SPEAKING UP: IS SPEAKING OR LISTENING RELATED TO HEALTH CARE ERRORS?

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ABSTRACT

Julia Kane: Speaking Up: Is Speaking or Listening Related to Health Care Errors?
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Communication issues have been recognized as a contributing factor in the majority of health care errors. Failure to share critical information or concerns with other health care professionals is one type of communication issue, and for years health care professionals have been told to "speak up" when they have information or concerns to address this. What is meant by "speak up" has not been clear, as it has been defined and operationalized in many different ways. A literature review was conducted to explore the meaning of "speak up," and 187 articles were evaluated for usage of the term speaking up and related synonyms. A mixed methods study was conducted at a large academic medical center, utilizing survey data to identify units with high and low levels of speaking up behaviors and then interviews were conducted with nurses to explore how they define and operationalize speaking up. This led to a description of the phenomenon of speaking up for medical surgical nurses at one hospital. Results from the study and the literature review also indicate that most health care professionals do speak up when they see an issue, indicating we need to examine issues around raising concerns beyond encouraging people to do it. Definitions from the literature and from interviews were examined for similarities and differences and a new definition for speaking up for patient safety is presented. Recommendations for future research, including the need to examine speaking up from the listening side, are discussed.

To my children, Conlan, Garrett, and Meghan. Thank you for leaving mom alone to think and write sometimes and for learning to feed yourselves. I love you all very much.

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Many, many thanks to my committee for staying with me on my long journey to completion. Your patience and expertise have been invaluable and greatly appreciated.

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INTRODUCTION

The importance of effective, timely communication to patient safety has been well recognized since the publication of *To Err is Human* in 1999 (Kohn, Corrigan, & Donaldson, 2000; Wachter, 2012). One of the commonly discussed ways to improve communication in healthcare revolves around the phrase *speak up*. Patients and healthcare providers are told they need to speak up and ask questions if they see something unsafe (Maxfield, Grenny, Lavandero, & Groah, 2011; Wachter, 2012). Nurses are told in campaigns like "Silence Kills" and in teamwork trainings that they need to speak up if they see something that endangers patients (Maxfield et al., 2011; Spruce, 2014). But what is *speaking up*? Most of the discussion around *speaking up* ends with just telling providers to do it, without clearly defining it or providing tools to do so. Silence and ineffective speaking up are even grouped together by some studies or treated as the same thing, further clouding what exactly speaking up entails (Maxfield et al., 2011). My aim with this dissertation is to conduct a literature review of the concept of *speaking up* and to explore through qualitative inquiry how nurses are defining and operationalizing speaking up in the hospital setting, specifically medical-surgical units.

Background

The publication *To Err is Human* brought to light the seriousness of errors in healthcare (Kohn et al., 2000). The U.S. Department of Health and Human Services Agency

for Healthcare Research and Quality (AHRQ) Patient Safety Net defines healthcare error as "An act of commission (doing something wrong) or omission (failing to do the right thing) that leads to an undesirable outcome or significant potential for such an outcome" (PSNet, n.d.a). *To Err is Human* estimated healthcare errors killed just under 100,000 people each year in the United States, a number that would have made healthcare errors the fifth leading cause of death in the United States in 1999 (Kohn et al., 2000; Hoyert, Arias, Smith, Murphy, & Kochanek, 2001). More recent studies find the number of deaths even higher, with reported estimates that errors kill between 100,000 and 400,000 plus patients each year in the United States, a number that moves healthcare errors to the third leading cause of death in recent years (James, 2013; Makary & Daniel, 2016). There is no recent estimate of morbidity from medical error; the Institute of Medicine estimated it to be as many as a million people in 1999 (Abbasi, 2016).

The large range of estimates for morbidity and mortality from healthcare errors comes primarily from the lack of data. Most error reporting is entirely voluntary. Only half of U.S. states have some system of mandated error reporting, but only a small number of events are reportable, and even within these systems, underreporting is common (Abbasi, 2016). Since 2012, The Centers for Medicare & Medicaid Services (CMS) will not pay for about two dozen errors, referred to as "never events" (Galewitz, 2011). Never events are defined by the AHRQ as "adverse events that are unambiguous, serious, and usually preventable. While most are rare, when never events occur, they are devastating to patients and indicate serious underlying organizational safety problems" (PSNet, n.d.c). This change to reimbursement rules meant hospitals were forced to track these errors, as mistakes in billings to CMS can lead to large fines (CMS, 2016; Galewitz, 2011). But even if hospitals are not billing for the

errors it does not mean they are not reporting them, even in states with mandatory reporting. In 2012 the Office of Inspector General found that only 14% of errors with Medicare beneficiaries was captured by hospital error reporting systems, and of those, less than 1% were reported to state systems (Abassi, 2016; Office of Inspector General, 2012). Even the Joint Commission (JC), an independent, not for profit organization that accredits over 21,000 health care organizations and programs in United States, does not mandate reporting of errors by its members (Joint Commission, 2016a). The Joint Commission encourages reporting of sentinel events, which they define as "A sentinel event is an unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. Serious injury specifically includes loss of limb or function" (Joint Commission, 2013, p. SE-1). Although all sentinel events are not errors, and vice versa, a review of sentinel events reported to JC in 2014 found that errors were the primary cause identified in the majority of cases (Joint Commission Online, 2015). So, although data on sentinel events could lead to better statistics about patient safety and healthcare errors, reporting is voluntary, and only 764 events were reported to JC in 2014 (Joint Commission Online, 2015). With the current estimates of patient deaths well into the hundreds of thousands, it is doubtful 764 is the actual total of sentinel events in JC hospitals.

The data we do have come from voluntary reporting, retrospective studies of patient files, malpractice case records, and from the mandatory reporting systems that are in place in some states and the CMS. But clearly the data are incomplete. Most error reports will never be seen by anyone outside of the occurring location's risk management department, and many errors are never reported at all (Classen et al., 2011; Makary & Daniel, 2016). Healthcare facilities are not eager to share their errors with the public. The studies and case

reports that are published often come from the state mandated error reporting networks, e.g., Pennsylvania, or closed malpractice cases (Abbasi, 2016; Blanco, Clarke, & Martindell, 2009). Some hospitals also participate in voluntary error reporting networks, like the National Perinatal Information Center (NPIC), which compiles and analyzes data for its member hospitals, including adverse outcomes data (NPIC, n.d.). Although the NPIC occasionally publishes articles from the data it collects, the data are not publicly available. This is common for collectives and individual hospitals, which makes it difficult to get a clear picture of errors. With reporting still mostly voluntary and mandatory reporting only in place for certain conditions, underreporting of healthcare issues is clearly an issue. As Robert Wachter, MD states, "My own feeling is we don't really know the number of deaths from medical errors. The fact that we are still not able to measure the extent of the problem or easily know whether we're making progress is a problem" (as cited in Abassi, 2016, p. 699).

The fact that communication plays a large role in medical errors has been widely acknowledged (Joint Commission, 2013; Wachter, 2012). Communication refers to all exchanges of information that occur, whether verbal or written. This includes face-to-face exchanges, telephone conversations, and written and electronic orders. Communication failures between healthcare providers are a common contributing factor in a majority of medical errors, with multiple studies finding this problem in over 80% of errors reviewed (Haig, Sutton, & Whittington, 2006; Nadzam, 2009; Wachter, 2012). Communication is consistently among the top three causes of medical errors and is identified as a contributing factor in almost all cases (Nadzam, 2009; Wachter, 2012). The JC has had communication in the top three of most frequently identified root causes of sentinel events for over 10 years (Joint Commission Online, 2015). Examples of communication errors include silence about

patient safety issues, miscommunication at handoffs, failure to relay test results to the proper provider, and poor documentation (J. L. Classen, 2010; Crico Strategies, 2015; Maxfield et al., 2011). A review of over 23,000 malpractice cases from 2009 to 2013 found communication was a factor in 30% of the cases, of which 88% resulted in medium to high severity injuries, including death (Circo Strategies, 2015). These cases incurred $1.7 billion in losses for the healthcare and insurance companies, and 57% of the cases were related to provider-to-provider communication (Circo Strategies, 2015). That 57% accounted for 73% of the incurred losses, and among nursing cases, 72% related to provider-to-provider communication (Circo Strategies, 2015). The top communication error was miscommunication about the patient's condition (Circo Strategies, 2015). Clearly communication plays a major role in healthcare errors. The reasons and conditions behind communication errors are complex and complicate addressing these issues.

