2012;2012:1–10. https://doi.org/10.5402/2012/369423.
[11] Jabre P, Belpomme V, Azoulay E, Jacob L, Bertrand L, Lapostolle F, et al. Family presence during cardiopulmonary resuscitation. N Engl J Med 2013;368(11):1008–18. https://doi.org/10.1056/nejmoa1203366.
[12] Twibell RS, Craig S, Siela D, Simmonds S, Thomas C. Being there: inpatients' perceptions of family presence during resuscitation and invasive cardiac procedures. Am J Crit Care 2015;24(6):e108–15. https://doi.org/10.4037/ajcc2015470.
[13] Chapman R, Bushby A, Watkins R, Combs S. Australian Emergency Department health professionals' reasons to invite or not invite Family Witnessed Resuscitation: a qualitative perspective. Int Emerg Nurs 2014;22(1):18–24. https://doi.org/10.1016/j.ienj.2013.03.008.
[14] O'Connell K, Fritzeen J, Guzzetta CE, Clark AP, Lloyd C, Scott SH, et al. Family presence during trauma resuscitation: family members' attitudes, behaviors, and experiences. Am J Crit Care 2017;26(3):229–39. https://doi.org/10.4037/ajcc2017503.
[15] Goldberger ZD, Nallamothu BK, Nichol G, Chan PS, Cooke CR, et al. Policies allowing family presence during resuscitation and patterns of care during in-hospital cardiac arrest. Circ Cardiovasc Qual Outcomes 2015;8(3):226–34. https://doi.org/10.1161/CIRCOUTCOMES.114.001272.
[16] Paplanus LM, Salmond SW, Jadotte YT, Viera DL. A systematic review of family witnessed resuscitation and family witnessed invasive procedures in adults in hospital settings internationally - part II: perspectives of healthcare providers. JBI Libr Syst Rev 2012;10(33):2018–294. https://doi.org/10.11124/01938924-201210330-00001.
[17] de Stefano C, Normand D, Jabre P, Azoulay E, Kentish-Barnes N, Lapostolle F, et al. Family presence during resuscitation: a qualitative analysis from a national multicenter randomized clinical trial. PLoS One 2016;11(6):e0156100. https://doi.org/10.1371/journal.pone.0156100. Epub 2016/06/02.
[18] Bouland AJ, Halliday MH, Comer AC, Levy MJ, Seaman KG, Lawner BJ. Evaluating barriers to bystander CPR among laypersons before and after compression-only CPR training. Prehosp Emerg Care 2017;21(5):662–9. https://doi.org/10.1080/10903127.2017.1308605.
[19] Yamane T. Statistics: an introductory analysis. second ed. New York: Harper and Row; 1967.
[20] Twibell RS, Siela D, Riwitis C, Wheatley J, Riegle T, Bousman D, et al. Nurses' perceptions of their self-confidence and the benefits and risks of family presence during resuscitation. Am J Crit Care 2008;17(2):101–11. ;quiz112.
[21] De Beer J, Moleki MM. Critical care nurses' perceptions of family witnessed resuscitation in the Kingdom of Saudi *Arabia*. Afr J Nurs Midwifery 2022;14(1):105–15. https://doi.org/10.25159/2520-5293/9187.
[22] Powers K, Reeve CL. Original research: family presence during resuscitation: medical-surgical nurses' perceptions, self-confidence, and use of invitations. Am J Nurs 2020;120(11):28–38. https://doi.org/10.1097/01.NAJ.0000721244.16344.ee.
[23] Sak-Dankosky N, Andruszkiewicz P, Sherwood PR, Kvist T. Health care professionals' concerns regarding in-hospital family-witnessed cardiopulmonary resuscitation implementation into clinical practice. Nurs Crit Care 2018;23(3):134–40. https://doi.org/10.1111/nicc.12294.
[24] McLean J, Gill FJ, Shields L. Family presence during resuscitation in a paediatric hospital: health professionals' confidence and perceptions. J Clin Nurs 2016;25(7–8):1045–52. https://doi.org/10.1111/jocn.13176.
[25] Gordon ED, Kramer E, Couper I, Brysiewicz P. Family-witnessed resuscitation in emergency departments: doctors' attitudes and practices. S Afr Med J 2011;101(10):765–7.
[26] Kim KI, Kim M. Intention of Korean nurses to allow family presence during resuscitation. J Hospice Palliat Nurs 2016;18(4):364–70. https://doi.org/10.1097/njh.0000000000000260.