#### The professional and personal debriefing needs of ward based nurses after involvement in a cardiac arrest: An explorative qualitative pilot study.

**Abstract**

*Background:* Current research demonstrates that debriefing staff post cardiac arrests in clinical practice is rare, with little evidence of effectiveness.

*Objectives:* The aim of this pilot study was to identify the needs of ward based nurses for debriefing after involvement in a cardiac arrest, and to identify any barriers to participating in debriefing.

*Methodology:* An explorative qualitative study was undertaken with a purposive sample of seven nurses working on acute adult wards in a United Kingdom hospital. Data were collected by audio-recorded interviews and analysed using framework analysis.

*Findings:* Two key themes emerged relating to the nurses debriefing needs post a cardiac arrest. Nurses expressed ‘professional needs’ to use the experience as an opportunity to learn and improve practice, and ‘personal needs’ for reassurance and validation. Nurses identified barriers to engaging in debriefing including lack of awareness and uncertainty about the role of a debrief, identifying time for debriefing, and the lack of clear guidance from organisational protocols.

*Conclusion:* Nurses make a distinction between ‘professional’ and ‘personal needs’ which may be met through debriefing. Debriefing is an untapped opportunity, which has the potential to be capitalised on after every cardiac arrest in order to improve care of patients and nurses.

**Key Words**

Cardiac Arrest; Cardiopulmonary Resuscitation; Critical Incident; Debrief\*; Hospital Ward; Nurse Perceptions

**Implications for Clinical Practice**

* After involvement in a cardiac arrest, ward based nurses have ‘professional’ and ‘personal needs’ which may benefit from debriefing.
* Ward based nurses may not have a clear understanding of how a debrief may help to meet their ‘professional’ and ‘personal needs’.
* Barriers to debriefing exist which need to be acknowledged and addressed in practice to enable opportunities for debriefing.
* Debriefing is an untapped opportunity, which has the potential to be capitalised on after every cardiac arrest to improve care of patients and nurses.

**Introduction**

Approximately 35,000 patients experience a cardiac arrest in United Kingdom (UK) hospitals every year, of whom fewer than 20% survive to leave hospital (Couper et al., 2016; Nolan et al., 2014). The majority of these cardiac arrests (56.6%) occur on general hospital wards (Nolan et al., 2014), with ward based nurses playing a key role in many cardiopulmonary resuscitation (CPR) attempts. The value of debriefing staff after their involvement in a critical incident is widely acknowledged (Couper et al., 2013; **Gwinnutt** et al., 2015; Maloney, 2012; Mitchell et al., 2003), yet provision of debriefing after a critical incident, such as a cardiac arrest, is often rare in clinical practice (Healy and Tyrrell, 2013; Ross-Adjie et al., 2007; Sandhu et al., 2014), with little evidence of effectiveness (Ireland et al., 2008; Magyar and Theophilos, 2010). Although resuscitation attempts involve the wider multidisciplinary team (MDT) this pilot study specifically examines the needs and attitudes of ward based nurses in relation to debriefing after a cardiac arrest.

**Background**

Debriefing refers to structured opportunities for staff to gain support and the chance to reflect so to improve performance and delivery of care (Couper et al., 2013; Gardner, 2013; Maloney, 2012). The value of debriefing is widely recognised in other sectors such as the military and aviation industry (Gardner, 2013) and enhances our understanding of the potential role of debriefing in healthcare. There has been a significant shift in utilising simulation training as an educational tool and statistics show that audiovisual feedback and debriefing after simulated cardiac arrests are powerful tools to improve CPR performance, patient outcomes and team dynamics (Dine et al., 2008; Kim et al., 2017; Seethala et al., 2010).

Although debriefing can improve team performance, it can also be of value to individual practitioners. Newman (1996) identified that practitioners can have four primary debriefing needs after a critical incident: talking about the incident, validation of the decision-making process, seeking personal reassurance and reaffirmation of professional competence. Ireland et al. (2008) conducted a UK wide survey of practitioners’ views of hospital policy, practice and experience of debriefing after failed paediatric resuscitation, and concluded that psychological needs as well as medical issues should be fully addressed during debriefing.