The Joint Commission has identified improving communication between healthcare staff as a patient safety goal again for 2018 (Joint Commission, 2018). Nurses play a key role in healthcare communication, as they are often responsible for relaying important information about the patient to other healthcare providers and spend the most time at the bedside (AHRQ, 2012). Difficulties in communicating between disciplines can be made even worse by the differences in training, terminology, and hierarchal issues (Makary et al., 2006; Mackintosh & Sandall, 2010; Manojlovich, 2010). Language and terminology differences result from the differences in how healthcare professionals are trained. Education in healthcare is often siloed, where little to no interaction occurs between the professions during training (Dayton & Henriksen, 2007). This makes it common for professionals to have little to no understanding of the jobs of those around them, which can lead to hesitancy to

challenge the actions of others on the healthcare team (Buckley, Laursen, & Otarola, 2009; Dayton & Henriksen, 2007). The perceived difference in knowledge is also often cited as a barrier, especially among nurses and junior physicians (Fackler, Chambers, & Bourbonniere, 2015; Maxfield et al., 2011; Szymczak, 2016). Even in cases where these providers see an error occurring or disagree with a plan of care, they will often remain silent if they feel they do not have enough expertise to challenge what is occurring (Fackler et al., 2015; Lyndon et al., 2012; Maxfield et al., 2011).

Hierarchy issues also impact interprofessional communication. A nurse or physician's perception of their power in a situation, often related to the hierarchical structure of the healthcare system, greatly influences their willingness to voice concerns or give any input at all (Fackler et al., 2015; Lyndon et al., 2012; Maxfield et al., 2011; Sutcliffe, Lewton, & Rosenthal, 2004). A study found that 12% of obstetric nurses and physicians would not speak up about an issue to a perceived superior even if they perceived a high probability of major harm coming to the patient (Lyndon et al., 2012). A survey of surgeons found that close to 50% would not welcome input or correction from a junior member of the operating room staff, believing the decisions of the leader should not be questioned (Wachter, 2012). A review of 444 surgical malpractice claims found that of those where communication breakdown resulted in patient harm, 74% of cases involved status asymmetry between the sender and receiver (Greenberg et al., 2007). Clearly the steep hierarchy often found in healthcare systems can negatively impact communication and patient safety.

Disrespectful behavior is also found to impact communication in healthcare. Disrespectful treatment of colleagues is found to be common in healthcare; a survey of over 4,000 nurses found 85% reported working with people who demonstrate disrespect for

others, and 46% reported the disrespect interfered with communication (Maxfield et al.,

2011). Lucian Leape and colleagues discussed the widespread culture of disrespect as "a

substantial barrier to progress in patient safety," identifying six categories of disrespectful

behavior (Leape et al., 2012, p. 845). Four of the six categories identified have been shown to

impact communication between healthcare professionals: disruptive behavior; humiliating,

demeaning treatment of nurses, residents, and students; passive-aggressive behavior; and

passive disrespect (Johnson, 2009; Leape et al., 2012; Maxfield et al., 2011; Rosenstein &

O'Daniel, 2005; Sutcliffe et al., 2004). All of these have been reported to interfere with

communication, from making the actual process less effective to people avoiding

communication with disrespectful providers (Johnson, 2009; Leape et al., 2012; Maxfield et

al., 2011).

Although multiple barriers to communication in healthcare have been identified, the

importance of open communication at all levels and among all providers to patient safety has

also been made clear. Retrospective reviews of errors and near misses indicate the

importance of any healthcare provider voicing their concern. A near miss is defined as "an

event or situation that did not produce patient injury, but only because of chance. This good

fortune might reflect robustness of the patient or a fortuitous, timely intervention" (PSNet,

n.d.b). An analysis of wrong site surgery near misses and actual occurrences at 97

Pennsylvania hospitals from August 2007 to August 2008 found a significant difference

between near misses and errors when a staff member communicated their concern (Blanco et

al., 2009). In fact, the voicing of concerns by staff members and acknowledgement of those

concerns accounted for the most significant differences between near misses or errors, with

the voicing and acknowledgment of concerns leading to more near misses and fewer errors

(Blanco et al., 2009). Another study involving interviews with 26 physician residents from a variety of specialties found that the most common issue cited for the 70 errors reported was communication, with the interviewees expressing that many could have been prevented with improved communication (Sutcliffe et al., 2004). This is a common finding in studies looking at errors retrospectively; lab results and orders are not communicated properly, information about the patient is not shared, and input from all professionals is not valued (Arora, Johnson, Lovinger, Humphrey, & Meltzer, 2005; Gawande, Zinner, Studdert, & Brennan, 2003; Greenberg et al., 2007; Johnson, 2009; Maxfield et al., 2011; Rothschild et al., 2005; Sutcliffe et al., 2004). As one resident put it,

> If I felt like I could actually communicate with that group of attendings I would have tried, but I didn't feel like it would useful to me. And all it would have done would be to inflame the relations between me and that attending and the patient still would have ended up getting [inappropriate treatment]. (as cited in Sutcliffe et al., 2004, p. 189)

Nurses also expressed similar feelings and stories:

> We tried to stop the doctor (plastic surgeon) and he said the permit was wrong. The patient was already asleep and he proceeded to do the wrong side against what the patient had verified, which had matched the permit. We could not get any support from the supervisor or anesthesiologist. . . . We felt absolutely powerless to being an advocate for the patient. (as cited in Maxfield et al., 2011, p. 5)

It is evident in the literature that communication needs to be improved in healthcare, including increasing the voicing of concerns and the valuing of input from all professionals. One way that is often discussed in the healthcare literature to increase these behaviors is by encouraging speaking up.

Speaking up has become a popular catch phrase in healthcare, especially in relation to patient safety. Speaking up is defined in one article as "the raising of concerns by health care professionals for the benefit of patient safety and care quality upon recognizing or becoming

aware of the risky or deficient actions of others within health care teams in a hospital environment" (Okuyama, Wagner, & Bijnen, 2014, p. 1). Speaking up is mentioned in many other articles, but no definition or even description of what it entails is offered (Beyea, 2008; Lyndon et al., 2012; Maxfield et al., 2011). Most authors discuss the importance of speaking up for patient safety without any definition or operationalization of the term. There are data which indicate that speaking up behaviors are important and lead to safer care (Blanco et al., 2009; Sutcliffe et al., 2004). But research reports also vary as to the definition of speaking up. The two quotes above illustrate two common scenarios around speaking up in patient safety—the resident chose not to speak at all, and the nurses spoke up but were ignored by other providers (Maxfield et al., 2011; Sutcliffe et al., 2004). Both were used as examples of not speaking up, although clearly the nurses did voice their concerns.

Equating ineffective speaking up with silence is especially problematic. Silence in the work place, or employee silence, is a different concept altogether from speaking up. Defined as "the intentional withholding of information by employees from others," this is the direct opposite of the definition of speaking up (Johannesen, as cited in Tangirala & Ramanujam, 2008, p. 39). Using both silence and ineffective speaking up as examples of a lack of speaking up further indicates the confusion surrounding this concept.

Some team training programs also contain tools for providers to voice their concerns, such as TeamSTEPPS CUS (TeamSTEPPS® 2.0, 2012). CUS, which stands for Concerned, Uncomfortable, and Safety, teaches nurses to raise concerns with the person TeamSTEPPS refers to as the "decisionmaker," often physicians, by using three statements in order: "I'm concerned, I'm uncomfortable, This is a safety issue"; each one is supposed to indicate to the decisionmaker the speaker's increasing discomfort with the situation (Pocket Guide:

TeamSTEPPS, 2014). The use of the word concern is problematic. It is defined as "relate to; be about" or "worry; make anxious" when used as a verb (Concern, n.d.) Therefore, when a nurse is expressing concern about a decision, she or he is saying the decision makes them worried or anxious. This is not the same as indicating they believe the decision is wrong or that they disagree. The CUS system also relies on the receiver knowing the importance of the use of the words, which requires they have received and retained TeamSTEPPS training. Even though team training is widely regarded as important to improving patient safety and reducing error, issues remain in terms of implementation and retention, and large numbers of healthcare providers have never had any formal team training (Salas & Rosen, 2013; Weller, Boyd, & Cumin, 2014). Even those that have completed the training at some point will lose the skills if they are not practiced and reinforced (Salas & Rosen, 2013). The goal of this dissertation is therefore to look at speaking up as a standalone concept. Investigators have reported that speaking up alone can improve patient outcomes and prevent errors (Blanco et al., 2009; Sutcliffe et al., 2004). By achieving a better understanding of speaking up, this dissertation may also help improve teamwork trainings by clarifying issues around speaking up and identifying effective behaviors.

Speaking up for patient safety has been shown to improve outcomes for patients, turning what could have been fatal errors into near misses (Blanco et al., 2009). But the lack of clarity about the definition of speaking up and how to do it, along with issues like disrespectful behavior and steep authority gradients, has led to providers who are hesitant to do so (Lyndon et al., 2012; Sutcliffe et al., 2004). The available evidence is also unclear as to what differentiates speaking up that is effective for making positive change in the patient's

care from speaking up that is ignored. This dissertation will attempt to gain a greater understanding of these issues around speaking up. The aims of this dissertation are to:

1. Understand the definition and operationalization of speaking up by healthcare professionals in hospital settings through a comprehensive literature review.

