How does the introduction of a new debriefing framework impact debriefing in a critical care environment?

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TITTEL PÅ MASTEROPPGAVE

Norsk tittel	Hvordan vil introduksjonen av ett klinisk debriefingsverktøy påvirke bruken av debriefing i intensiv- og postoperativmiljø?
Engelsk tittel	How does the introduction of a new debriefing framework impact debriefing in a critical care environment?

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Norsk	Debriefing; Debriefingsverktøy; Intensiv og postoperativ sykepleie; Intensivavdeling; Postoperativ avdeling; TALK
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ABSTRACT

Objective   The present study aimed at assessing the impact of introducing an in-field debriefing framework in intensive and postoperative care nursing, both in term of debriefing use, but also in term of debriefing culture.

Design and method   A descriptive design with a quantitative method was used in the form of an observational cohort research study. This study was conducted in the intensive care unit and the 2 post-anaesthesia care units in the Stavanger University Hospital in Norway through the use of a survey after each shift. The data was collected using face to face interviews, the first of which was conducted between September and October 2019, 3 weeks before the introduction of the framework, while the second was conducted between January and February 2020, 9 weeks after the introduction.

Results   The first round of data collection resulted in 336 responses in which 19.6% of the teams reported having conducted a debriefing, while 80.4% reported not conducting any debriefing. The second round provided 319 responses where 24.1% used debriefing, and 75.9% did not. After the 1st data collection, 36.4% of the teams who conducted debriefing reported following a specific structure, whereas 50% reported doing so after the 2nd data collection.

Conclusion   Overall, although a slight increase in debriefing use was observed, this change was however not significant, but also inconsistent between units. One unit reported more debriefings before the introduction of the framework, whereas the second unit reported a significant increase in debriefing use; the third unit's debriefing use remained relatively unchanged after the introduction. The structure and participation in debriefing sessions showed a small, although not significant, increase.

SAMMENDRAG

Hensikt   Oppgavens overordnede hensikt var å måle om introduksjonen av ett debriefingsverktøy i intensiv og postoperativmiljø ville ha effekt på bruken av klinisk debriefing og debriefingkulturen.

Design og metode   En deskriptiv kvantitativ metode ble benyttet i en observasjonstudie med kohort design på en intensivavdeling og to postoperative avdelinger på Stavanger universitetsykehus. Dataene ble innhentet gjennom en undersøkelse ved bruk av intervju på slutten av hver vakt på hver avdeling. Første datasamling var fra september til oktober 2019, 3 uker før introduksjonen av verktøyet og den andre datasamling var fra januar til februar 2020, 9 uker etter introduksjonen.

Resultat   Den første runden med datasamling resulterte i 336 svar, der 19,6% av deltakerne rapporterte å ha brukt debriefing og 80,4% svarte de ikke hadde brukt debriefing. Den andre runden med datasamling resulterte i 319 svar, som viste at 24,1% hadde brukt debriefing, og 75,9% ikke hadde brukt debriefing. Etter første datasamling rapporterte 36,4% at de brukte en struktur i debriefingen, mens 50% rapporterte bruk av struktur etter andre datasamling.

Konklusjon   Til tross for at det var en økning i bruken av debriefinger, var ikke denne økningen signifikant. Det ble observert store forskjeller på de ulike avdelingene. En avdeling gjorde flere debrefinger før introduksjonen samenlignet med etter, en avdelingen gjorde flere debriefinger etter introduksjonen og en avdelingen gjorde generelt debriefinger ofte, både før og etter introduksjonen. Strukturen og deltakelse i debriefingene viste en økning etter introdukjsonen, dog ikke en signifikant økning.

Contents

Chapter 1

Introduction

Unsafe patient care is ubiquitous. Estimates from developed nations suggest that between 7.5% and 10.4% of patients in acute care settings experience an adverse event (WHO, 2008). In Norway, for example, 11.9% of patients in somatic care in hospitals had a minimum of 1 recorded injury while receiving treatment (Norwegian Directorate of Health, 2019). In fact 1 in every 10 patients in high-income countries are harmed while receiving hospital care (WHO, 2019a).

Significant enhancement of health systems' performance can be achieved by preventing adverse events in particular, and improving patient safety and health care quality in general (WHO, 2002).

"Communication gap", along with "knowledge gap", are listed among the obstacles that need to be overcome in order to improve patient safety (WHO, 2019b). Clinical event debriefing, being an important strategy to learn from errors and improve on safety (AHRQ, 2019), could help closing these gaps and thus advancing on the overall mission of enhancing our healthcare systems' performance.

In fact, clinical event debriefing is recommended by the World Health Organization for team reflection after tasks, shift and events (TALK, 2020). It has been incorporated in several clinical fields, including critical care, surgery, internal medicine, and neonatology. However, its use has been mainly focused on enhancing learning in simulation and learning environments, with limited use in the clinical environment (Eppich et al., 2016).

Although clinical event debriefing is recommended and there are several guidelines on how to do a debrief, there are no golden standards on how to structure a debriefing session (Hunter, 2016). The lack of a standardised clinical event debriefing framework is potentially one of the reasons behind

the limited use of debriefing in a clinical environment.

TALK is a framework designed to guide structured team self-debriefing after any learning event in clinical environments (TALK, 2020). It was proposed in June 2014, and is as of today, an ongoing EU project.

The Stavanger University Hospital (SUS) introduced the TALK framework in the intensive and post-anaesthesia care units (ICU and PACU) in October 2019. This introduction provided us with an opportunity to try to quantify the impact of this framework on the use of clinical debriefing, and also whether clinical debriefing could become an integral part of the daily routine of the health staff in the critical care units.

The results from this research are presented in a research article, supported by this thesis. The objective with the article[1] is to have it published in the "Intensive and critical care nursing" journal.

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[1]Authored following the guidelines outlined in https://www.elsevier.com/wps/find/journaldescription.cws_home/623043?generatepdf=true

Chapter 2

Background

2.1 Intensive care nursing

The intensive care nurse (ICN) gives healthcare to acute and/or critically ill patients of all ages. To prevent, to treat, and to give relief and rehabilitation are some of the functions of the ICN. They are expected to have the necessary competence to make the right decision in each situation while being flexible and independent. ICNs need to be knowledgeable about how diseases, injuries and unexpected events can affect the patient's life situations. The ICN has to continuously aim at improving patient care and quality through inter-professional cooperation (Norwegian association of critical care nurses, 2017; Stubberud, 2015).

Patients in intensive care units (ICU) are more likely than other hospitalised patients to experience medical errors, due to the complexity of their conditions, need for urgent interventions, and considerable workload fluctuation (Garrouste-Orgeas et al., 2012). The error rate in the ICU is higher than in other units and are associated with worse adverse outcomes (Kaur et al., 2019).

Postoperative care is in a similar situation to intensive care units with regards to patient safety: errors also happen due to the complex patient situation and hectic environment as patients are constantly being admitted and discharged. Moreover, postoperative care is often administrated by ICNs in post-anaesthesia care units (PACU).

Overall, the intensive care and postoperative care environments, also referred to as critical care environments, are complex. Having to deal with critically ill patients, these environments have to bring in all the necessary disciplines needed for providing the necessary care. These complex and multidisciplinary environments makes it more likely for medical errors to occur (Reader et al., 2007). The highly sophisticated treatments, technologies and diagnostic

tools are also associated with a high risk of medical errors and adverse events (Garrouste-Orgeas et al., 2012).

2.2   Patient safety

The World Health Organization defines patient safety as follows: "The avoidance, prevention, and amelioration of adverse outcomes or injuries stemming from the processes of health care" (WHO, 2009). A simpler definition is that patient safety is the prevention of errors and adverse effects to patients associated with health care (WHO, 2020).

Errors can occur at any step of patient management, including diagnosis, treatment and prevention. An error may or may not cause an adverse event. Adverse events are injuries that result from a medical intervention and are responsible for harming the patient (Garrouste-Orgeas et al., 2012). These errors result in reduced patient safety, increased length of hospital stays, and patient death. They obviously also have a large economic impact (Allen et al., 2018).

The WHO (2019b) lists medication errors, infections, unsafe injection practices, unsafe transfusion practices, sepsis, and venous thromboembolism as some of the adverse events that could be avoided. The same report also lists "knowledge gap", "policy gap", "design gap", "delivery gap" and "communication gap" as gaps that need to closed in order to improve on patient safety.

The "delivery gap" refers to organisation not having the adequate structure to deliver on the expected level of quality for patient care. While "design gap" refers to the inadequate application of science to design policies, strategies, plans and implementation tools for patient safety (WHO, 2019b). Stubberud (2018) points out that in the case of the Norwegian healthcare, these could be improved on by developing systems and cultures where the healthcare can learn from previous mistakes.

In relation to the "communication gap", it has been reported that more than 60% of all adverse events in hospitals could be caused by poor communication (Müller et al., 2018). In the context of intensive care nursing, better collaboration between ICNs and doctors has been shown to reduce reports on adverse events (Reader et al., 2007), moreover, Stubberud (2018) reports that good communication amongst healthcare workers can improve patient safety.

From our perspective, as nurses in the intensive and post-anaesthesia care units, patient safety is about making sure that the healthcare given is safe. The objective is to prevent errors from occurring while accepting and acknowledging that mistakes will always happen.