Couper and Perkins (2013) review of the effectiveness of debriefing interventions distinguished two approaches to debriefing based on the timing of delivery. ‘Hot’ debriefing (taking place directly after the incident) tends to focus on reactions to the event, and issues such as team performance, speed of resuscitation team arrival and equipment availability. ‘Cold’ debriefing (provided some time after the event) typically reviews objective performance data, such as defibrillator recordings, and focuses on improving performance and patient outcomes. ‘Hot’ and ‘cold’ debriefing appear to address different timing and performance needs. Couper and Perkins (2013) note that a wide range of approaches may be taken in order to meet debriefing needs, yet this lack of standardisation limits the extent to which the value and effectiveness of debriefing can be evaluated.

The majority of evidence relating to debriefing after a cardiac arrest has been undertaken in emergency departments and paediatric areas (Ireland et al., 2008; Sandhu et al., 2014; Theophilos et al., 2009) and little is known about the attitudes and needs of ward based staff, which may be different to those of critical care specialists. In a study involving three emergency departments in Ireland, Healy and Tyrrell (2013) undertook a survey of 90 nurses and 13 doctors and concluded that debriefing is more highly valued by staff who have greater exposure to critical incidents. Conversely, staff who have less experience of involvement in cardiac arrests are wary of disclosure for fear of being labelled as not coping (Healy and Tyrrell, 2013; Page and Meerabeau, 1996). Whilst staff within critical care environments, such as emergency departments, often express very positive views towards the need for debriefing (Theophilos et al., 2009), the attitudes of ward based nurses towards debriefing are not known.

Despite positive attitudes by staff in critical care areas towards debriefing, debriefing is not consistently offered. In a study of the experiences of nurses in Western Australian emergency departments, Ross-Adjie et al. (2007) found that 59% of the 156 nurses reported that debriefing is not routinely offered and could be inadequate or non-existent. The lack of opportunities for debriefing in clinical practice may reflect barriers to the implementation of debriefing. Salas et al. (2008) note that there is often insufficient time within busy acute areas to participate in lengthy debriefs post critical incidents, and a lack of clear guidance and policy may be a further barrier. Studies have found that 72% of practitioners from UK emergency and paediatric departments (Ireland et al., 2008) and 69% of practitioners from 13 paediatric emergency departments in Australia and New Zealand (Theophilos et al., 2009) reported no formal debriefing policy or guidelines. When debriefing does occur, it is often undertaken on an ad hoc basis, in the absence of formal guidelines, and with little evidence of effectiveness (Ireland et al., 2008; Magyar and Theophilos, 2010). Little evidence examines the specific barriers to implementing debriefing after cardiac arrests on ward environments.

**Study Aim**

This pilot study aimed to:

1. Explore the needs of ward nurses in relation to debriefing after their involvement in a cardiac arrest
2. Examine any barriers perceived by ward nurses to participating in debriefing

**Methods**

An explorative qualitative study was undertaken with nurses working on acute adult wards in a UK hospital, to gain insights into nurses’ perceived needs for debriefing and perceived barriers to debriefing post cardiac arrests. By capturing thoughts, attitudes and experiences, explorative research allows the generation of ideas and theories to gain rich meaningful data on an area in which little or no formal research has been conducted (Labaree, 2013).

*Recruitment*

Purposeful sampling recruited participants over a five month period between September 2014 and January 2015. Inclusion criteria restricted the sample to registered nurses working on an adult hospital ward, who had been involved in or witnessed an adult cardiac arrest with CPR attempts. All other health care professionals and nurses working in critical care units, paediatrics and emergency departments were excluded from the study.

Notices were displayed on 26 adult wards, including medical, elderly, surgery, cardiovascular and thoracic, orthopaedic, and cancer wards. The notices invited nurses to participate in a research study about debriefing post cardiac arrests and provided contact details for more information and to register interest. The researcher approached nurses and attended ward meetings to explain the purpose of the research. A participant information sheet was given prior to the interview, with the opportunity to ask questions provided. To minimise non-attendance, email reminders were sent out to participants prior to their interview.