2. Examine how nurses are defining and operationalizing speaking up in their work.

3. Explore the situational and environmental factors that affect the speaking up and silence behaviors of nurses.

4. Describe the emotional and psychological impacts on nurses who speak up.

Clearly understanding and defining a concept is key, and is a necessary, preliminary step to ensure any future interventions are appropriate and effective.

CHAPTER 2

LITERATURE REVIEW

A thorough literature review is the first step in addressing any research problem. A clear understanding of what is already known on a topic is needed before undertaking research in that area. Garrard (2017) defines a literature review as

> an analysis of scientific materials about a specific topic that requires the reviewer to carefully read each of the studies to evaluate the study purpose, determine the appropriateness and quality of the scientific methods, examine the analysis of the questions and answers posed by the authors, summarize the findings across the studies, and write an objective synthesis of the findings. (pp. 4–5)

Other types of reviews, such as integrative, systematic, and meta-analysis, share the basic framework of design that a literature review has, but they have different methodology and purpose, mostly looking to synthesize the results from multiple intervention studies and offer conclusions and recommendations (Garrard, 2017; Moher et al., 2009). The literature review used in this project provided a foundation for the empirical investigation. As full understanding of the use of the concept of speaking up for patient safety in healthcare was the goal, this review included all articles that discussed speaking up for patient safety, even if speaking up was not the primary topic of the paper.

Purpose and Methodology

This literature review was conducted utilizing Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines and the Covidence online literature review management system (Moher et al., 2009; www.covidence.org). The analysis was done utilizing Garrard's matrix method for health science literature reviews (Garrard, 2017). The purpose of this review was twofold: first, to examine the language of speaking up to gain a clearer picture of how healthcare workers were defining and discussing speaking up, and second, to explore how speaking up for patient safety was being operationalized in healthcare, including any intervention studies that have been done. In order to present a clear and usable description of the concept of speaking up, the limits for this search were much broader. Any article that discussed speaking up, or related search terms (Table 1), was included. The only limits placed on the search were: written in English language and published since 1999. No dissertations/theses were included. The year 1999 was chosen because that was the year *To Err is Human* was published, resulting in increased awareness of issues around patient safety and interest in addressing these issues. The year 1999 is often used to mark the beginning of the modern patient safety movement (Wachter, 2012).

Four different databases were searched, PubMed, CINAHL, PsychoInfo and Communication/Mass Media Complete. Table 1 shows all the search terms used, repeated in each database. The different terms were selected from prior readings on speaking up and discussions with other healthcare professionals. Results were imported into a digital reference library (RefWorks) and repeats were removed. This left 1,212 studies to be imported into Covidence for screening.

Table 1

Literature Review Search Terms

Source/Search Terms	Number of Studies Found
PubMed—Limited to 1999-2017, English, humans	
Speak* up and patient safety	115
Voic* concerns and patient safety	58
whistleblowing and patient safety	65
MeSH Term- Patient safety and advoca*	139
And rais* concerns	71
And report* concerns	147
And address* concerns	174
Communication openness and patient safety	42
Share views and patient safety	5
Share concerns and patient safety	56
Sharing concerns and patient safety	41
Announc* concerns and patient safety	12
Confront* and patient safety	136
Question authority and patient safety	12
Speak* up and medical error	74
CINAHL, PsychInfo, Communication and Mass Media Complete, 1999-2017, human, English	
Speak* up and patient safety	54
Voic* concerns and patient safety	10
whistleblowing and patient safety	17
Patient safety and advoca*	305
And rais* concerns	123
And report* concerns	88
And address* concerns	68
Communication openness and patient safety	32
Share views and patient safety	3
Share concerns and patient safety	2
Sharing concerns and patient safety	1
Announc* concerns and patient safety	0
Total 1,934, 722 Duplicates- 1,212 to Covidence for Review	

PRISMA and Covidence

The 2009 PRISMA guidelines addressed issues with quality in systematic reviews and meta-analyses (Moher et al., 2009). The guidelines were a revision of the 1996 Quality of Reporting of Meta-analyses, or QUOROM, Statement (Moher et al., 2009). The guidelines consist of a 27-item checklist of "items to include when reporting a systematic review or meta-analysis" (Moher et al., 2009, p. 266). For this review, the guidelines used were those concerning the search and selection of articles for review. The full electronic search strategy is presented in Table 1, including any limits, so that others can repeat the search. A PRISMA flowchart, indicating how articles were selected for review, was generated for this project as well. This allowed for a clear picture of the article selection process, including exclusion and inclusion reasons and numbers of articles screened at each level. Figure 1 is the PRISMA flowchart.

The Covidence online literature review management website was used for this review (www.covidence.org). Covidence is an online service that is designed to make the production of high-quality literature reviews faster and easier (www.covidence.org/about-us). In 2015 Cochrane partnered with Covidence to make them the standard production platform for Cochrane Reviews (www.covidence.org/about-us). Covidence allows for easy collaboration between reviewers and streamlines much of the literature review process. Searches were conducted across multiple databases and resulting articles compiled into an Excel spreadsheet, which was then imported into Covidence. The articles were then screened at the title and abstract level by a minimum of two reviewers.
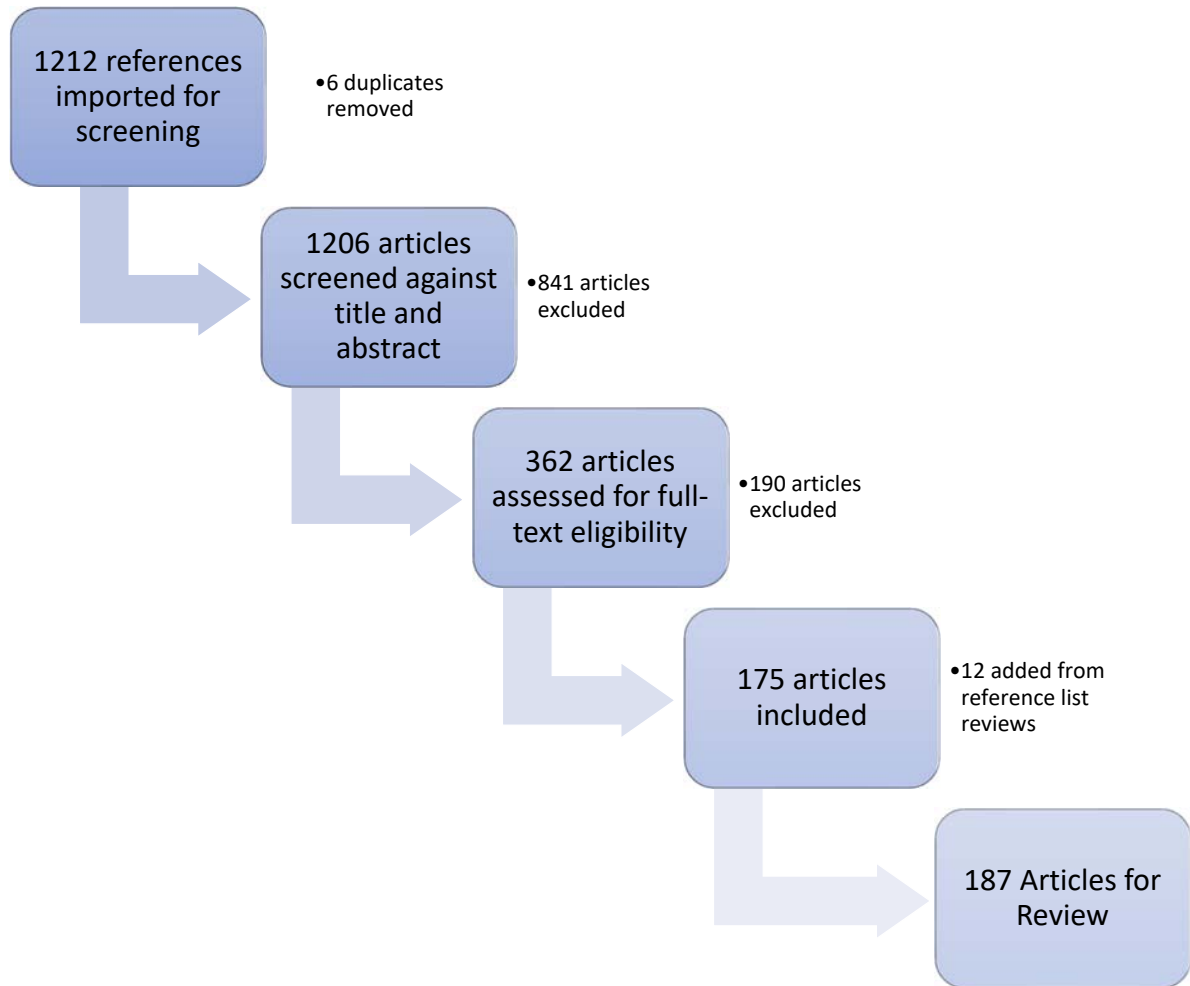
Figure 1. PRISMA flowchart for Speaking Up review.