2.3   Team communication

As highlighted above, critical care teams perform a multitude of activities requiring effective communication, and without effective communication, medical errors become more probable. d'Agincourt-Canning et al. (2011) state that there is much evidence revealing that 75-80% medication errors can be linked to miscommunication in teams. They also state that in the critical care environment the chances of these types of mistakes are more likely because of the larger team sizes, but also due to the ever changing and multidisciplinary teams consisting of doctors, nurses, physiotherapists, pharmacists, consulting doctors and radiologists. The risk of miscommunication increases with the high number of involved parties.

However, there are several barriers that stand in the way of effective team communication. Lack of psychological safety, cultural norms, hierarchy in health care professions and uncertainty of the care plan for the patients are among these barriers (Gausvik et al., 2015). When present, these barriers could lead to inefficient team communication which again increases the risk for patient harm.

Patient safety as a field of study highlights how important it is to be open about the errors that occur during hospitalisation. The openness about these events can contribute to learning from the mistakes and reduce the risk of repeated errors. It is important that people feel free to talk about their mistakes, and that they will not be subject to blaming and shaming. The most important part after an error is not to blame others, but to learn something from the event (Tinnå, 2009).

Debriefing has been proposed as a method that can be used to improve teams and their communication skills (Gausvik et al., 2015).

2.4   Debriefing

Debriefing is found across a wide range of organisations and settings. It has been part of the US military organisations and aviation for decades, and got introduced later into other organisations such as the fire services and healthcare, but also in organisational training and simulation environments (Allen et al., 2018).

Debriefing allows for teams to discuss, interpret, and learn from recent events during which they collaborated. It has been suggested as an important mechanism by which individuals and teams use post-incident communication to learn and improve (Allen et al., 2018). Research has shown that using debriefing results in an improved team performance and learning (Cheng et al., 2014).

However, it must be acknowledged that in order for debriefing to be effective, teams must be willing to engage in open and honest discussions. When team members worry about criticism, blaming, or being censured, the discussion during the debrief is less likely to include important issues. The psychological safety of the team members is viewed as critical for the success of debriefing, this means that if team members feel threatened or blamed, they are less likely to participate in the debrief and will feel less psychologically safe (Allen et al., 2018; Salas et al., 2008). The environment during a debrief should be supportive as this may lead the involved participants to be open and this could make the debriefing session more constructive for the group (Eppich et al., 2016).

Team and organisation leaders have a particularly important role in creating and fostering an environment that allows for effective debriefs to take place. They also have an important role in ensuring that proper debriefing training is brought into the team. Training should bring guidance on how to conduct debriefings, as teams that are provided such a guide are more effective than teams without (Allen et al., 2018).

2.4.1   Debriefing in clinical environments

The purpose of debriefing in healthcare is to learn from previous experiences and improve patient safety (Allen et al., 2018; Eppich et al., 2016).

Debriefing has been incorporated in several clinical fields, including critical care, surgery, internal medicine, and neonatology. This, however, has been mainly focused on enhancing learning in simulation and learning environments (Eppich et al., 2016). Outside simulation and learning, debriefing is not routinely offered and could be inadequate or non-existent. Even though provision of debriefing often is rare in clinical practice, the value of debriefing the staff and their involvement in critical incidents is acknowledged (Ross-Adjie et al., 2007) Furthermore, debriefing benefits are not limited to big events or fatal outcomes, as debriefing can be also be beneficial to teams after daily routines (Kessler et al., 2015).

Post-event debriefings in clinical medicine have been shown to increase overall performance, reduce the frequency of equipment-related problems, and improve communication and teamwork (Sawyer et al., 2016). Moreover, structured debriefings after a life-threatening emergency can help clinical teams improve learning, enhance non-technical performance and improve patient focused outcomes (Couper et al., 2013; Kessler et al., 2015). In fact post-event debriefing is thought to be a foundational behaviour of high performing teams, and this team and individual performance improvement can reach up to 25% in organisations that conduct effective debriefings (Tannenbaum & Cerasoli,

2013).

The lack of opportunities for debriefing in clinical practice may reflect barriers to the implementation of debriefing. There is often insufficient time within busy acute areas to practice in lengthy debriefs post critical incidents, the lack of clear guidance and policy may be a further barrier to the clinical use of debriefing (Salas et al., 2008). Conducting debriefs is challenging for overloaded teams having to handle new events taking place before they had the chance to discuss the previous event (Allen et al., 2018).

Finally, when debriefings occur, they are more than often undertaken on an ad hoc basis, in the absence of formal guidelines and with little evidence of effectiveness (Theophilos et al., 2009).

In order to overcome some of these challenges in implementing debriefing, several debriefing techniques and frameworks have been proposed.

2.4.2 Debriefing frameworks

Several prototypes for conducting a debriefing have been identified in the nursing and medicine literature. A preferred debriefing technique has however not been identified, but most include active participation, a focus on improvement, discussion of the event and input from multiple sources (Hunter, 2016).

Kessler et al. (2015) formed a practical guide for debriefing based on a literature review. The guide suggests the *when*, *how* and *where* of the debriefing.

There are several other methods that can be used for debriefing. The most common one is called "plus-delta" and involves a team reflection. The team analyses what went well and what needs improvement. It is not focused on patient outcome but on team performance enhancement. This method of debriefing is relatively easy to learn, but by being unstructured, it has its "pitfalls". It is for example relatively easy to fall into blaming other team members or even excluding them from the discussion. These mistakes could be avoided by using a structure for the debriefing sessions (Kessler et al., 2015).

Critical incident stress debriefing (CISD) is another method that was developed as a mean to therapeutically process a traumatic patient care event to facilitate emotional recovery for the individuals involved. It is a facilitated session in which everyone involved gathers together as soon as possible after the event to review the facts and discuss emotional responses. Since critical patient incidents often involve respondents from multiple disciplines, CISD allows for team processing of the event. Systematic errors are commonly identified during these discussions. CISD enables institutions to put processes and policies in place with the goal of reducing the possibility of recurring events

in the future (Hunter, 2016).

The framework being used in this study is the TALK debriefing framework. It is meant to promote reflection within clinical teams to improve patient safety. The TALK debriefing framework is geared toward increasing efficiency and improving communication and dialogue in a supportive environment for the team members. The TALK framework is meant to be easy and practical; the debriefing session is designed to be simple to use and can be initiated by any of the team members. The TALK debriefing sessions is not meant to be time consuming, with the goal of staying within a 5-10 minutes window (TALK, 2020).

Chapter 3

Purpose & objectives

3.1 Purpose

From the intensive care nurse perspective, ICNs have a preventive function in treating critical care patients, one of their many obligations is to ensure patient safety and protect them from complications and harm related to procedures and treatments (Norwegian association of critical care nurses, 2017).

A large majority of mistakes affecting patient safety are due to poor or unstructured team communication. Improving, facilitating and structuring team communication could thus lead to a reduction of the risk of patient harm during hospitalisation and contribute to an overall increase in patient safety. With debriefing being shown to improve team collaboration and communication, the obvious question to ask is why is debriefing use limited in clinical environments, and whether its use could be increased?

Various frameworks for structured debriefing in healthcare have been proposed with the goal of simplifying, structuring and integrating debriefing into the clinical patient care environment.

The Stavanger university hospital joined an EU project promoting the use of the TALK framework for structured debriefing, leading to TALK being introduced in SUS October 2019. This presented us with an opportunity to have a deeper look into debriefing, its relevance to the role of the intensive care nurse, and the impact of this framework on the debriefing culture in the intensive and post-anaesthesia care units in SUS.

Our experience working as registered nurses in the intensive care unit in SUS is in line with the research findings, we have rarely been part of team debriefings as those were limited to handling of unexpected and rarely occurring events, debriefing was not being used on a regular basis.

The purpose of this study is to assess whether the introduction of the TALK debriefing framework can contribute to a more systematic debriefing culture in the intensive and post-anaesthesia care units in SUS, and with this, improve on the overall patient safety in the critical care environments.

3.2 Objectives

The overall objective of this thesis is to investigate the impact of introducing the TALK framework on the use of clinical event debriefing:

> *How does the introduction of a new debriefing framework impact debriefing in a critical care environment?*

Specifically, the objective of this study is to assess whether the introduction of TALK has an impact, either positive or negative on debriefing in the intensive and post-anaesthesia care units.

Chapter 4

Method

The general purpose of nursing research is to answer questions or solve problems of relevance to nursing in clinical practice (Polit & Beck, 2017). The paradigm that has dominated nursing research for decades is known as positivism and is also the paradigm chosen for this thesis.

This thesis seeks to investigate "debriefing use" with relation to the introduction of a debriefing framework in the critical care environment. The hunch is that the introduction of such a framework should have a positive impact on the use of debriefing: an aim that could be fulfilled through observation and reason.

4.1 Study design

With the goal of addressing the overall objective of this research, which is to assess the impact of introducing a debriefing framework in the critical care environment, a quantitative method was used. This method enables us to assess the prevalence of a phenomenon, "debriefing use" in this case, and what would happen to this phenomenon with the introduction of an intervention, "debriefing framework introduction" in this case (Polit & Beck, 2017).