*Data collection*

Data were collected via audio-recorded individual interviews lasting 15-25 minutes. The interviews were conducted by the primary author, a registered nurse.

A semi-structured interview framework was adopted in order to allow flexibility to alter the sequence and ask further questions to significant replies (Ellis, 2010). The interview schedule was peer reviewed by nurses who were not part of the sample in order to ensure relevance and consistency and to avoid leading questions (Seidman, 1998).

During the interviews participants were asked to recall recent cardiac arrest experiences they had been involved in or witnessed; they were then asked open-ended questions about their experiences and perceptions of cardiac arrests and debriefing, opportunities for a debriefing post cardiac arrests, and barriers to debriefing. Notes were made immediately after the interviews to maintain contextual details for data analysis and interpretation (Ellis, 2010). The interviews took place on the hospital premises, outside of participant working hours and in an interview room to ensure minimal risk of interruptions.

Interviews can be prone to a form of researcher bias (Ellis, 2010), therefore every aspect of the interview was directed to reduce the effect of interviewer influence. It was stressed at the beginning of each interview there were no right or wrong answers and the primary author maintained written reflection on the experience of interviewing and both members of the research team reviewed transcripts of the early interviews. This approach enabled the primary author to refine their interview technique over the course of the data collection. Latter interviews were of longer duration and drew out richer data, although they did not result in new emerging data.

*Ethics*

Ethical approval and sponsorship was gained through the University of Southampton, Ethics and Research Committee (ERGO ID 10653). Research and Development approval was gained from the NHS Trust involved (RHM CAR0468). Participants gave written consent at the time of the interview and were informed of their right to withdraw at any time, with the assurance that all the information provided would be treated in a confidential, non-identifiable manner. As a sensitive and emotive topic of discussion, the participants were debriefed at the end of the interview by the primary author and informed of support and referral pathways available through the Hospital Employee Assistance Programme and chaplaincy services.

# *Data analysis*

Framework analysis was chosen due to its systematic staged process for managing data, allowing transparency and an auditable trace of findings (Ward et al., 2013). Frequently used in healthcare research as an established rigorous process, it is often used for semi-structured interview transcripts and to address specific questions useful for informing policy and practice (Gale et al., 2013; Ward et al., 2013). The seven-stage approach reported by Gale et al. (2013) was used (Table 1) and the data analysis was undertaken manually and recorded using Microsoft Office software.

Table 1: Stages of Framework Analysis (Gale et al., 2013)

|  |  |
| --- | --- |
| **Framework Analysis Stages** | **Procedure for analysis** |
| Stage 1: Transcription  | The transcript was transcribed verbatim. |
| Stage 2: Familiarisation with the interview | Immersion in the data through line-by-line reading. |
| Stage 3: Coding | Identifying segments of interesting text and applying a code. |
| Stage 4: Developing a working analytical framework | Codes were grouped into categories.  |
| Stage 5: Applying the analytical framework | The appropriate code and category was attached to the transcripts. |
| Stage 6: Charting data into the framework matrix | A framework matrix was generated to summarise each category with illustrative quotations. |
| Stage 7: Interpreting the data | Themes were generated from the data by reviewing the matrix and making connections between the participants and the categories. |

To ensure trustworthiness (Bryman, 2001), the interviews were transcribed verbatim and transcripts checked for accuracy by re-listening to the recordings. After initial codes had been developed, the transcripts were subjected to dual analysis by the authors in order to test reliability of the analysis, and the categories and themes were discussed. Respondent validation was sought by returning to the participants to discuss the themes and confirm that the reported findings were congruent with their views.

**Findings**

Nine nurses initially expressed interest in the study, although two of these later declined an interview. Seven female participants, aged 26-45 years with up to 12 years experience participated, all but one of whom worked on acute cardiac wards (Table 2). In terms of seniority, the participants were all experienced registered nurses (band 5 on the Agenda for Change pay scales) or deputy ward managers / sister (band 6).