One reviewer had to be the primary author, and the other reviewer could be any of the four healthcare and research professionals (three Registered Nurse PhDs and one MD), who volunteered to work on this project. The system flags any disagreements in decisions to include or exclude and must be reviewed by primary author before moving on. Inclusion and exclusion criteria are also posted to the website and can be easily reviewed at any time by reviewers. All articles were reviewed for any mention of speaking up for patient safety or any of the identified synonyms in Table 1. Some articles used the term speaking up but were excluded from this literature review if the phrase was used in relation to non-health related

topics such as labor disputes or referred to speaking up by patients or family members. After review was completed at the title and abstract levels, the full texts of the remaining articles were uploaded into Covidence. Articles were then reviewed at the full text level by two reviewers. After this process was complete, the remaining articles were utilized for this literature review. Extraction and analysis of the articles was done using Garrard's Matrix Method.

The Matrix Method

Garrard's Matrix Method is a structured way of organizing a literature review (Garrard, 2017). The method is used to approach literature reviews in a systemic and organized way, using a folder system composed of four primary folders: paper trail, documents, review matrix, and synthesis (Garrard, 2017). The paper trail folder is used to document the search of the literature. Garrard (2017) utilizes some of the PRISMA guidelines in this step, emphasizing the importance of keeping and sharing a detailed, reproducible search history and the flowchart to show exclusion and inclusion decisions (Table 1 and Figure 1). This folder also includes notes about the search, including notations about meetings with librarians or other experts, keywords, and a chronological record of the search. Both the PRISMA guidelines and Garrard emphasize the importance of the literature search being reproducible, and the paper trail folder is designed to make it easy for the author to summarize and report their search techniques and results (Garrard, 2017; Moher et al., 2009). For this literature review, my paper trail folder was in the form of Word documents with my detailed search history and limits, combined with the article review and selection process being completed on Covidence. Covidence tracks the reviewers' decisions, inclusions and exclusions. Covidence also creates the PRISMA flow chart once all decisions

are made. The second folder of the Matrix Method is the documents folder and is for storing the articles selected for the literature review. The articles for this literature review that required full text review were uploaded into Covidence to allow access by all reviewers.

Garrard's Review Matrix Folder is where the key part of this method, the matrix, is utilized (Garrard, 2017). The review matrix is a table created to facilitate extraction of the information needed from the articles to fulfill the purpose of the literature review. Some headings are common to all reviews for identification purposes, such as article title, authors, and publication year. Other column headings can be tailored to the literature review's purpose. For this review, one such heading was if and how speaking up was defined by the author(s). Another heading is how speaking up is operationalized. Columns can be reviewed and altered as needed during the review process, but the key is to ensure they reflect the purpose of the literature review (Garrard, 2017). A column dealing with the type of article/study is also common, along with one evaluating the rigor and value of the article. The matrix generated for this review was in the form of a large Excel spreadsheet. The final folder for Garrard's method is the Synthesis Folder, and it is where the written synthesis of the review of the literature is kept. For this review, the synthesis focused on how healthcare professionals' speaking up for patient safety was being defined and operationalized, exploring differences and similarities between the articles. The synthesis also looks at all the language being used as synonyms for speaking up, both through narrative analysis and by generating a word cloud, a graphic representation of text frequency (www.wordclouds.com).

Results

The search of four databases, PubMed, CINAHL, PsychInfo, and Communication and Mass Media Complete, returned 1,934 articles. Table 1 contains the multiple search terms

used and the number of articles returned from each term. All articles were imported into RefWorks, and then 722 duplicates were removed. The remaining 1,212 articles were imported to an Excel spreadsheet and then uploaded to Covidence.org. The articles were then reviewed at the title and abstract level by the author and at least one other reviewer. If there was any disagreement among reviewers as to whether to include or exclude at this level, the article was included for full text review. A total of 841 were excluded at the title and abstract level, and 6 more duplicates were found, leaving 359 articles for full text review. The full text of these 359 articles was uploaded into Covidence and reviewed by at least two reviewers. Any disagreements at this point as to inclusion were discussed and the author made the final decision. After full text review, 175 articles were included in the study. Another 12 articles were added from reference list reviews, making the final total of articles for this literature review 187. Figure 1 is the PRISMA flowchart, including exclusion reasons at the full text level.

Types of Articles

Articles came primarily from the United States (85 articles) and the United Kingdom (44), with Australia (16) and Canada (8) accounting for the most other articles outside of those two countries, with 34 articles coming from a variety of other countries (Figure 2). Articles were evaluated for focus, defined here as what the primary topic of the article was. This was decided by evaluating the title, abstract, aim, and/or content of the article. A total of 103 articles had a focus other than speaking up, and 84 were focused on speaking up or whistleblowing (Figure 3). Of the 187 articles, 110 can be broadly classified as studies. This includes qualitative, quantitative, case, or mixed methods studies, retrospective reviews, and quality improvement projects. The remaining 77 articles are broadly classified as non-

studies, and included opinion pieces, topic review/recommendation articles, continuing education texts, literature reviews, theory articles, and news reports. Of the 110 study articles, 26 were intervention studies. Two articles were about the same intervention, so 25 total interventions were reported. Within the 25 interventions, only 16 were related to increasing speaking up behaviors. Of those 16 studies, only 10 had increasing speaking up as a study aim; no studies looked to increase whistleblowing.

Articles by Country and Focus

Country	Speaking Up Article	Whistleblowing Article	Other Focus
Australia	3.00	8.00	5.00
Canada	2.00	0.00	6.00
Other	7.00	2.00	26.00
UK	19.00	14.00	11.00
USA	27.00	2.00	55.00

Figure 2. Articles by country and focus.

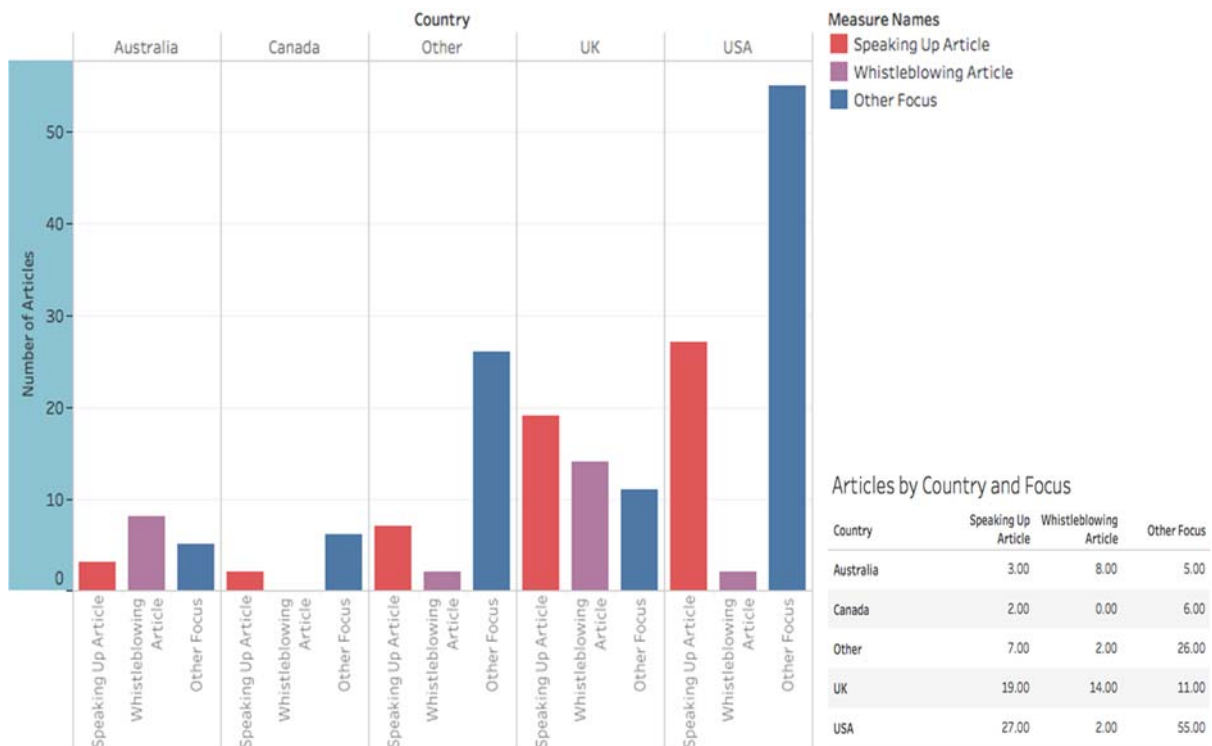| Other Focus | 103.00 |
| Speaking Up Article | 58.00 |
| Whistleblowing Article | 26.00 |
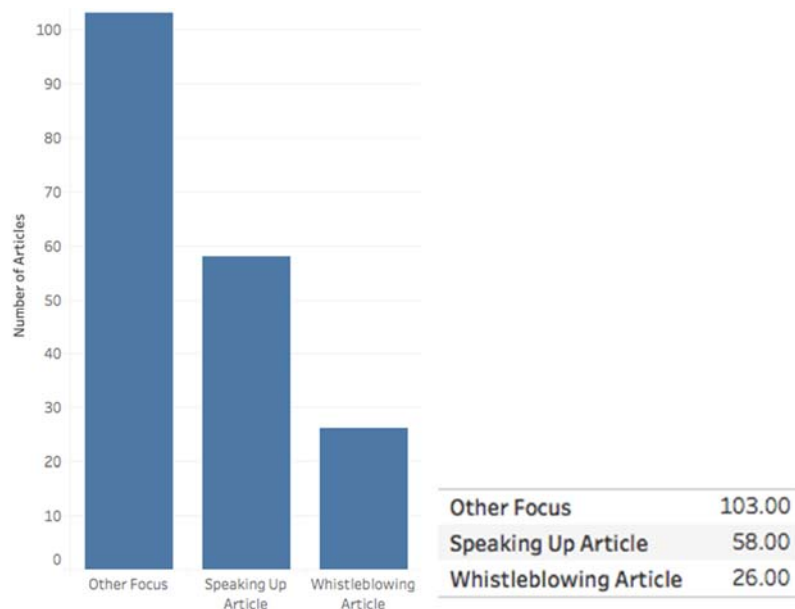
Figure 3. Article focus—speaking up, whistleblowing, other.