The choice of an observational method was largely dictated by the fact that we are not involved in the introduction of the TALK debriefing framework. In order to answer the research question and assess the effect of this introduction, at least two observations of the debriefing situation in the critical care environments have to be conducted, one before and another one after the introduction. This naturally leads to a cohort design as the same sample is observed over time.

The choice of the study design was largely constrained by the context and environment. While the use of an experimental design would have provided

us with a theoretically stronger result, the implementation of such would have been impractical, as that would have required the availability of two or more comparable clinical environments as well as the ability to manipulate these environments.

This study was conducted through a survey to collect data before and after the introduction of the debriefing framework. The results of the data collection provided us with a baseline (Pre) to be used for comparison with the second data collection (Post 9w) for the purpose of inferring the correlation and potentially the causation between the use of debriefing and the introduction of TALK in SUS.

The answers for the survey were collected through personal interviews. Meeting in person with the respondents is known to give higher response rates compared to self-administered questionnaires (Polit & Beck, 2017).

4.2 Settings and participants

Participants were recruited from three units in SUS: the intensive care unit (ICU) and the 2 post-anaesthesia units (PACU1 and PACU2). All staff members who were at work at the time of the data collection were asked to participate.

96 ICU-nurses, 15 RN, 4 nurse assistants and 40 doctors work in these units. Most of the participants rotates between the ICU and the post-anaesthesia care units. During the first data collection, 15 1st year ICN master students were doing their internships across these three units.

In the ICU, the healthcare staff works in teams. The teams are very varied, and are generally setup on an as-needed basis. These teams are often multidisciplinary and defined by the tasks and procedures necessary for a specific patient. For example a team can consist of 2 ICNs working together on the same patient for the duration of the patient stay. Other procedures such as intubation require a team of 2 doctors and 2 nurses. In the post-anaesthesia units on the other hand, teams are organised differently, a team in PACU1 consists of staff members who work in the same section, each team member individually in this case is responsible for 1 to 3 patients.

The participants in this research did not receive any training in the use of the TALK debriefing framework prior to the first data collection. This doesn't exclude the fact that some participants may have had prior knowledge about debriefing or TALK.

With these participants and organisational structure, our statistical population would consist of teams according to the definition of team laid out above.

4.2.1   Debriefing framework introduction

The debriefing framework was introduced to the staff of the critical care units through a set of introduction sessions. These sessions were made available to the hospital staff from the 9th of October to the 13th of November 2019, during which a total of 8 sessions were conducted.

During our second data collection, 78% (n=88) of the ICU and postoperative nursing staff had participated to an introduction session. Separately, 30 doctors from the critical care units also received a TALK introduction session.

The first data collection was completed before the TALK introduction started. The second data collection was conducted 15 weeks after the end of the first data collection, 9 weeks after the last TALK introduction session.

4.3   Data collection

Each data collection was over a period of two weeks. The first round of data collection was conducted from the 23rd of September 2019 until the 7th of October 2019, while the second data collection started on January 20th, 2020 and ended on February 3rd, 2020. After each shift, critical care staff were asked through face-to-face interviews about their use of debriefing during the shift, the answers were collected using an interview schedule.

4.3.1   Interview schedule

The interview schedule being used was developed by the TALK organisation. It was originally made in English and translated into Norwegian for the occasion by professors in the University in Stavanger. The interview schedule is named "Debriefing performance" and can be found in Appendix C.

The interview schedule has three sections containing both open-ended and closed-ended questions. The closed-ended questions also provide an option for open-ended answers, this can reduce the risk of failing to include key answers that might have been missed in the interview schedule design (Polit & Beck, 2017).

4.3.2   Interview procedure

After each shift, we met in person with the staff members present in each one of the three surveyed units and asked whether they would be willing to participate in this research, if positive, a consent form was filled and signed, and then we proceeded with asking about the debriefing use in each of the teams they were involved in during the shift.

4.4 Data analysis

The data was analysed through descriptive statistics using a program for statistical data analysis called R. The statistical significance was set to $p < .05$ for all tests. Descriptive statistics were used to summarise and describe the collected data.

The responses from the interviews were registered in Excel documents. The Excel documents did not contain any personally identifiable data. These Excel documents were loaded into R using the R Studio interface for further processing.

4.4.1 Statistical tools

Descriptive statistics such as frequencies, percentages, means and standard deviations were used to assess study sample, while Pearson's chi-squared test ($\chi^2 test$) was used to test whether there is a statistically significant difference across the measured parameters.

For example, when comparing the number of debriefings done before and after the introduction of TALK in SUS, The $\chi^2 test$ is used with a null hypothesis H_0 being that the expected number of debriefs after the introduction of TALK would be roughly equal to the number of observed debriefs before the introduction of TALK. If the $\chi^2 test$ gives a $p < .05$ then the null hypothesis would be rejected, or in other words: the introduction of TALK and the number of debriefs can be correlated.

4.5 Ethical approval and considerations

This study does not involve patients, and thus no patient data has been collected for conducting this study. All data collected concerns hospital staff and is voluntary and de-identified. The data protection officer in Helse Stavanger has approved this study in writing on the 31st of August 2019 (ref. 2019/21), a copy of this approval has been attached in Appendix D. The usage of the collected data in this master project has been approved by the Stavanger university hospital research department on the 16th of October 2019 (ref. 2019/16157 - 132785/2019) a copy of this approval has been attached in Appendix E. The Regional committee for Medical and Health Research Ethics has also reviewed this study (ref. 2019/1156) and decided that an application for permission to conduct the study was not necessary, a copy of this response has been attached in Appendix F.

All participants received a standard information document explaining the aim and background of this study, the voluntary aspect for participation, and

the strategies put in place for ensuring anonymity and confidentially. In this document, participants were also informed that none of their or their patients' personal data was collected, and that they had the right to withdraw from the study even after submitting their responses.

In order to implement the withdrawal process, participants were assigned a number before each interview. This number was used as an identifier in both a consent form that had to be signed before participating in each interview, as well as in the response form. The consent forms and response forms were stored separately, with only the consent form containing the name of the participant. In case of withdrawal request, the consent forms would be used to retrieve all the identifiers linked to the withdrawing respondent, and then these identifiers would be in turn used to remove the responses from the collected data.

Chapter 5

Results

The data collection provided us with 655 responses from 3 different units, with 336 responses collected before the TALK introduction (Pre) and 319 collected 9 weeks after its introduction (Post 9w).

In this chapter, the impact of the debriefing framework introduction on the number of debriefings done is analysed first, after which an exploration of the difference between the surveyed units is conducted. The collected data is then used to measure the impact on the debriefing culture and any change that might have occurred. Finally the reported reasons for not conducting a debriefing are categorised and measured to assess whether the TALK introduction could have had an impact.

5.1 Debriefing use

Before the TALK introduction, 19.6% of the teams used debriefing, while 80.4% did not conduct debriefing. After the introduction of TALK, 24.1% of the teams used debriefing, and 75.9% did not. Table 5.1 summarises the debriefing use before and after the introduction of TALK.

	No (N=512)	Yes (N=143)	Total (N=655)	p value
Phase				0.164
Pre	270 (80.4%)	66 (19.6%)	336 (100.0%)	
Post 9w	242 (75.9%)	77 (24.1%)	319 (100.0%)	

Table 5.1: Debriefings pre and post introduction of TALK

A slight increase of debriefing use after the introduction of TALK can be observed. To assess the significance of this change, a χ^2 test was used. The χ^2

test results in a p value of 0.164 which is greater than .05, this means that we are not able to reject the null hypothesis, and we are thus unable to confirm whether the introduction of TALK had any significant impact on the use of debriefing in SUS.

5.1.1 Debriefing use per unit

Before analysing the surveyed units individually, it is important to get an overview of the representation of each unit in the survey data. Out the 655 collected samples, 30.7% (N=201) come from the first post-anaesthesia care unit (PACU1), 6.9% (N=45) from the second post-anaesthesia care unit (PACU2) and 62.4% (N=409) from the intensive care unit. This difference in representation is further discussed in chapter 7.

Unit		No (N=512)	Yes (N=143)	Total (N=655)	p value
PACU1	**Phase**				0.173
	Pre	87 (73.7%)	31 (26.3%)	118 (100.0%)	
	Post 9w	68 (81.9%)	15 (18.1%)	83 (100.0%)	
PACU2	**Phase**				0.309
	Pre	19 (65.5%)	10 (34.5%)	29 (100.0%)	
	Post 9w	8 (50.0%)	8 (50.0%)	16 (100.0%)	
ICU	**Phase**				0.004
	Pre	164 (86.8%)	25 (13.2%)	189 (100.0%)	
	Post 9w	166 (75.5%)	54 (24.5%)	220 (100.0%)	

Table 5.2: Debriefings done per unit before and after the TALK introduction

When evaluating the units individually, the debriefing change has been quite different from a unit to another. PACU1 has seen a decrease in debriefings done, going down from 26.3% before the introduction of TALK to 18.1%, this change is however not considered significant with a p value of 0.173. PACU2 did not see a significant change either with a p value of 0.309, the size of this unit is however relatively small, as it represents only 6.9% of the collected data. On the other hand, the ICU saw a significant change in debriefings done, going up from 13.2% to 24.5% with a p value of 0.004. Table 5.2 summarises these results.