Table 2: Participant details

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Age** | **Length of time qualified** | **Grade** | **Current**  |
| **Ward** |
| **Participant 1** | 26 | 1 year 7 months | Senior Band 5 | Medical |
| **Participant 2** | 26 | 2 years | Junior Band 5 | Cardiac |
| **Participant 3** | 36 | 9 years | Senior Band 5 | Cardiac |
| **Participant 4** | 27 | 5 years 6 months | Sister Band 6 | Cardiac |
| **Participant 5** | 28 | 4 years | Senior Band 5 | Cardiac |
| **Participant 6** | 33 | 12 years | Senior Band 5 | Cardiac |
| **Participant 7** | 45 | 10 + years | Sister Band 6 | Cardiac |

Data analysis identified two overarching themes pertaining to the nurses’ need for debriefing post a cardiac arrest; these were ‘professional needs’ and ‘personal needs’. Within these themes, six categories that influenced both nurses’ ‘professional needs’ and ‘personal needs’ were identified. Figure 1 outlines these themes and categories.

Figure 1: Relationship between the categories and key themes.

Nurses perceived need for debrief

Barriers

Provision

Debrief experience

Cardiac arrest experience

Patients

Provision

*Professional Needs*

Many of the participant responses related to the need for nurses to learn from their experience of being involved in a cardiac arrest, in order to improve their future personal performance or that of the team in a similar situation. All the participants identified that debriefing would offer an opportunity to develop a shared understanding of the cardiac arrest and address questions and concerns. Learning from the situation was seen as key to changing and improving practice:

*"important to know clinically what had happened to that patient and, actually following that, we changed some of our practice on the ward." (Participant 3)*

*“you can always learn from every situation, I have got better at arrests” (Participant 1)*

Several participants suggested that this need to learn from the cardiac arrest may be of greater importance to practitioners with more limited experience:

 *“it might be that junior staff, if this is their first or second one, a debrief would actually help them to pick apart what’s happened and learn from that situation" (Participant 5)*

Whilst the participants identified the need to learn from the experience in order to improve performance, they also identified a ‘professional need’ to understand why the cardiac arrest happened and often, why resuscitation was not effective:

"*I think it is very important that people should have a debrief and be told this is what happened and this is why we couldn’t do anything" (Participant 5)*

In contrast, some participants felt that there was less need for a debrief after relatively straightforward and successful resuscitation attempts:

*"I think if it is controlled … you know, they were in VT or VF, shocked and they come back, I don’t know if it’s always needed." (Participant 2)*

*Personal Needs*

Although the participants all acknowledged the ‘professional’ (learning) needs, the majority of points raised related to their own ‘personal needs’. All the participants expressed a ‘personal need’ for debriefing to cope with the emotional impact of being involved in a cardiac arrest. This ‘personal need’ was greater when resuscitation was unsuccessful, or if they had a prior therapeutic relationship with the patient. Several participants suggested that if a therapeutic relationship had been established with a patient, then nurses were more likely to consider debriefing as beneficial:

*"I was quite visibly upset, because he had been with us a little while and I had been involved in his care and you build a rapport with these patients" (Participant 5)*

The participants commented that the cardiac arrests were *“horrendous”* and “*distressing”*, often reporting feeling anxious and in need of support and reassurance or ‘peace of mind’ to gain assurance that they were not at fault. Whilst recognising that these ‘personal needs’ could be provided through debriefing, participants generally indicated that such debriefing was rare:

"*there needs to be a lot more of them, because I think there are a lot of people that go home and worry. I don’t think we are very good at taking care of each other*" *(Participant 7)*

Participants noted that neglecting to address these ‘personal needs’ can have significant consequences. In addition to the emotional cost, participants indicated that the failure to provide and engage in a debrief could impact on the confidence of practitioners. There was some indication that this could have been a contributing factor in staff leaving employment:

*"I have experienced when people have left because of certain arrest situations that they have seen" (Participant 4)*