Populations and Areas of Interest

Because of the wide variety of article types in this literature review, population is defined in two ways, either the study population or the targeted audience. If an article was a study of any sort the population is the study population, i.e. those that completed the intervention or survey. In articles that were not studies, the population was defined as the targeted audience, based on article title and content or journal. For analysis purposes, discrete populations were grouped into larger categories, which are defined in Table 2. The largest population was All, with studies that included the entire unit of interest's population or the audience was all healthcare professionals. The second most common was nurses, followed by nurses and providers, providers, and students. The majority of articles were not aimed at a specific area of the hospital or healthcare, with 113 articles classified as dealing with all areas. The next most common area of interest was perioperative, with 32 articles focused on operating rooms and the pre- and post-operative areas. All other areas had fewer than ten

articles focused on them, with obstetrics and critical care having the most (8 and 6,

respectively).

Table 2

Populations Defined

Population	Definition
ALL (77 articles)	For study articles this means the study population included all members of the unit or hospital of interest. For example, in studies completed in the OR this would include surgeons, anesthesia providers, nurses, scrub techs, and any perfusion technologists or other specialists.
	For non-study articles this would include articles aimed at healthcare professionals in general, such opinion articles published in the *Joint Commission Journal on Quality and Patient Safety*.
NURSES (58 articles)	Any study article with nurses as the population or non-study article with nurses as the intended audience as indicated by article title and content or journal.
NURSES & PROVIDERS (14 articles)	Any study article with nurses and providers as the population or non-study article with nurses and providers as the intended audience as indicated by article title and content or journal. Providers include physicians and mid-level providers such as nurse practitioners and physician's assistants.
PROVIDERS (21 articles)	Any study article with providers as the population or non-study article with providers as the intended audience as indicated by article title and content or journal. Providers include physicians and mid-level providers such as nurse practitioners and physician's assistants.
STUDENTS (17 articles)	Any study or non-study article with students as the population of interest. Students include all healthcare professions' students.

A majority of articles were aimed at all health professionals (Figure 4). Nurses were

always a part of the all population; there were no studies done hospital wide that excluded

nurses, and non-study articles that discussed health care in general included nursing in these

discussions. Almost half (44%) of the non-study articles had all as their intended audience, and another 39% were aimed at nurses specifically. The majority (76%) of studies included nurses in the study population. This literature review did not specifically target nurses and "nurse" was not used as a search term (Table 1). Though CINAHL (the nursing literature database) was one of the four databases, the other three databases were not nursing specific.

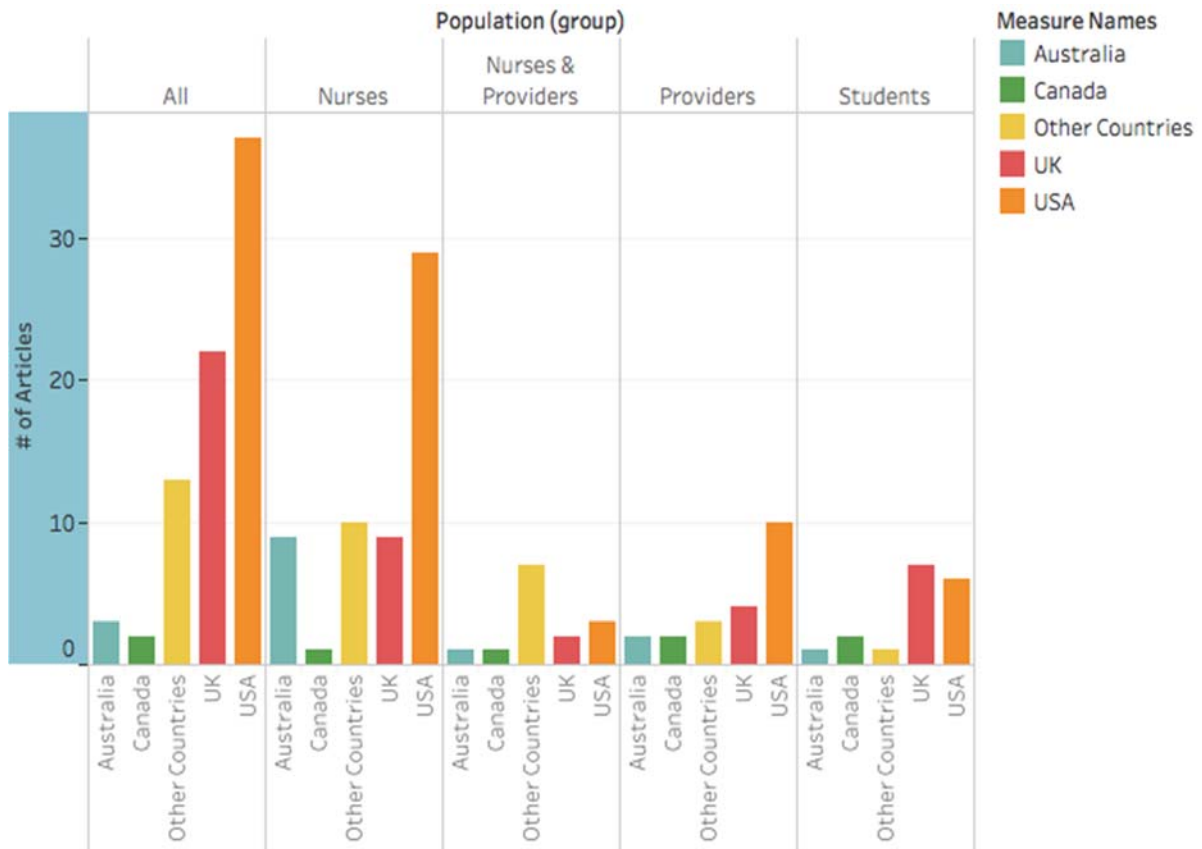*Figure 4.* Number of articles by population and country. Australia, Canada, Other Countries, UK, and USA for each population (group). Color shows details about Australia, Canada, other countries, UK, and USA.

Definitions, Synonyms, and Operationalizations

Fifteen articles provided definitions of speaking up (Table 3). There was overlap in definitions used, so a total of 11 definitions were found. Eighteen articles provided

definitions for whistleblowing, with a total of 14 definitions identified (Table 4). Some authors offered definitions for synonyms of speaking up, eight of which are presented in Table 5. All synonyms used by authors were collected in the synonyms column of the matrix and then imported into a word cloud generator (www.wordart.com). In order to clearly show the use of terms all tenses and uses were changed to current singular. For example, raising a concern, raising concerns, and a concern was raised, were all changed to raise concern. The word cloud is presented in Appendix A. "Speak up" was used twice as often as the next most common term, "raise concern." The top 15 terms with their frequency are listed in Appendix A, along with the word cloud.

Table 3

Definitions of Speaking Up from Articles

Article	Definition
Dayton & Henriksen, 2007, p. 35 No reference	Speak up (that is, initiate a message) to draw attention to the situation before harm is caused.
Eichhorn 2013, p. 114 No reference	Speaking up to power—preventing a situation where one member of a perioperative team recognizes a clear and present danger or a potential danger to patient but is inhibited from calling attention to the danger because of a sociocultural inequality, intimidation, fear of reprisal (such as job loss), or simply being ignored.
Fagan, Parker, & Jackson 2016, p. 2346 No reference	Assertive communication in clinical situations that requires immediate action through questions, statements of opinion or information with appropriate persistence aiming for resolution.
Law & Chan, 2015, p. 1838 Attributed to Sayre et al., 2012	An individual using his/her voice to convey to someone in higher authority specific information that might make a difference to patient safety.
Martinez et al., 2015, p. 672	Stating concerns (e.g., filing a report, sharing concerns with a supervisor or speaking directly with the individual(s) involved) rather than saying nothing.