These results hint at the fact that the different units have different debriefing acceptance and use. Using a χ^2 test for evaluating the dependence between the unit and the debriefing use, we can see that the difference is indeed significant with a p value of 0.006 (Table 5.3). These differences are further discussed in

chapter 7, with more insight about the potential reasons behind these differences.

	No (N=512)	Yes (N=143)	Total (N=655)	p value
Unit				0.006
PACU1	155 (77.1%)	46 (22.9%)	201 (100.0%)	
PACU2	27 (60.0%)	18 (40.0%)	45 (100.0%)	
ICU	330 (80.7%)	79 (19.3%)	409 (100.0%)	

Table 5.3: Debriefings done per surveyed critical care unit

5.2 Debriefing culture

The introduction of TALK to the critical care units in SUS did not have a significant impact on the number of debriefings done overall. This doesn't mean that TALK did not have an impact at all. In this section, the impact of TALK on structure, team participation and measures taken is evaluated.

5.2.1 Structure

When surveying the teams, the teams who had conducted debriefing sessions were further asked a set of questions on whether they followed any particular structure during the debriefing sessions.

Before the introduction of TALK 63.6% (N=42) responded negatively, while 36.4% (N=24) did report following a structure, out of which only 1 report specifically mentioning the use of TALK was given, the others reported the use of variations of the "What happened, Why, How, What could be done differently?" structure, while a small number reported they didn't know.

After the TALK introduction, 50% (N=38) responded negatively and 50% (N=38) responded positively. While we can see a small increase in the number of structured debriefings, this change is not significant with a p value of 0.102. Out of the 38 reported structured debriefs post-introduction, 78.9% (N=30) reported following the TALK structure for their debriefing session.

5.2.2 Team participation

Among the teams who conducted debriefing sessions, 68.2% (N=45) reported that the whole team had participated before the introduction of TALK, and 75.0% (N=57) reported a whole team participation after the introduction. This change, while positive, is also not significant with a p value of 0.368.

Nurses were the healthcare group who took the most initiative in debriefing both before 83.1% (N=64) and after 78.8% (N=52) the introduction of TALK. Doctors initiated debriefs showed an increase from 9.1% (N=6) to 16.9% (N=13) after the introduction of TALK. Managers and administrators hardly took part in the debriefings during the 1st data collection and did not participate at all in the 2nd data collection.

5.3 Debriefing outcomes

As presented in chapter 2, the aim of debriefing in clinical environment is to contribute to an increase in patient safety. With this in mind, we wanted to evaluate whether the introduction of TALK led to a change in the measures taken after debriefing. Before the introduction of TALK, 59.4% (N=38) reported that their debriefing sessions lead to specific measures being taken. This number increased to 67.5% (N=52) after the introduction of TALK. A positive change, although not significant with a p value of 0.316.

	Pre (N=38)	Post 9w (N=52)	Total (N=90)	p value
Measure taken				0.956
Procedural[1]	9 (23.7%)	11 (21.2%)	20 (22.2%)	
Treatment[2]	6 (15.8%)	9 (17.3%)	15 (16.7%)	
Medication[3]	6 (15.8%)	9 (17.3%)	15 (16.7%)	
Organisational[4]	6 (15.8%)	8 (15.4%)	14 (15.6%)	
Communication[5]	6 (15.8%)	7 (13.5%)	13 (14.4%)	
Confirmation[6]	2 (5.3%)	1 (1.9%)	3 (3.3%)	
Other	3 (7.9%)	7 (13.5%)	10 (11.1%)	

[1] Change the in procedures used for treatment
[2] Change in the treatment or treatment plan
[3] Change in medication or its administration
[4] Change in the team structure or higher up in the whole unit or even hospital
[5] Change in communication methods or the need of more communication
[6] Changes or decisions made earlier are working

Table 5.4: Overview of the measures taken as a result of a debriefing session

The type of measures taken also did not show a significant change after the TALK introduction with a p value of 0.956. Table 5.4 shows the distribution of the measures taken as a result of a debriefing session before and after the introduction of TALK.

5.4 Debriefing barriers

Understanding the barriers standing in the way of debriefing, could help us point at further research that could be conducted in order to increase the use

of debriefing in clinical environments.

	Pre (N=270)	Post 9w (N=242)	Total (N=512)
Debriefing barrier			
Not needed	214 (79.9%)	194 (80.8%)	408 (80.3%)
Time constraint	24 (9.0%)	23 (9.6%)	47 (9.3%)
Patient is stable	9 (3.4%)	5 (2.1%)	14 (2.8%)
Forgot	1 (0.4%)	9 (3.8%)	10 (2.0%)
Alone	2 (0.7%)	4 (1.7%)	6 (1.2%)
Not used to debriefing	1 (0.4%)	2 (0.8%)	3 (0.6%)
Other	17 (6.3%)	3 (1.2%)	20 (3.9%)
None given	2	2	4

Table 5.5: Debriefing barriers before and after the introduction of TALK

With 270 team interviews reporting not having conducted any debriefing before the introduction of TALK, and 242 after the introduction of TALK for a total of 512 interviews. The most cited reason for not conducting a debriefing both before and after the introduction of TALK is that it was deemed unnecessary, this represents about 80% for all the given reasons. The 2nd most given reason is that of time constraint at around 9% both before and after the introduction of TALK. A summary of the given reasons for not conducting a debriefing are given in Table 5.5.

Chapter 6

Methodological considerations

An observational cohort study design was chosen due to the nature and constraints of the environment. This meant that while this design provided us with a set of qualities and strengths, it also meant that we had to accept some of its limitations.

6.1 Strengths

An observational study design allowed us to collect a large amount of answers that can be representative of the real world. Representative means that conducting this study had little or no impact on the observed effect, and that the environment in which this study was conducted was not artificial. This is in fact the biggest strength of observational studies.

The use of surveys instead of self-administrated questionnaires is also regarded as not only increasing the quality of the collected survey data, but also the quantity, as the refusal rates tend to be low in interviews according to Polit and Beck (2017).

6.2 Limitations

This study has been conducted in the context of a Master thesis for intensive care nursing, this meant that it had to be conducted within a set time frame. It would have been ideal to continue the surveys with one or more data collection rounds as well as additional introduction courses for TALK. In fact, 22% of the staff in the intensive and post-anaesthesia units in SUS did not take part of the introduction courses after the 2nd data collection.

The units representation in the data was also not uniform, with more data samples coming from the ICU unit and contributing a larger number of samples

at 62.4% (N=409) while the PACU2 contributed a much smaller one at 6.9% (N=45). This is mainly due to the fact that the ICU has a larger number of teams compared to the PACUs. The ICU and PACU1 are running 24/7, PACU2 is open Monday-Friday 9-17.

Another challenge was that respondents had a different perception of the word "debriefing": we observed that before the introduction of TALK, the definition and understanding of what constitutes debriefing was diffuse and not uniform across the respondents. After the introduction of TALK, a large number of respondents equated debriefing with TALK.

The data collection sessions presented their own set of challenges, as it was sometimes hard or even impossible to survey the personnel due to the fact that they were very busy, in the middle of a procedure or helping out other colleagues.

Finally, with the de-identification requirement, we could not uniquely identify the respondents and analyse their responses based on whether they have had the TALK introduction individually.

All of these aspects might have had an effect the results of this study, as debriefings might have occurred, yet remained unaccounted for, while in other cases, unstructured discussions or conversations might have been reported as debriefings.

Chapter 7

Discussion

The purpose of this study was to investigate whether the introduction of a new debriefing framework had any impact on clinical debriefing in the critical care environment. This chapter expands on the results presented in chapter 5 and aims at discussing them from an intensive care nurse perspective while providing the reader with more context and information that could be relevant to better understanding these findings.

7.1 Debriefing use

Although a slight increase was observed in debriefing use after the introduction of TALK in the critical care environments in SUS, this increase was however not significant. This effectively means that there is no evidence of correlation between the introduction of the debriefing framework and the observed change in debriefing use.

This outcome was not anticipated, as we expected to see a significant increase in the number of debriefings done after the introduction. Our initial impression of TALK was that of simplicity, ease of use and ease implementation, this, combined with the fact that we were made aware of the positive results[1] from the introduction in a university hospital in Cardiff, Wales (CVUHB) led us to expect a more significant increase in debriefing use from the introduction in SUS.

Many aspects could have contributed to this disparity, particularly, the TALK introduction in SUS was quite different from that in CVUHB. The introduction in Cardiff was done through 50 short in field conversations over 3 days, between TALK experts, local ambassadors and the staff, while on the other hand, the

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[1] The introduction was conducted in the short surgical stay unit and operation rooms, and led to a significant increase ($p = 0.039$) 3 months after its introduction (TALK, 2018)

introduction in Stavanger was done through a formal introduction course with little or no in field training.

According to a study conducted by Van Leijen-Zeelenberg et al. (2014) there are several important factors to consider before, during and after the implementation of new routines or tools in an organisation: it is important that in order to attempt the implementation of any new tool or routines, sufficient information and training is provided to the staff beforehand, ample time is used during the implementation, and that every involved party receives adequate follow-ups during and after the implementation. Another important aspect, probably the most important in fact, is that the tools or routines should be considered useful and fit into the working schedule of the staff.