One participant admitted that the cardiac arrests she had been involved in and supervised had been particularly traumatic, and noted not only that debriefing would have been valuable at the time, but that she would still value a debrief long after the event:

*"it has been some years now, some of them. To still have the opportunity to go have a debrief with somebody, I would take that up right away now." (Participant 5)*

*Professional vs Personal Need*

Participants therefore identified two sets of needs after their involvement in a cardiac arrest, but they were also clear that these two sets of needs were distinct:

*"needing a debrief for emotional support is different to feeling like you need a debrief to improve your clinical skills"* *(Participant 1)*

Participants recognised that these two sets of needs may dominate and be met at different times depending on a range of factors, such as the resuscitation outcome. In general, nurses’ ‘personal needs’ could be seen to predominate immediately after the cardiac arrest, whereas ‘professional needs’ could be addressed at a later time:

*“where it hasn’t been a very good situation for people to have witnessed … the sooner the better emotion wise … from a clinical side, then maybe time for everyone to calm down and think about it.” (Participant 4)*

*"more supportive nature initially and then later down the line, perhaps when more information has been gathered, what happened, why did it happen? … what did we do well and what did we do wrong?" (Participant 3)*

*Barriers*

The participants were able to express both ‘professional’ and ‘personal needs’ that could have been met through debriefing but recognised that debriefing was scarce in practice and identified a number of reasons why this may be the case. One principal barrier to undertaking debriefing was a lack of awareness and exposure to debriefing:

*"I don’t necessarily know what’s involved in a debrief" (Participant 6)*

Without exposure to a debrief, the participants highlighted that nurses do not know what debriefing involves or perceive a need for it. In current practice, the participants considered a debrief was only likely to be provided in response to clear or overt distress on the part of a staff member:

*"If the nurses are physically upset then it might happen … no one really recognises that it should be standard practice after every resus situation" (Participant 4)*

Participants recognised from their own practice that the benefits of debriefing were most readily understood only after experiencing it themselves:

"*when we had the debrief from the anaesthetist, it made me think … where it is not practice, I had never seen it before … it made me realise the benefits of it. So I am conscious to do that, when I’ve led an arrest in this role." (Participant 4)*

The participants displayed uncertainty about when and how a debrief should be provided. Although the majority of participants welcomed the concept of debriefing, some considered the need for debrief to be a personal individual experience and did not feel that there was a need for a “formal debrief” in a group. Whilst the majority felt that debriefing may be valuable after an unsuccessful resuscitation, only a minority expressed the view that there should be a debrief after all cardiac arrests whatever the outcome.

Participants identified a further barrier to debriefing related to nurses’ ‘professional needs’; this referred to information following the investigation of an unsuccessful resuscitation not being fed back to the nurses or taking too long to be reviewed, preventing the opportunity to learn from the situation and improve clinical practice.

*“we would have a formal review afterwards … that’s where we would probably fall down, because the time you take to review it, and it then goes off to panel for them to look at … from previous arrests there are still situations ongoing.” (Participant 7)*

The participants also recognised that finding time for a team discussion on a busy ward was a fundamental barrier to conducting debriefing.

*“Do you necessarily have time to take everyone out of the workplace and say let’s spend some time talking about this." (Participant 3)*

*“often you don’t get time for a debrief, or no one wants to stay behind” (Participant 2)*

The participants generally felt that the only time at which they could be sure not to be interrupted by clinical demands was at the end of the shift, though they recognised that staff may well be reluctant or unable to stay on duty for this purpose. Some participants also noted that immediately after a shift may not be the most appropriate time for a full debrief and that a further barrier was uncertainty over the best time to hold a debrief. Some participants stated they would prefer to have a chance to reflect, get away from work and refocus before a debrief at a later time. Whilst participants perceived advantages to immediate debriefing due to events being fresh in their memories, an immediate debrief would not always be welcomed:

"*If they had tried to do a proper formal debrief after this shift I had from hell, I’d have said no, I just want to go home*." *(Participant 6)*

Overall, the participants recognised that there were challenges in finding the right balance for an optimal time for a debrief.