Table 3

Cont.

Article	Definition
Nembhard, Labao, & Savage, 2015, p. 226 Attributes Morrison, 2011	Also Voice—Discretionary communication of ideas, suggestions, concerns, or opinions about work-related issues with the intent to improve organizational or unit functioning
Okuyama et al., 2014, p. 1 Eppich 2015, p. 84 Eppich attributes to Okuyama et al., 2014 Okuyama et al., 2014 attributes to Leonard, Graham, & Bonacum, 2004 and Lyndon et al., 2012.	The raising of concerns by healthcare professionals for the benefit of patient safety and care quality upon recognizing or becoming aware of the risky or deficient actions of others within healthcare teams in a hospital environment
Raemer, Kolbe, Minehart, Rudolph, & Pian-Smith, 2016, p. 530 Attributed to Okuyama et al., 2014	To raise concerns about risky or inappropriate actions of other team members
Sayre 2012a, p. 458 Attributed to a "working paper" by Detert and Edmondson, 2005.	Using one's voice to make known to someone-with positional power or authority to take action-specific information or knowledge that is privately held.
Sayre 2012b, p. 1 Attributed to a "working paper" by Detert and Edmondson, 2006. (dates different in two Sayre publications)	Using voice to make specific information that is privately held know to someone- with positional power or authority—to take action.
Schwappach & Gehring, 2014a Schwappach & Gehring, 2014c Schwappach 2015 Szymczak 2016 Schwappach attributes to Premeaux & Bedian, 2003 and Lyndon et al., 2012. Szymczak attributes to Schwappach & Gehring, 2014c	Assertive communication in clinical situations that require (immediate) action through questions or statements of opinion or information with appropriate persistence until there is a clear resolution to prevent error or harm from reaching the patient.
Ahern & McDonald, 2002, p. 305 Jackson et al., 2010, p. 34 Kelly & Jones, 2013, p. 183 Andrew & Mansour, 2014, p. 312 Andrew & Mansour (2014) and Jackson et al. (2010), attribute to Ahern & McDonald, 2002 Kelly & Jones (2013) attribute to McDonald & Ahern, 2000, p. 314	A nurse who identifies an incompetent, unethical or illegal situation in the workplace and reports it to someone who may have the power to stop the wrong.

Table 4

Definitions of Whistleblowing from Articles

Article	Definition
Bolsin, Faunce, & Oakley, 2005, p. 613 Black, 2011, p. 27 Black (2011) attributes to Bolsin et al., 2005	The attempt, in good faith and in the public interest, to disclose and resolve in a reasonable and non-vexatious manner, but in the face of significant institutional or professional opposition, a significant deficiency in the quality or safety of health care.
Bolsin, Pal, Wilmshurst, & Pena, 2011, p. 278 Kelly & Jones, 2013, p. 182 Kelly & Jones attribute to Bolsin et al., 2011	A whistleblower is defined as a person raises concern about wrongdoing.
Duffy, McCallum, Ness, & Price, 2012, p. 177	escalating concerns
Firtko & Jackson, 2005, p. 2	The reporting of information to an individual, group, or body that is not part of an organization's usual problem-solving strategy.
Jackson et al., 2014, p. 240 Attributed to Near & Miceli, 1985	A process whereby a current or former member of an organization discloses practices believe to be illegal, immoral or illegitimate, to those who may be able to effect change.
Johnstone, 2004, p. 15 Attributed to Boatright, 1993, p. 133	The voluntary release of non-public information, as a moral protest, by a member or a former member of an organization outside the normal channels of communication to an appropriate audience about illegal or immoral conduct in the organization or conduct in the organization that is opposed in some significant way to the public interest.
Kelly & Jones, 2013, p. 183 Jones & Kelly, 2014a, p. 710 Jones & Kelly attributed to Miceli & Near, 1984, p. 689; Kelly & Jones attributed to Miceli & Near, 2002, p. 689	Disclosure by organization members (former or current) of illegal, immoral or illegitimate practices under the control of their employers, to persons or organizations that may be able to effect action.
Jones & Kelly, 2014b, p. 987 Attributed to Lewis, 2006	Internal or external disclosure by employees (and former employees) of malpractice, illegal acts, or omissions at work.
Jones, 2015, p. 67 Attributed to Bolsin et al., 2011	A person who raises concern about a perceived wrongdoing (interchangeable with raises concerns).
Mansbach & Bachner, 2010, p. 483 Attributed to James (1980) and Ray (2006).	The disclosure by a staff member of an organization of practices and/or policies engaged in by that organization or its employees that wrong or harm a third party. The objective of the disclosure is to stop the harmful behavior and to prevent such conduct in the future.

Table 4

Cont.

Article	Definition
Mansbach, Melzer, & Bachner, 2012, p. 307 Attributed to Miceli, Near, & Dworkin, 2008, p. 8	The disclosure by organization members (former or current) of illegal, immoral, or illegitimate practices under the control of their employers to persons or organizations that may be able to effect action. The objective of the disclosure is to stop the harmful behavior and to prevent such conduct in the future.
McCutcheon, 2015, p. 125	When an employee or former employee raises concerns regarding a misconduct issue in the workplace. Officially it is known as 'making a disclosure in the public interest.'
Rodulson, Marshall, & Bleakley, 2015, p. 3 Attributed to The British Medical Association website accessed in 2015	Where an employee, former employee or member of an organisation raises concerns to people who have the power and presumed willingness to take corrective action. In most cases, the individual is unable or unwilling to raise their concerns locally either through concern for their own role or because they have raised the concern previously and no action was taken.

Table 5

Other Synonym Definitions from Articles

Article	Definition
Lockett et al., 2015, p. 561	**Peer to peer accountability** is a process of "speaking up" when one observes a peer doing something not according to acceptable practice or standards.
Lyndon, 2008, p. 13 Attributed to Preston, 2003	**Assertive communication**—stating concerns with persistence until there is a clear resolution.
Lyndon & Kennedy, 2010, pp. 24–25 (1) attributed to Thomas, Sexton & Helmreich, 2004, p. i59, (2) to Preston, 2003	**Assertive communication**—(1) an individual provider asserts their opinion (through questions or statements of opinion) during critical times OR (2) individuals speak up and state their information with appropriate persistence until there is a clear resolution.
Lyndon et al., 2012, p. 2 Attributed to Simpson & Knox, 2003; Leonard et al., 2004; Preston, 2003	**Assertive communication**—speaking up and stating concerns with persistence until these is a clear resolution
Morrow, Gustavson, & Jones, 2016, p. 43	**Safety voice**—employee willingness to proactively participate in communication related behaviors for the purpose of improving workplace safety

Table 5

Cont.

Article	Definition
Patterson, Pace, & Fincham, 2013, p. 132 HSOPSC study- Not how HSOPSC defines CO.	**Communication Openness**—characterized by a freedom to disclose errors among colleagues within a less punitive environment
Pian-Smith et al., 2009, p. 85 Collaborative inquiry attributed to Argyris, Putnam, & Smith, 1985; Friedman, 2001; Torbert, 2004	**Collaborative Inquiry combined with Advocacy** **Collaborative inquiry**—public testing of conclusions and reasoning, inquiry into alternative points of view, and seeking to enhance free and informed choice. **Advocacy**—a statement that describes the trainee's opinion or position
Volp, 2006, p. 4 Attributed to Brower, 1982, p. 141	**Advocacy**—one who defends, pleads the cause of or promotes the rights of, or attempts to change systems on behalf of an individual or group

A majority of definitions shared a common theme of calling attention to a patient

safety issue that needed immediate or prompt attention. The definitions varied in terms of

who the intended audience of the speaking up is and the focus of speaking up. Okuyama et

al. (2014) included a phrase in their definition about speaking up "upon recognizing or

becoming aware of the risky or deficient actions of others" and also limited the location to

"within healthcare teams in a hospital environment" (p. 1). This specificity contrasts with

Martinez et al. (2015), whose broader definition of speaking up as "stating concerns (e.g.,

filing a report, sharing concerns with a supervisor or speaking directly with the individual(s)

involved) rather than saying nothing" (p. 672). Okuyama et al. (2014) definition has very

clear conditions in terms of not only when an issue should be raised ("upon recognizing or

becoming aware"), but also what type of issue ("the risky or deficient actions of others"), and

the location for speaking up ("within healthcare teams in a hospital environment"), whereas

Martinez et al. (2015) have no limitations on time, type, or location (p. 1). Speaking up can

be both broadly and narrowly defined; however, as the majority of articles offer no definition

of speaking up, it is left to the reader to define the meaning. The term "whistleblowing" has similar limitations in the literature, as some of these definitions vary as to detail about how the concerns are raised. Johnstone (2004) offers an extremely detailed definition of whistleblowing, including that it is a "release of non-public information, as a moral protest," that is done "outside the normal channels of communication" about "illegal or immoral conduct" or conduct that is "opposed in some significant way to the public interest" by "a member or former member of an organization" (p. 15). In contrast, Bolsin et al. (2011) define a whistleblower as "a person who raises concern about wrongdoing" (p. 278). Whistleblowing is also defined as both internal and external in terms of organization, with internal referring "reporting wrongdoing to an authority within the organization" and external reporting "to an outside agency, such as the police, a professional organization, or the press" (Mansbach & Bachner, 2010, p. 484). This the clearest difference between definitions of speaking up and whistleblowing, as speaking up is never explicitly situated externally.