In the SUS context, the introduction of TALK was done through a 2 hours long course structured as a short introduction to TALK itself followed by 2 simulation exercises. The attendance rate was relatively high, with 78% of the critical care nursing staff having participated. However, according to some of our colleagues who are currently conducting a qualitative study relating to the TALK introduction, the preliminary results revealed that the nursing staff did not perceive the course as being useful, especially with regards to the practical exercises that were not tailored to the critical care nursing needs. This opinion was however not unanimous, as doctors and leaders had a more positive opinion towards the course.

From our perspective, in order to achieve a better result, the introduction course should probably be reduced to a simpler theoretical introduction about debriefing itself with the goal of establishing a good understanding around debriefing in general and highlighting its benefits and the expected gains from its use. The practical exercises should probably be replaced with in field training and discussions, similarly to the introduction done in Wales. In short, we believe that a better introduction and sustained in field training and follow-ups could probably lead to a substantial increase in the use of debriefing.

Moving beyond the introduction course, some of the staff did not perceive TALK as being generally useful, while others reported that initiating a TALK debriefing session felt unnatural and awkward at times. The first point could be directly attributed to the introduction courses focusing on TALK itself without drawing the big picture related to debriefing and patient safety, while the second point could be linked to the lack of in field training.

Finally, the reason for not observing a significant change in debriefing use could simply be linked to the length of this study: the time frame between the introduction of a new method or tool in an organisation; TALK in this case;

and the observation of effects relating to this introduction; debriefing use in this case; could be quite long (Kitson et al., 1998).

7.2 Debriefing culture

The introduction of TALK did not have a significant impact on the number of debriefings done, correspondingly, the change in structured debriefing use and team participation was also marginal.

7.2.1 Structure

A slight, although non significant, increase in structured debriefings was observed after the introduction of TALK. Similarly to debriefing use, this increase is weaker than expected.

Before the TALK introduction, structured debriefings was mostly reported as following a "What happened, Why, How, What could be done differently?" structure, whereas after the introduction, the majority reported using TALK or "mostly TALK". Pocket-sized TALK debriefing cards were provided to the nursing staff post introduction, these cards contained a summary on how to structure and conduct a debriefing session according to the TALK structure. This could explain both the slight increase in structured debriefing, but also the change of reported structure.

It has to be noted that a large portion of the nursing staff started equating debriefing with TALK and did not always understand the notion of structured debriefing. During the 2nd data collection, the participants generally confounded TALK with debriefing. When the definition of what constitutes a debriefing or what is a structured debriefing is not clear in the respondents mind, the results about debriefing structure should be considered carefully.

Overall, we would expect the use of structured debriefing to increase with the increase of debriefing done in general. A better understanding of debriefing amongst the participants, and more specifically structured debriefing would also provide a more accurate picture about the use of structured debriefings.

7.2.2 Team participation

On the team participation front, no significant change was observed, nurses remained the healthcare group who took the most initiative in debriefing both before and after the TALK introduction. This is not unexpected as the nurse-patient ratio is much higher than the doctor-patient ratio.

The increase in doctor taking initiative in the ICU was however not anticipated. TALK might have provided a better platform for inter-disciplinary communica-

tion, allowing for faster and more effective information and knowledge transfer between doctors and nurses. As mentioned earlier, the introduction course provided to the doctors, albeit to a small number, has been well received. We are unaware of the content or the structure of that course as it was conducted separately from the nurses, but we expect it to be different, possibly more theoretical and without the simulation exercises.

From the intensive care nurse perspective (Norwegian association of critical care nurses, 2017), especially with regards to improving patient care and quality through inter-professional cooperation, debriefing provides an opportunity for reducing the communication gap between doctors, nurses and other healthcare personnel.

7.3 Debriefing outcomes

Increasing patient safety is the main reason for exploring debriefing and methods that could lead to an increase in debriefing use in the clinical environment. Out of the 143 debriefings reported, 90 reported having used debriefing to come up with a specific measure representing an action for improvement in patient handling.

The TALK introduction did however not have a statistically significant impact on the number of reported measures taken, nor on their type, as they remain very similar to those reported before the introduction.

The initial expectation was that TALK could bring a change in the measures taken after a debrief, as it is designed to allow for debriefing even for the smallest events, by being easy, practical, short and effective (TALK, 2020). However, given that the impact of the introduction has been limited, it is, after all, hardly surprising to not see any change in the reported measures.

The overall distribution of measures taken directly lines up with the commonly reported distribution of patient injury categories. Most of the improvement measures were related to *procedures or guidelines* (N=20); in a 2018 report from the Norwegian Directorate of Health (2019), 43.8% of all of the reported mistakes[2] in patient care were related to clinical processes or procedures, with the most reported reasons being "Guidelines or procedures not followed" and "Started procedures or guidelines too late".

The other most common reported improvement measures were related to the *treatment* of the patient (N=15), and *change in medication* (N=15); incorrect or wrong medication is reported in 17.3% of all of the reported mistakes in the report from the Norwegian Directorate of Health (2019).

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[2]These mistakes resulted in 235 deaths that might have been avoided.

This is a strong indicator that debriefing, when used effectively, could increase technical knowledge in teams and reduce the incidence of procedural mistakes and improve teamwork, which could in turn lead to improved patient safety.

Debriefing, and more specifically TALK, was also reported by the respondents as being used as a diplomatic tool for pointing out mistakes being made by colleagues without the risk of blaming, shaming and embarrassing. In some debriefings, it was reported that no change was necessary, and that debriefing was used to reinforce instead of change an existing practice.

From our own experience, all debriefings that we have been part of as nurses or intensive care nurses in training, both the ones that lead to a change in practice or procedure, but also the ones that confirmed an existing practice, were very beneficial to us. These debriefing sessions allowed us to correct incorrect knowledge or acquire new one, but also confirm and reinforce knowledge we already had.

7.4   Debriefing barriers

Both before and after the TALK introduction, the most commonly cited reason for not conducting a debriefing session was that it was deemed unnecessary or not needed. Debriefing was generally perceived and described as being a tool reserved to unexpected situations only. Related to it, the third most common reason for not conducting a debrief is that the patient being cared for was stable. Many of the participants reported that they did not do debriefs because there was nothing to debrief about, and a few felt that they only needed to use debriefing after severe events.

The second most common reason for not doing debriefing was related to busyness and the general lack of time and staff. The staff in the critical care environments did not feel that they had the chance to stop and do a debriefing after an event before jumping onto the next event or task that needed handling. This could be linked to hectic work schedule, critical unstable patients, under-staffing, but also to the fact that sometimes it is difficult to assemble the team for debriefing after a handover from the operation rooms.

This is inline with findings from Allen et al. (2018) and Salas et al. (2008), who highlight that conducting debriefs is challenging for overloaded teams having to handle new events taking place before they have had the chance to discuss the previous events. They also point out that debriefs are often not conducted even when they would likely be helpful, because teams are too busy and believe that the time spent doing debriefing is not useful.

Another common reason was that the staff just didn't think about conducting

a debriefing, or more specifically, many who said so, equated debriefing with TALK during the second data collection. This further confirms the fact that many of the staff members confounded debriefing with TALK and did not necessarily understand the relationship between the two.

TALK was also mentioned as being hard to initiate as some of the staff found it difficult to suggest to their peers, and even found it uncomfortable to conduct at times.

Having worked and trained in the critical care environment in SUS, both before and after the introduction of TALK, we have seen, but also been part of mistakes being made. Debriefing is a useful tool to build a shared knowledge about pitfalls and common errors, and avoid repeated incidence of these errors by learning from other's mistakes.

However, one of the main challenges standing in the way of in field debriefing, is that it is hard to conduct when it would be needed the most, mainly due to the fact that whenever adverse events occur, the focus is generally around reversing or limiting the effects of these events. With limited time at hand, conducting debriefing becomes a second level priority.

7.5 Unit differences

After analysing the collected data from the surveyed units individually, a clear difference on the use of debriefing was observed. Our expectation was that the 3 surveyed units would give similar results as overlap in staff between the units is very big.

Surprisingly at first, the first post-anaesthesia care unit (PACU1) teams conducted more debriefing sessions before the introduction of TALK compared to after its introduction. This decline in debriefing use could be attributed to the fact that 7 intensive care nursing students were present for the purpose of their training during the 1st data collection, and several staff members reported the use of debriefing for training purposes.

The structure and operation of PACU1 could also have played an important role in the limited use of debriefing in this unit even after the introduction: patients in this unit are generally relatively stable with short term stays as the patients with deteriorating health tend to be transferred to the intensive care unit. The team aspect in this unit is also not as strong: each nurse, alone, is responsible for 1 to 3 patients during their shift. The most commonly cited reason in PACU1 for not conducting a debriefing session was that it was deemed unnecessary with 80.5% (N=124) reported as such. Moreover, the patient flow in this unit can vary substantially, and also unpredictably, impacting the staff workload. This

coincides with the second most reported reason in PACU1 for not conducting debriefing: time constraint with 11.7% (N=18).