A final set of barriers to undertaking debriefing was a lack of clear guidance from organisational protocols. All the participants agreed that the provision of debriefing was deemed a management responsibility, but the senior nurses taking charge of shifts indicated that they had received no specific training on how to lead a debrief after a cardiac arrest. The senior nurses expressed the view that training and guidelines on key areas to discuss and a flexible structure would offer direction on how to initiate and facilitate a debrief, and help to ensure that effective debriefing became a more standardised practice.

*“I think having that policy or protocol would make it a generalised practice … The key areas to discuss, a time frame that the debrief should happen within” (Participant 4)*

**Discussion**

The primary finding of this pilot study is that ward nurses have ‘professional’ and ‘personal needs’, which may benefit from debriefing post cardiac arrests, and make a distinction between these two separate debriefing needs. Nurses recognise that these needs may be met by providing a debrief at different times post a cardiac arrest. Recognition of these as distinct needs is significant because literature on debriefing tends to discuss the optimal timing of debriefing rather than recognising that two distinct processes may be involved. Although ward nurses in this pilot study recognised the value of debriefing after a cardiac arrest, formal debriefing was rare. This study identified barriers to the provision of debriefing on hospital wards including: lack of awareness and uncertainty about the role of a debrief, identifying time for debriefing, and the lack of clear guidance from organisational protocols.

The expressed needs of the nurses involved in this study support the findings of earlier studies. Gamble (2001) identified nurses working on medical wards had ‘personal needs’ associated with seeking reassurance and coping with negative emotions, particularly when nurses have developed prior professional relationships with the patient. Newman (1996) highlighted the need for practitioners to talk about experiences and seek validation and personal reassurance. The detrimental impact of failure to address these feelings and emotions is also widely acknowledged (Maloney, 2012). Similarly, the ‘professional needs’ associated with learning for future performance have also been widely discussed in prior literature (Couper et al., 2013; **Gwinnutt** et al., 2015).

In this study, debriefing for ‘personal need’ to seek reassurance and validation is regarded as more valuable immediately after a cardiac arrest, and is distinct from meeting the ‘professional need’ to change and improve practice which can occur at a later time. Boud et al’s. (1985) seminal work, argues that for reflection to be a valid way of learning; emotions associated with the event must be addressed before the experiential learning cycle can be completed. Couper and Perkins’ (2013) concept of ‘hot’ and ‘cold’ debriefing, relating to the timing of the debrief, correlates with the nurses need for an immediate debrief followed by a delayed debrief. However, Couper and Perkins' (2013) focus was on clinical outcomes rather than psychological debriefing, and did not explore emotional considerations in debriefing. ‘Hot’ debriefing, at the time of an event, offers an avenue to address what findings in this study convey as nurses ‘personal need’ to express emotion and reduce stress levels.

Prior literature has emphasised that every resuscitation attempt should be debriefed as a valuable learning opportunity whether or not resuscitation was successful (Gallagher et al., 2012). Our findings recognised nurses have a ‘professional need’ to learn from cardiac arrests through reflection on decision-making processes and to understand clinically what happened to the patient in order to develop future practice. Such learning is more readily achieved in ‘cold’ debriefing, which is associated with improvements in process and patient outcomes (Couper and Perkins, 2013). These findings are also consistent with the findings of Couper and Perkins (2013) that ‘hot’ debriefing is considered easier with more opportunity to be widely implemented, whilst ‘cold’ debriefing is considered harder to implement. The findings of our study highlight that this was due to the challenges of identifying an appropriate time for the debrief, and delays in feeding information about resuscitation outcomes back to the teams involved.

*Limitations*

This study has a number of limitations. The study was undertaken as part of a Master of Science project and required completion within a set timeframe. For this reason, the study was undertaken as a pilot focussing on the needs of nurses rather than all members of the MDT. Despite efforts to maximise the number of participants, the seven participants were all female, and all but one of these worked on cardiac wards, hence caution is needed in extrapolating these findings to other groups. The sample could have been influenced by self-selection bias given that staff more favourably disposed to debriefing could have volunteered. Further research is needed to determine whether these findings are transferable to nurses working in other areas, and whether male nurses or other members of the wider MDT have any different needs or perceptions of debriefing.