Due to the wide variety of types of articles and language used around speaking up, operationalizations of speaking up and whistleblowing were challenging to pull from the literature. For this paper, operationalization was defined as "the process by which a researcher defines how a concept is measured, observed, or manipulated within a particular study. This process translates the theoretical, conceptual variable of interest into a set of specific operations or procedures that define the variable's meaning in a specific study" (Operationalization, n.d., para. 1). Very few articles explicitly stated operationalizations, even those exploring speaking up as a behavior. If an operationalization was not explicitly stated, the article was reviewed for less clearly indicated operationalizations, such as

instrument wordings and suggested speaking up tools. Table 6 reviews the operationalizations found in the articles.

Twenty-two operationalizations were pulled from the articles; 19 were operationalizations of speaking up and three of whistleblowing (Table 6). The operationalizations fell primarily under measured perceptions of speaking up and whistleblowing or were tools to increase speaking up behaviors. Seven of the operationalizations were survey items that measured perceptions of willingness to speaking up or blow the whistle (Bowman, Neeman, & Sehgal, 2013; Dendle et al., 2013; Doyle, VanDenKerkhof, Edge, Ginsburg, & Goldstein, 2015; Hughes et al., 2014; Mansbach & Bachner, 2010; Putnam et al., 2015; Raemer et al., 2016; Reader, Flin, Mearns, & Cuthbertson, 2007). For example, Dendle et al. (2013) surveyed physicians about their "willingness to prompt" other doctors to perform hand hygiene, using the terms to "ask" or "remind" (pp. 72–73). Responses were then reported in the article as "Willingness of medical staff to 'speak up' if a doctor does not perform HH (hand hygiene)" (Dendle et al., 2013, p. 73). Of the remaining 14 operationalizations, eight were tools for speaking up. The CUS (I am Concerned, I am Uncomfortable, This is a Safety issue) tool was the most commonly referenced, though Gould (2010) changed the S to an E for 'escalate.' Only Johnson and Kimsey (2012) reported actually teaching CUS. The other articles referred to the CUS tool as a recommendation or possible intervention (Eppich, 2015; Gould, 2010; Leonard et al., 2004). The Situation Background Assessment Recommendation (SBAR) tool was discussed but not used as an intervention (Eppich, 2015; Leonard et al., 2004; Lyndon & Kennedy, 2010; Mackintosh & Sandall, 2010). Only Johnson and Kimsey (2012) discussed actually teaching providers to use the tools (CUS, two-challenge rule, and 'stop the line' were all

reported to be taught in their intervention) and provided outcomes related to their use. The one written speaking up tool, Hospital Event Analysis Describing Significant Unanticipated Problems (HEADS-UP), was described but no data about its use was available (Pannick et al., 2015). The other tools discussed were mentioned as recommendations or suggestions for interventions (Table 6).

Table 6

Operationalizations of Speaking Up and Whistleblowing

Operationalization	Article(s)	Category for this Review
Speaking Up		
"The student was considered to have spoken up if she or he refused to cut the tissue, clearly stating that a burn is needed before a cut; or if the student refused to cut the tissue and asked the surgeon about the need to burn before cutting" (p. 1004).	Barzallo et al., 2014	Criteria for evaluating behavior
"A member of the surgical team raised a specific concern about possible wrong site surgery at any point before incision" (p. 218).	Blanco et al., 2009	Criteria for evaluating behavior
Utilizing HSOPSC. Communication Openness composite defined as "staff freely speak up if they see something that may negatively affect a patient and feel free to question those with more authority" (Sorra et al., 2016, p. 3).	Bowman et al., 2013 Bump et al., 2015 Burstrom, L., Letterstal, A., Engstrom, M. L., Berglund, A., & Enlund, 2014 El-Jardali, Sheikh, Garcia, Jamal, & Abdo, 2014 Fan et al., 2016 Khater, Akhu-Zaheya, Al-Mahasneh, & Khater, 2015 Mayer et al., 2011 Mazur et al., 2015 Nie et al., 2013 Patterson et al., 2013	Measuring perceptions
Three Color Flag System of Speaking Up Behaviors Table 1, p. 183 Though examples of best responses are given, not a broad operationalization	Craig & Banja, 2010	Tools for speaking up
Survey, perceived willingness to ask colleagues to perform hand hygiene.	Dendle et al., 2013	Measuring perceptions

Table 6

Cont.

Operationalization	Article(s)	Category for this Review
Speaking Up (cont.)		
Utilizing H-PEPSS. Dimension of four items titled "comfort when speaking up" (Doyle et al., 2015, p. 139, Table 3) Kent, Anderson, Ciocca, Shanks, & Enlow (2014) omitted two of the four items for their study.	Doyle et al., 2015 Kent et al., 2014 Lukewich et al., 2015	Measuring perceptions
Interview study—Ease of speaking up coded on 1-3 scale (Table II, p. 1431). 3. Open reciprocal communication, 2. Respectful but guarded communication, 1. Communication that is quite limited, with some members extremely hesitate to speak up.	Edmondson, 2003	Criteria for evaluating behavior
P.A.C.E. model of graded verbal assertiveness. Probe, Alert, Challenge, Emergency (p. 114). Attributed to the commercial aviation industry.	Eichhorn, 2013	Tools for speaking up
SBAR- Situation, Background, Assessment, and Recommendation (Eppich, 2015, p. 87) Leonard et al. (2004) recommend combining SBAR with assertive communication.	Eppich, 2015 Leonard et al., 2004 Lyndon & Kennedy, 2010 Mackintosh & Sandall, 2010	Tools for speaking up
CUS- I am Concerned! I am Uncomfortable! This is a Safety issue! (Eppich, 2015, p. 87) Gould (2010) changed S to E for Escalate.	Eppich, 2015 Gould, 2010 Johnson & Kimsey, 2012 Leonard et al., 2004	Tools for speaking up
Modified Human Factors Attitude Survey (HFAS) item "Staff will freely speak up if they see something that can negatively affect patient care", higher score used to indicate willingness to speak up (Hughes et al., 2014).	Hughes et al., 2014	Measuring perceptions
The two-challenge rule. Johnson and Kimsey (2012) describe it as the first two assertions of CUS (p. 600). Pian-Smith et al. (2012) use aviation two challenge rule, challenge twice and then modified the third step of taking control of the aircraft to getting additional help.	Johnson & Kimsey, 2012 Pian-Smith et al., 2012	Tools for speaking up

Table 6

Cont.

Operationalization	Article(s)	Category for this Review
Speaking Up (cont.)		
Stop the Line Johnson & Kimsey (2012) describe this as the third assertion of CUS (p. 600).	Johnson & Kimsey, 2012	Tools for speaking up
Assertion Model for speaking up-referred to as part of a CRM programme. 1. Get person's attention 2. Express concern 3. State problem 4. Propose action 5. Reach decision (Escalation by jumping rank if necessary) Law & Chan, 2015, p. 1839, Table 1 In circular form, this is referred to as the Assertion cycle by Leonard et al., 2004.	Law & Chan, 2015 Leonard et al., 2004	Tools for speaking up
Likelihood of Speaking Up Index. Clinical scenarios with questions-how likely are you to insist, step in, take additional action? (Lyndon et al., 2012, p. 4 Box 1)	Lyndon et al., 2012	Criteria for evaluating behavior
Hospital Event Analysis Describing Significant Unanticipated Problems (HEADS-UP) Briefing and form completed every 24 hours to collect and address staff concerns (Pannick et al., 2015).	Pannick et al., 2015	Tools for speaking up
Safety Attitudes Questionnaire, speaking up domain composed of six questions (Putnam et al., 2015).	Putnam et al., 2015	Measuring perceptions
Desired speaking up actions during simulation- For each situation Ask/question, then express safety concern, followed by taking over or getting help (Raemer et al., 2016, p. 532 Table 1).	Raemer et al., 2016	Criteria for evaluating behavior

Table 6

Cont.