The ICU on the other hand has had more debriefings done after the introduction of TALK. Several factors could have contributed to this. The patients present in the ICU are generally more vulnerable, are often critically ill and under longer term treatments (Garrouste-Orgeas et al., 2012). The team structure in the ICU is also different, contrary to the postoperative care teams where each nurse is responsible for multiple patients, the ICU has multidisciplinary teams, each dedicated to individual patients. These two aspects, weaker patients and multidisciplinary teams, together can lead to more mistakes being made (Kaur et al., 2019). In the ICU, the debriefing framework introduction could have been an eye opener, more reports (85.3%, N=139) of debriefing deemed unnecessary were registered before the introduction, compared to after the introduction (77.4%, N=127). Moreover, ambassadors who promoted the use of TALK were present in the ICU after its introduction, this could be one more reason for the observed increase. It has to be noted however that similarly to PACU1, 8 intensive care nursing students were in practice at the ICU before the introduction of TALK, however there has not been any report of using debriefing for the training purpose.

As for the second post-anaesthesia care unit (PACU2), the use of debriefing was in general relatively high, both before and after the introduction of the TALK framework. As far as we know, one of the leaders in PACU2 has recognised the importance and benefits of debriefing, and has been working towards having debriefing sessions conducted in the teams even before the TALK introduction.

The impact of the environment on debriefing use is most probably more important than initially thought, the 3 surveyed units have had a different take on debriefing and its acceptance within the teams. Environment size, team structure, tasks, work schedule, leadership all have an impact on the introduction of any new tool within an organisation.

Chapter 8

Conclusion & practical implications

The purpose of this thesis was to investigate if the introduction of a new debriefing framework could impact the use of debriefing in a critical care environment.

Although the results from this study were mostly inconclusive with regards to our main research question, it lead to unforeseen findings.

Before conducting the research, the assumption was that debriefing was generally understood among the critical nursing staff, an assumption that turned out to be incorrect. The understanding of debriefing and its benefits, let alone how debriefing should be structured, was limited and remained so even after the TALK introduction. Ensuring a good understanding of debriefing is, in our opinion, a prerequisite for implementing debriefing use in the field.

The observed difference between the surveyed units could also not have been foreseen. This begs the question: *given that the 3 surveyed units have a large staff overlap, what are the differences that led to inconsistent change in debriefing use after the introduction?* Our intuition points at the difference in team and organisational structure between the different units, but also at the needs of the team.

Overall, one of the main challenges standing in the way of in field debriefing, is that it is hard to conduct when it would be needed the most. Whenever adverse events occur, the focus is generally around reversing or limiting the effects of these events. With limited time at hand, conducting debriefing becomes a second level priority. Conversely, without the occurrence of unexpected or unexpected events, debriefing is seen as unnecessary.

8. Conclusion & practical implications

Although our findings are overall non conclusive and the observed changes could not confidently be attributed to the use of a debriefing framework, we still believe that a framework such as TALK could be part of the solution toward increasing debriefing use and thus patient safety in critical care environments.

More efforts need to be put in place for a successful change in debriefing culture, such as a better introduction program highlighting the link between patient safety, communication and debriefing, but also having ambassadors embedded within the team that are firm believers in the importance of debriefing and the benefits it can bring.

Chapter 9

Future research

This research is only the first step towards uncovering what could help increasing the effective use of debriefing in critical care environment with the goal of increasing patient safety and reducing the potential for mistakes.

It would be beneficial to conduct another survey 6 months, and maybe another 12 months after the TALK introduction to measure whether a significant impact could be obtained. This research should also be extended with a qualitative study to further explore the reasons behind the limited use of debriefing even after the introduction of TALK.

Most importantly, the differences between units need to be investigated further. As presented in chapter 5 and chapter 7, the organisational and structural differences between the surveyed units lead to completely different results regarding the number of debriefings done after the introduction.

Bibliography

AHRQ. (2019, September). *Debriefing for clinical learning*. Agency For Healthcare Research and Quality. https://psnet.ahrq.gov/primer/debriefing-clinical-learning. (Cit. on p. 1)

Allen, J. A., Reiter-Palmon, R., Crowe, J. & Scott, C. (2018). Debriefs: Teams learning from doing in context. *American Psychologist*, *73*(4), 504–516. https://doi.org/10.1037/amp0000246 (cit. on pp. 4–7, 27)

Cheng, A., Eppich, W., Grant, V., Sherbino, J., Zendejas, B. & Cook, D. A. (2014). Debriefing for technology-enhanced simulation: A systematic review and meta-analysis. *Medical Education*, *48*(7), 657–666. https://doi.org/10.1111/medu.12432 (cit. on p. 5)

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 Medicine*, *39*(9), 1513–1523. https://doi.org/10.1007/s00134-013-2951-7 (cit. on p. 6)

d'Agincourt-Canning, L., Kissoon, N., Singal, M. & Pitfield, A. (2011). Culture, communication and safety: Lessons from the airline industry. *Indian Journal of Pediatrics*, *78*(6), 703–708. https://doi.org/10.1007/s12098-010-0311-y (cit. on p. 5)

Eppich, W., Mullan, P., Brett-Fleegler, M. & Cheng, A. (2016). "let's talk about it": Translating lessons from healthcare simulation to clinical event debriefings and clinical coaching conversations. *Clinical Pediatric Emergency Medicine*, *17*. https://doi.org/10.1016/j.cpem.2016.07.001 (cit. on pp. 1, 6)

Garrouste-Orgeas, M., Philippart, F., Bruel, C., Max, A., Lau, N. & Misset, B. (2012). Overview of medical errors and adverse events. *Annals of Intensive Care*, *2*(1), 1–9. https://doi.org/10.1186/2110-5820-2-2 (cit. on pp. 3, 4, 29)

Gausvik, C., Lautar, A., Miller, L., Pallerla, H., Schlaudecker, J., Reader, T. W., Flin, R., Cuthbertson, B. H., Singal, M. & Pitfield, A. F. (2015). Structured nursing communication on interdisciplinary acute care teams improves perceptions of safety, efficiency, understanding of care plan and teamwork as well as job satisfaction. *Journal of Multidisciplinary*

Healthcare, *8*(June), 33–37. https://doi.org/10.2147/JMDH.S72623 (cit. on p. 5)

Hunter, L. A. (2016). Debriefing and feedback in the current healthcare environment. *Journal of Perinatal and Neonatal Nursing*, *30*(3), 174–178. https://doi.org/10.1097/JPN.0000000000000173 (cit. on pp. 1, 7, 8)

Kaur, A. P., Levinson, A. T., Monteiro, J. F. G. & Carino, G. P. (2019). The impact of errors on healthcare professionals in the critical care setting. *Journal of Critical Care*, *52*, 16–21. https://doi.org/10.1016/j.jcrc.2019.03.001 (cit. on pp. 3, 29)

Kessler, D. O., Cheng, A. & Mullan, P. C. (2015). Debriefing in the emergency department after clinical events: A practical guide. *Annals of Emergency Medicine*. https://doi.org/10.1016/j.annemergmed.2014.10.019 (cit. on pp. 6, 7)

Kitson, A., Harvey, G. & McCormack, B. (1998). Enabling the implementation of evidence based practice: A conceptual framework. *BMJ Quality & Safety*, *7*(3), https://qualitysafety.bmj.com/content/7/3/149.full.pdf, 149–158. https://doi.org/10.1136/qshc.7.3.149 (cit. on p. 25)

Müller, M., Jürgens, J., Redaèlli, M., Klingberg, K., Hautz, W. E. & Stock, S. (2018). Impact of the communication and patient hand-off tool SBAR on patient safety: A systematic review. *BMJ Open*, *8*(8). https://doi.org/10.1136/bmjopen-2018-022202 (cit. on p. 4)

Norwegian association of critical care nurses. *The role and scope of practice of the critical care nurse*. 2017. %7Bhttps://www.nsf.no/Content/4471940/cache=20191610165859/The%20Role%20and%20scope%20of%20practice%20of%20the%20critical%20vare%20nurse%20folder.pdf%7D (cit. on pp. 3, 9, 26)

Norwegian Directorate of Health. (2019, September). *Pasientskader i norge 2018*. https://www.helsedirektoratet.no/rapporter/pasientskader-i-norge. (Cit. on pp. 1, 26)

Polit, D. F. & Beck, C. T. (2017). *Nursing Research: generating and assessing evidence for nursing practice* (10th ed.). Wolters Kluwer. (Cit. on pp. 11–13, 21).

Reader, T. W., Flin, R. & Cuthbertson, B. H. (2007). Communication skills and error in the intensive care unit, 732–736 (cit. on pp. 3, 4).

Ross-Adjie, G. M., Leslie, G. & Gillman, L. (2007). Occupational stress in the ED: What matters to nurses? *Australasian Emergency Nursing Journal*, *10*(3), 117–123. https://doi.org/10.1016/j.aenj.2007.05.005 (cit. on p. 6)

Salas, E., Klein, C., King, H., Salisbury, M., Augenstein, J., Birnbach, D., Robinson, D. & Upshaw, C. (2008). Debriefing medical teams: 12 evidence-based best practices and tips. *Joint Commission journal on quality and patient safety / Joint Commission Resources*, *34*, 518–27. https://doi.org/10.1016/S1553-7250(08)34066-5 (cit. on pp. 6, 7, 27)

Sawyer, T., Loren, D. & Halameess, L. P. (2016). Post-event debriefings during neonatal care: Why are we not doing them, and how can we start?