The majority of participants came forward from cardiac wards, which may indicate that nurses in these environments are more open towards discussion of debriefing after a cardiac arrest. It is also possible that the experiences of cardiac nurses may not be wholly representative given that patients in these environments are more likely to be cardiac monitored and may experience higher rates of cardiac arrest due to shockable rhythms, which have higher rates of survival (Nolan et al., 2014).

It was not possible to recruit participants who had experienced a cardiac arrest within a specified timeframe, hence participant data could have been influenced by forms of recall bias. The length of the interviews was relatively limited, and reflected a focus on the central aim to identify ward nurses needs for debriefing.

Despite these limitations, participants in qualitative studies are recruited for their relevance rather than representativeness (Neuman, 2003), and our findings nonetheless identified nurses working on acute wards within a UK hospital were able to articulate two distinct sets of debriefing needs which were rarely met.

**Conclusion**

Debriefing after cardiac arrests on adult hospital wards is infrequent, yet this pilot study provides a greater understanding of nurses' perceived needs for debriefing, identifying two distinct debriefing needs. Nurses reported a ‘personal need’ to undertake debriefing immediately after a cardiac arrest to seek reassurance and validation, which is occasionally met on adult hospital wards. Nurses also reported a ‘professional need’ for debriefing required later on, as a learning opportunity to change and improve practice, which rarely happens as a result of the barriers identified. Debriefing can turn a negative experience into a positive one. It is an untapped opportunity, which has the potential to be capitalised on after every cardiac arrest in order to improve care of patients and nurses.

Further research is needed in order to identify strategies that are effective in overcoming barriers to the provision of debriefing. This will include examining how debriefing practices may be standardised and implemented, with particular emphasis on communicating the value and purpose of debriefing to ward staff.

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**References**

Boud, D., Keogh, R., Walker, D., 1985. Reflection: Turning Experience into Learning. RoutledgeFalmer, London.

Bryman, A., 2001. Social Research Methods. Oxford University Press, Oxford.

Couper, K., Perkins, G.D., 2013. Debriefing after resuscitation. Curr. Opin. Crit. Care. 19 (3), 188–94.

Couper, K., Salman, B., Soar, J., Finn, J., Perkins, G.D., 2013. Debriefing to improve outcomes from critical illness: A systematic review and meta-analysis. Intensive Care Med. 39 (9), 1513–23.

Couper, K., Yeung, J., Nicholson, T., Quinn, T., Lall, R., Perkins, G.D., 2016. Mechanical chest compression devices at in-hospital cardiac arrest: A systematic review and meta-analysis. Resuscitation. 103, 24–31.

Dine, C.J., Gersh, R.E., Leary, M., Riegel, B.J., Bellini, L.M., Abella, B.S., 2008. Improving cardiopulmonary resuscitation quality and resuscitation training by combining audiovisual feedback and debriefing. Crit. Care Med. 36 (10), 2817–22.

Ellis, P., 2010. Understanding Research for Nursing Students. Learning Matters Ltd, Exeter.

Gale, N.K., Heath, G., Cameron, E., Rashid, S., Redwood, S., 2013. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. BMC. Med. Res. Methodol. 13 (1), 117.

Gallagher, G., Morkane, C., Sharma, D., 2012. Improving resuscitation using a post-arrest debriefing tool. Resuscitation. 83, e104.

Gamble, M., 2001. A debriefing approach to dealing with the stress of CPR attempts. Prof. Nurse. 17 (3), 157–60.

Gardner, R., 2013. Introduction to debriefing. Semin. Perinatol. 37 (3), 166–74.