Journal of Perinatology, *36*(6), 415–419. https://doi.org/10.1038/jp.2016
.42 (cit. on p. 6)

Stubberud, D.-G. (2015). *Intensivsykepleie* (3rd ed.). Cappelen Damm Akademisk.
(Cit. on p. 3).

Stubberud, D.-G. (2018). *Kvalitet og pasientsikkerhet. sykepleierens funksjon og
ansvar for kvalitetsarbeid* (1st ed.). (Cit. on p. 4).

TALK. (2018, May). *Preliminary research data*. TALK. https://ec.europa.eu/resea
rch/participants/documents/downloadPublic?documentIds=080166e5
baeab695&appId=PPGMS. (Cit. on p. 23)

TALK. (2020). *Talk debrief*. TALK. https://www.talkdebrief.org. (Cit. on pp. 1,
2, 8, 26)

Tannenbaum, S. I. & Cerasoli, C. P. (2013). Do team and individual debriefs
enhance performance? A meta-analysis. *Human Factors*, *55*(1), 231–245.
https://doi.org/10.1177/0018720812448394 (cit. on p. 6)

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. *EMA - Emergency Medicine Aus-
tralasia*, *21*(6), 479–483. https://doi.org/10.1111/j.1742-6723.2009.0123
1.x (cit. on p. 7)

Tinnå, M. (2009, August 14). *Hva er pasientsikkerhet?* https://www.helsebibliot
eket.no/221732.cms. (Cit. on p. 5)

Van Leijen-Zeelenberg, J. E., Van Raak, A. J., Duimel-Peeters, I. G., Kroese,
M. E., Brink, P. R., Ruwaard, D. & Vrijhoef, H. J. (2014). Barriers to
implementation of a redesign of information transfer and feedback in
acute care: Results from a multiple case study. *BMC Health Services
Research*, *14*, 1–10. https://doi.org/10.1186/1472-6963-14-149 (cit. on
p. 24)

WHO. (2002). *Quality of care: Patient safety*. World Health Organization. http:
//apps.who.int/gb/archive/pdf_files/WHA55/ewha5518.pdf. (Cit. on
p. 1)

WHO. (2008). *Summary of the evidence on patient safety: Implications for re-
search*. https://apps.who.int/iris/bitstream/handle/10665/43874/9789
241596541_eng.pdf. (Cit. on p. 1)

WHO. (2009). *Conceptual framework for the international classification for patient
safety*. https://www.who.int/patientsafety/taxonomy/icps_full_repor
t.pdf. (Cit. on p. 4)

WHO. (2019a, September). *10 facts on patient safety*. https://www.who.int/fea
tures/factfiles/patient_safety/patient-safety-fact-file.pdf. (Cit. on p. 1)

WHO. (2019b, March 25). *Global action on patient safety*. https://apps.who.int
/gb/ebwha/pdf_files/WHA72/A72_26-en.pdf. (Cit. on pp. 1, 4)

WHO. (2020). *Patient safety*. Retrieved March 8, 2020, from http://www.euro.w
ho.int/en/health-topics/Health-systems/patient-safety/patient-safety. (Cit.
on p. 4)

Appendices

ABBREVIATIONS

CVUHB Cardiff & Vale University Health Board

ICN Intensive Care Nurse

ICU Intensive Care Unit

PACU Post-Anesthesia Care Unit

SUS Stavanger Universistet Sykehus (Stavanger University Hospital in Stavanger)

WHO World Health Organisation

————

SEARCH HISTORY FROM CINAHL AND EMBASE

The PICO framework was used in identifying the keywords to be used for the literature search.

P	I	C	O
Intensive care	Debrief*		Safety
Critical care	Feedback		
Acute care	Communica-		
	tion		
ICU	Debrief Tool		
Multidisciplinary Care Team			

Table B.1: PICO structrure

Two initial searches were conducted in May and August 2019. These initial searches gave few relevant articles, with most of the results relating to debriefing in simulation but very few about patient safety. A third search was conducted in January 2020, with the assistance of a librarian. This third search gave more relevant results than the previous two and included articles concerning debriefing in the context of clinical patient safety.

The search from January 2020 used the CINAHL and Embase databases on January 24th. Search queries towards these databases were formed by using the keywords resulting from the use of the PICO framework. The keywords were initially used alone, then combined with the AND, OR and NOT operators. The NOT operator was using to restrict the results and avoid including articles referring to debriefing in simulation. In CINAHL the "Suggest subject terms" function was also used to extend the search and find related keywords. Research older than 15 years was excluded because relevant research of recent date was found.

The CINAHL search gave 1132 unique results, whereas the Embase search gave 3474 unique results.

After an review of the abstract of all the 4606 results, 34 were shortlisted from CINAHL and 56 from Embase. After excluding articles related to simulation, 11 from CINAHL and 35 from Embase were selected to be relevant for the

thesis. Two other articles were directly provided by this thesis supervisor.

INTERVIEW SCHEDULE

DEBRIEFING PERFORMANCE DATA FORM

FORM ID:

1 Unit _____   **2 Date** ___/____/____   **3 Shift** ☐AM ☐PM ☐night ☐other
(specify) _____

SECTION 1 · PERFORMANCE OF DEBRIEFING

2 How many debriefings* has the team carried out during this shift? _____(no.)   *If >0, go to Section 3*

* Clinical Debriefing is a team conversation about what has happened during a case or a shift about any aspects of patient care. Clinical debriefing allows the team to analyse together what happened and identify ways to learn and improve.

SECTION 2 · IF DEBRIEFING **HAS NOT** TAKEN PLACE

3 Has the team considered doing a debriefing in this shift?

☐Yes; **3a Why did you not carry it out?**
☐Time constraints   ☐Lack of engagement   ☐Clinical urgency   ☐ Other
(specify)_____

☐No; **3b Why do you think the team didn't consider it?** _____

End of questionnaire. Thank you for your time!

SECTION 3 · IF DEBRIEFING **HAS** TAKEN PLACE

4 Did the team follow a structure in the debriefing?   ☐No   ☐Yes; **11a If yes, which one?** _____

5 Did the whole team take part in the debriefing?
(Whole team= all members who were present in the clinical case discussed during debriefing)

☐ Yes

☐ No;   **5a If not, Who was missing?**
☐ Doctor   ☐ Nurse   ☐ Allied healthcare professional   ☐ Administrative   ☐ Other (specify)_____

5b Why did team members miss the debriefing? *(register members and reason for absence)*
_____
_____

13 Who started the debriefing?
☐ Doctor   ☐ Nurse   ☐ Allied healthcare professional   ☐ Administrative   ☐ Other (specify)_____

14 Who lead the debriefing?
☐ Doctor   ☐ Nurse   ☐ Allied healthcare professional   ☐ Administrative   ☐ Other (specify)_____

15 During debriefing, did you decide to take any actions for improvement?
☐ No
☐ Yes; **15a Specify**
_____
_____

16 Did you have any difficulties or barriers during debriefing?
☐ No

☐ Yes; **16a If yes, which barriers did you have?**
☐Time constraints   ☐Lack of engagement   ☐Clinical urgency   ☐ Other
(specify)_____

End of questionnaire. Thank you for your time!

© C Diaz-Navarro, E Leon-Castelao, I Enjo-Perez, C Doyle. V2. August 2017
V3 (Spanish) by P Castro, E Leon-Castelao, I Enjo-Perez and colleagues, August 2018.
V4 (English) C. Diaz-Navarro and S Qvindesland, January 2019

APPROVAL FROM DATA PROTECTION OFFICER

Til

Thomas W. Linder

Intern ID	Elements	Saksbehandler:	Dato:
2019/21		Personvernombud Rafal Yeisen	31.08.19

—

Tilbakemelding på melding om behandling av personopplysninger i forbindelse med et _kvantitativ_ prosjektet; «I*mpact of TALK debriefing on safety culture Exploring safety culture and use of TALK debriefing :* Effekten av TALK Debrief på sikkerhetskultur.»

Viser til innsendt melding om behandling av personopplysninger/helseopplysninger. Det følgende er en formell anbefaling fra personvernombudet. Forutsetningene nedenfor må være oppfylt før innsamlingen av opplysningene/databehandlingen kan begynne.

Formålet med kvantitativprosjektet; _Evaluering av effekten av innføring av TALK Debrief, et tverrfaglig kommunikasjonsverktøy for å veilede strukturert klinisk debriefing, på arbeids-/sikkerhetskultur og de ansattes trivsel på Stavanger Universitets Sykehus_

Prosjektet vil innhente samtykke fra de registrerte til behandlingen av personopplysninger. Vår vurdering er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 nr. 11 og art. 7, ved at det er en frivillig, spesifikk, informert og utvetydig bekreftelse, som kan dokumenteres, og som den registrerte kan trekke tilbake.
Lovlig grunnlag for behandlingen vil dermed være den registrertes uttrykkelige samtykke, jf. personvernforordningen art. 6 nr. 1 a)

Personvernombudet tilrår at kvalitetssikringsprosjektet gjennomføres under forutsetning av følgende:

1. Prosjektet godkjennes av klinikksjef før oppstart.
2. Behandling av personopplysningene skjer i samsvar med og innenfor det formål som er oppgitt i meldingen.
3. Prosjektet skal ikke behandler pasientopplysninger.
4. Data lagres avidentifisert på helseforetakets forskningsserver.
5. Koblingsnøkkel som kobler avidentifiserte data med personopplysninger lagres enten elektronisk på tildelt område på forskningsserveren eller nedlåst på prosjektleders kontor og skal slettes ved prosjektslutt 01.01.23.
6. Data slettes eller anonymiseres under enhver omstendighet (ved at krysslisten slettes) ved prosjektslutt **01.01.23**. Når formålet med registeret er oppfylt sendes melding om bekreftet sletting/anonymisering til personvernombudet.

7. Det presiseres at prosjektet, slik det er beskrevet i søknaden, oppfattes som et Helsetjeneprosjekt. Hvis det er ønske om å bruke data til delprosjekter/masterstudenter må det søkes personvernombudet om dette.

Med vennlig hilsen

Personvernombud

Kopi:
Klinikksjef

42

———

APPROVAL FROM THE RESEARCH DEPARTMENT

HELSE STAVANGER
Stavanger universitetssjukehus
Forskningsavdelingen

Notat

Til:
Lillian Milford, Cathrine Dreggevik
Fra:
Fagsjef Kirsten Lode/mv

Kopimottakere:
Klinikksjef, Juridisk rådgiver Ina Trane

Dato: 16.10.2019
Arkivref: 2019/16157 - 132785/2019

Godkjent masterprosjekt - MA203

Masterprosjektet: «How will the implementation of the TALK debriefing tool effect the safety culture and patient safety?»

Det vises til søknad vedrørende oppstart av ovennevnte masterprosjekt. Prosjektet har vært vurdert av forskningsansvarlig og prosjektet er registrert i vår database med intern id: MA203.

Nødvendige tillatelser foreligger. Basert på disse og forskningsprotokoll godkjennes oppstart av masterprosjektet.

Forskningsavdelingen ønsker å minne om at som ved alle forskningsprosjekter gjelder:
- ved endringer må endringsmelding sendes
- dersom innhenting av pasientopplysninger baserer seg på samtykke, må samtykkeskjemaet oppbevares sikkert
- data skal slettes eller anonymiseres ved prosjektslutt

Dersom prosjektet ikke starter og/eller blir avbrutt må melding sendes til Forskningsavdelingen. Likeledes sendes en kort sluttrapport.

Tillatelsen gjelder bruk av data i utarbeidelse av mastergrad. Ved eventuell publisering av prosjektet, ber Forskningsavdelingen om at medforfatterskap fra SUS vurderes i de tilfeller hvor sjukehuset har vært bidragsyter til prosjektet.

Forskningsavdelingen ønsker lykke til med gjennomføring av prosjektet.

_____

REGIONAL COMMITTEE FOR MEDICAL AND HEALTH RESEARCH ETHICS RESPONSE

Sv: REK vest 2019/1156 Effekten av TALK Debrief på sikkerhetskultur

post@helseforskning.etikkom.no <post@helseforskning.etikkom.no>
Fri 6/21/2019 1:18 AM
To: thomas.werner.lindner@sus.no <thomas.werner.lindner@sus.no>

Vår ref. nr.: 2019/1156
Prosjekttittel: "**Effekten av TALK Debrief på sikkerhetskultur**"
Prosjektleder: Thomas Lindner

Til Thomas Lindner.

Vi viser til ditt skjema for fremleggingsvurdering datert 11.06.2019. Henvendelsen er vurdert av REK vest ved komitéleder Marit Grønning//sekretariatet.

Generelt om fremleggingsplikten for REK
Helseforskningsloven gjelder for medisinsk og helsefaglig forskning på mennesker, humant biologisk materiale eller helseopplysninger. Medisinsk og helsefaglig forskning defineres som virksomhet som utføres med vitenskapelig metodikk for å skaffe til veie ny kunnskap om helse og sykdom. Slike prosjekter må søke REK.

Vurdering av om prosjektet er fremleggingspliktig
Etter vår oppfatning er dette prosjektet ikke fremleggingspliktig for REK.

Studien vil evaluere effekten av innføring av TALK Debrief, et tverrfaglig kommunikasjonsverktøy, på arbeids-/sikkerhetskultur og de ansattes trivsel ved SUS. Studiets design: Kvantitativ spørreskjema og svar om tiltenkt og aktuell bruk av TALK Debrief. Deltakere 50-100 ansatte. Forskningsspørsmål:

- Hvordan bidrar innføring av team debriefing verktøyet TALK Debrief til pasientsikkerhetskultur?
- Hvordan bidrar introduksjonen av TALK debriefing til en positiv kultur for kommunikasjon og læring?
- Vil innføringen av TALK Debrief bidra til forbedret trivsel blant de ansatte?

REK oppfatter at formålet med denne forskningsstudien ikke er å søke etter ny kunnskap om helse og sykdom. Dette fremstår som forskning på helsetjenesten som faller utenfor helseforskningsloven. Du trenger dermed ikke å søke REK. Du bør kontakte personvernombudet for om studien må meldes dit.

Vi gjør oppmerksom på at konklusjonen er å anse som veiledende, jf. forvaltningslovens § 11. Dersom du likevel ønsker å søke REK må du sende inn skjemaet "Prosjektsøknad", der søknaden vil bli behandlet i komitémøte og det vil bli fattet et enkeltvedtak etter forvaltningsloven.

Med vennlig hilsen
Camilla Gjerstad
rådgiver
post@helseforskning.etikkom.no
T: 55978499

Regional komité for medisinsk og helsefaglig forskningsetikk REK vest-Norge (REK vest)
http://helseforskning.etikkom.no

SPREK banner 20100316.jpg

DECLARATION OF CONTRIBUTION

Cathrine Dreggevik *spesialisering i intensivsykepleie*

Prosjektskisse: Deltatt 50% med arbeid og utarbeidelsen av prosjektskisse. Prosjektplan: Deltatt 50% i utarbeidelse av prosjektplan. Fokuserer mer på metodekapittel.

Datasamling: Deltar i forberedelser til datasamlingene, forbereder spørreskjema og samtykkeskjema til studien samt nummerering av disse for senere å kunne avidentifisere data. På dagtid går vi på hver vår avdeling for å samle data, men morgen, kveld og helger fordeler vi mellom oss.

Arbeider med kappe frem til jul med introduksjon, bakgrunn og metode (har mest fokus på metode).

Bestiller time hos bibliotekar på SUS for å gjennomføre et systematisk litteratursøk, da det oppleves at vi har for lite relevant egen innhentet forskning. Jeg utfører det systematiske litteratursøket i CINAHL.

Vi går gjennom innsamlet data med ansvarlig forsker fra TALK-prosjektet i to dager. Vi analyserte da i SPSS. For at vi skulle få videre hjelp etter han var reist tilbake til Spania valgte vi å analysere data i R, da vi hadde mulighet for å få hjelp med dette.

Jeg ferdigstilte kappen og artikkel i programmet LaTeX, da dette var lettere å bruke og kommunisere med Mendeley som var programmet vi oppbevarte utvalgt bakgrunnsinformasjon til studien. Da jeg satt med oppgaven var det lettere for meg å se hva som manglet, men lagret regelmessig pdf-formater og sendte til Lillian for gjennomgang og tilbakemelding på arbeidet.

Lillian Milford *spesialisering i intensivsykepleie*

Vi avtalte tidlig i forløpet av vi skulle møtes og planlegge regelmessig, men valgte å fordele arbeidet for å komme godt i gang, vi diskuterte sammen hva som ville være relevant å inkludere i bakgrunn og metode i plenum før vi arbeidet mye individuelt.

Vi fordelte arbeidet likt i introduksjonsfasen med utarbeiding av problemstilling, innhenting av relevant forskning og valg av metode.

Vi informerte sammen avdelingen om vår datasamling. Og deltok i ferdigstillin-

gen i samtykkeskjema. Vi fordelte likt i datasamlingen, så vi begge gikk inn til SUS like mange ganger, og registrerte data i felleskap. Jeg fikk tilgang på forskningsserver og lagret data på denne. Data ble registrert i Excel skjema utarbeidet av representanter fra TALK som bidro i innsamlingen av data.

Etter første datasamling jobbet vi videre med bakgrunn og metode i oppgaven, og forberedte oss til 2 datasamling i januar. Jeg fokuserte mest på bakgrunns kapittelet.

Før andre datasamling, gjennomførte vi et systematisk litteratursøk med bibliotekar på SUS, jeg søkte i Embase, dette gav et godt utvidet resultat i forhold til tidligere søk.

Vi fordelte likt andre datasamling, byttet avdelinger for å få mest mulig erfaring gjennom datasamlingen.Deltok på analysen sammen med forsker fra Spania, og deretter når vi jobbet videre med analyse i R.

For å best få en rød tråd i oppgaven avtalte vi at bare en av oss skulle ha tilgang til dokumentet med oppgaven. Cathrine fikk denne oppgaven, men sendte meg dokumentet jevnlig for vurdering, tilbakemeldinger og innspill. Vi jobbet sammen siste ukene via Skype.

Cathrine Dreggevik   Lillian Milford