# **Gwinnutt,** C., Davies, R., Soar, J., 2015. In-hospital resuscitation. Resuscitation Council (UK). [https://www.resus.org.uk/resuscitation-guidelines/in-hospital-resuscitation](https://www.resus.org.uk/resuscitation-guidelines/in-hospital-resuscitation%20/) (11.11.2015).

Healy, S., Tyrrell, M., 2013. Importance of debriefing following critical incidents. Emerg. Nurse. 20 (10), 32–7.

Ireland, S., Gilchrist, J., Maconochie, I., 2008. Debriefing after failed paediatric resuscitation: a survey of current UK practice. Emerg. Med. J. 25 (6), 328–30.

Kim, J.H., Kim, Y.M., Park, S.H., Ju, E.A., Choi, S.M., Hong, T.Y., 2017. Focused and corrective feedback versus structured and supported debriefing in a simulation-based cardiac arrest team training: A pilot randomized controlled study. Simul. Healthc. 12 (3), 157–164.

Labaree, R., 2013. LibGuides. [Organizing Your Social Sciences Research Paper](http://libguides.usc.edu/writingguide). Types of Research Designs. 1–113.

http://libguides.usc.edu/content.php?pid=83009&sid=818072 [(15.7.14](http://www.socialresearchmethods.net/kb/sampnon.php%20%28Accessed%2010/3/14)).

Magyar, J., Theophilos, T., 2010. Review article: Debriefing critical incidents in the emergency department. Emerg. Med. Australas. 22 (6), 499–506.

Maloney, C., 2012. Critical Incident Stress Debriefing and Pediatric Nurses: An Approach to Support The Work Environment and Mitigate Negative Consequences. Pediatr. Nurs. 38 (2), 110–13.

Mitchell, A.M., Sakraida, T.J., Kameg, K., 2003. Critical incident stress debriefing: Implications for best practice. Disaster Manag. Response. 1 (2), 46–51.

Neuman, W.L., 2003. Social Research Methods: Qualitative and Quantitative Approaches, 5th edition. Allyn and Bacon, London.

Newman, M.C., 1996. The emotional impact of mistakes on family physicians. Arch. Fam. Med. 5 (2), 71–5.

Nolan, J.P., Soar, J., Smith, G.B., Gwinnutt, C.,  Parrott, F., Power, S., et al. 2014. Incidence and outcome of in-hospital cardiac arrest in the United Kingdom National Cardiac Arrest Audit. Resuscitation. 85, 987–992.

Page, S., Meerabeau, L., 1996. Nurses’ accounts of cardiopulmonary resuscitation. J. Adv. Nurs. 24 (2), 317–25.

Ross-Adjie, G.M., Leslie, G., Gillman, L., 2007. Occupational stress in the ED: What matters to nurses? Australas. Emerg. Nurs. J. 10 (3), 117–23.

Salas, E., Klein, C., King, H., Salisbury, M., Augenstein, J.S., Birnbach, D.J., et al. 2008. Debriefing medical teams: 12 Evidence-based best practices and tips. Jt. Comm. J. Qual. Patient Saf. 34 (9), 518–27.

Sandhu, N., Eppich, W., Mikrogianakis, A., Grant, V., Robinson, T., Cheng, A., et al. 2014. Postresuscitation debriefing in the pediatric emergency department: a national needs assessment. Can. J. Emerg. Med. 16 (5), 383–92.

Seethala, R.R., Esposito, E.C., Abella, B.S., 2010. Approaches to improving cardiac arrest resuscitation performance. Curr. Opin. Crit. Care. 16 (3), 196–202.

Seidman, I., 1998. Interviewing as Qualitative Research: A guide for Researchers in Education and Social Sciences, 2nd edition. Teachers College Press, London.

Theophilos, T., Magyar, J., Babl, F.E., 2009. Debriefing critical incidents in the paediatric emergency department: Current practice and perceived needs in Australia and New Zealand. Emerg. Med. Australas. 21 (6), 479–83.

Ward, D.J., Furber, C., Tierney, S., Swallow, V., 2013. Using Framework Analysis in nursing research: A worked example. J. Adv. Nurs. 69 (11), 2423–31.