Operationalization	Article(s)	Category for this Review
Speaking Up (cont.)		
Local survey, two scales dealing with speaking up—"Communication openness between nurses and doctors" and Communication openness within groups" defined as "the extent to which ICU nurses and doctors/ team members within a group (e.g., between doctors) can speak openly with one another without fear of negative repercussions or misunderstanding" (Reader et al., 2007, p. 349, Table 2).	Reader et al., 2007	Measuring perceptions
Whistleblowing		
Conditions for it to be Whistleblowing- • An individual performs an (unauthorized) action or series of actions intended to make information public • the information is made a matter of public record • the information is about possible or actual, non-trivial wrongdoing in an organization • the individual who performs the action is a member or former member of the organization Also, usually made to someone with the power to either make change or exert pressure on those with that power. (Johnstone, 2004, p. 15).	Johnstone, 2004 Attributed to Vinten, 1994, pp. 256-257	Criteria for evaluating behavior
The process of whistleblowing: Discovery—the wrongdoing is observed Evaluation—the wrongdoing is evaluated as wrong or illegal Decision—to report the wrongdoing, or not. Reaction to the whistleblowing Evaluation of the reaction (Kelly & Jones, 2013, p. 184).	Kelly & Jones, 2013 Attributed to Bjorkelo et al., 2011	Criteria for evaluating behavior

Table 6

Cont.

Operationalization	Article(s)	Category for this Review
Whistleblowing (cont.)		
For the survey, internal whistleblowing was chosen if they decided to "talk to your colleague and try to persuade" her to admit her deception, or "go to someone at the center who has the power to intervene" and external whistleblowing was chosen if they chose to "turn to the Nurses' Association, an external body" or "the media" (p. 486). 1 to 4 scale of likelihood used. Mansbach et al. (2011) same categories just with physical therapists (p. 309).	Mansbach & Bachner, 2010 Mansbach et al., 2011	Measuring perceptions

The remaining articles operationalized speaking up or whistleblowing in order to evaluate whether or not it was done, categorized as criteria for evaluating behavior in Table 6. As an example, Blanco et al. (2009), in their retrospective review of operating room errors and near misses gave credit for speaking up if "A member of the surgical team raised a specific concern about possible wrong site surgery at any point before incision" (p. 218). In contrast, study participants in Barzello-Salazar et al. (2014) "were considered to have spoken up if they questioned the instruction and did not cut" (p. 1001). Barzello-Salazar et al. (2014) required action beyond speech for the participant to have spoken up; Blanco et al. (2009) only required the speech act itself. Of the seven articles that operationalized speaking up or whistleblowing in order to evaluate whether or not it was done, four counted the speech act itself (Blanco et al., 2009; Edmondson, 2003; Johnstone, 2004; Kelly & Jones, 2013), and three required an action beyond speech (Barzello-Salazar et al., 2014; Lyndon et al., 2012; Raemer et al., 2016).

Interventions to Increase Speaking Up Behaviors

Although 26 intervention studies were found in this literature review, only 16 of the interventions were even peripherally related to increasing speaking up behaviors. The other ten were interventions that were not aimed at speaking up behaviors (e.g., Burstrom et al.'s (2014) study on changing the order of triage in EDs in Sweden). Table 7 lists the 16 interventions related to speaking up behaviors, along with population, outcomes measured, type of intervention, and results. This includes studies that did not have increasing speaking up behaviors as an aim or that spent little time discussing speaking up. Only ten studies clearly had increasing speaking up behaviors as an aim of their intervention (see Table 7 note). Of outcomes reviewed, only seven studies of the 16 studies had outcomes related to patient safety directly; the majority looked at perceptions or responses in a simulated environment. Of those seven, five were not testing an intervention aimed at speaking up behaviors; only two studies examined speaking up behavior interventions and actual patient safety indicators for outcomes (Johnson & Kimsey, 2012; Pannick et al., 2015).

Only one intervention study specifically aimed to increase speaking up behaviors had practicing nurses as the study population (Sayre et al., 2012a, 2012b). Of the remaining nine studies, one sampled nursing students, four involved physicians and/or medical students, three involved all unit providers in mental health, perioperative, and medical-surgical units, and the remaining study used a variety of healthcare students. (Ashton, 2014; Barzallo-Salazar et al., 2014; Delisle, Grymonpre, Whitley, & Wirtzfeld, 2016; Johnson & Kimsey, 2012; Kent et al., 2014; O'Connor, Byrne, O'Dea, McVeigh, & Kerin, 2013; Pannick et al., 2015; Pian-Smith et al., 2009; Raemer et al., 2016). Including the three studies aimed at hospital units as a whole as intervention studies for nurses brings the total number of

Table 7

Interventions Reported

Authors & Date	Study Aim	Intervention	Population	Outcomes Measured	Results
[*] Ashton, S. 2014. Leadership walkrounds in mental health care. *Nursing Times, 110*(23), pp. 21-23.	QI report- Patient safety walkrounds enable staff to raise concerns with senior executives. Their use in one mental health trust led to improvements in safety and care.	The "executive team" conducts scheduled unit walkrounds two times a month, allowing "staff to raise concerns with senior executives before incidents occur" (p.21) LEADERSHIP INVOLVEMENT	Inpatient mental health unit staff	Unclear. The article mentions improvements, but no expected outcomes are listed beyond allowing concerns to be raised and demonstrating visible commitment to safety issues.	Reports completion of 90% of identified "actions", some examples give on p. 22. Unclear how measured for many, like "physical healthcare for inpatients has been improved" (p. 22).
[*] Barzallo-Salazar et al. 2014. Influence of surgeon behavior on trainee willingness to speak up: a randomized controlled trial. *Journal of the American College of Surgery, 219*(5), pp. 1001-1007.	To determine if surgeon's behaviors can encourage or discourage trainees from speaking up when they witness a surgical mistake.	Medical students were randomized to either an "encouraged" or "discouraged" group assisting in a simulated surgical case. The surgeon proceeded to give an incorrect instruction to cut during the simulation. Students were judged to have spoken up "if they questioned the instruction and did not cut" (p. 1001). ENCOURAGEMENT & SIMULATION	55 medical students	Whether or not the student spoke up. They also measured personality bias with two validated personality tests before simulation.	82% of the encouraged group spoke up versus 30% of the discouraged group. No significant difference between groups in personality traits, training level or sex.

Table 7

Cont.

Authors & Date	Study Aim	Intervention	Population	Outcomes Measured	Results
[*] Delisle et al. (2016). Crucial conversations: an interprofessional learning opportunity for senior healthcare students. *Journal of Interprofessional Care, 30*(6), pp. 777-786.	To examine the effect of interprofessional communication training, namely Crucial Conversations, on pre-licensure healthcare students with the goal of improving their ability to speak up and collaborate interprofessionally to improve patient safety.	Optional extracurricular course offered to senior students at the schools of medicine, nursing, dentistry, pharmacy, dental hygiene, and medical rehabilitation at the University of Manitoba. Nine 2-hour lessons designed by VitalSmarts, called Crucial Conversations. EDUCATION	Thirty-eight senior Healthcare students (none from dental hygiene), in two separate cohorts met for four weeks for four hours each class.	University of West England Interprofessional Questionnaire (UWE IPQ) measuring attitudes towards learning, relationships, interactions, and teamwork used as a pre and posttest. VitalSmarts survey completed 3 to 4 months after course.	Baseline scores were positive for three dimensions and remained so in the post survey, with some improvement. Interprofessional interaction scores were negative at baseline and remained so on the post survey, no improvement.
Donnelly, L., Dickerson, J., Goodfriend, M., Muething, S. (2010). Improving patient safety in radiology: concepts for a comprehensive patient safety program. *Seminars in Ultrasound, CT and MRI 31,* pp. 67–70.	To describe the horizontal interventions to improve patient safety used in our department	5 Key Drivers 1. Error prevention training 2. Cause-analysis program 3. tactical interventions for high-risk areas 4. lessons-learned program 5. restructuring of patient safety governance (p. 67). Focus on creating a culture where everyone is expected and encouraged to speak up (p. 68). EDUCATION & PROTOCOLS	Radiology department staff at a US Children's hospital	Mean days between serious safety events (SSE) and safety culture as evaluated by AHRQ survey.	SSE at baseline every 200 days to every 839 days 2 years later. Forty-three percent of scores on safety culture survey showed statistically significant improvement.

38

Table 7

Cont.

Authors & Date	Study Aim	Intervention	Population	Outcomes Measured	Results
Hughes et al. (2014). A crew resource management program tailored to trauma resuscitation improves team behavior and communication. *J AM Coll Surg 219*(3), pp. 545–551.	To evaluate the effectiveness of a team-building process in resuscitation of trauma patients, does crew resource management (CRM) modified for trauma improve teamwork and communication.	A Trauma Resuscitation Area (TRA) specific 3-hour CRM course was required to be completed by any staff member who participated in trauma resuscitations. EDUCATION	324 staff members who participate in trauma resuscitations.	Observation and evaluation by Communication and Teamwork Skills (CATS) scoring of trauma resuscitations pre and post intervention. Modified Human Factors Attitudes Survey (HFAS) pre and post.	Significant improvement in about half of the CATS metrics; no sig. improvement in critical language, verbal assertion, escalation of asserted concern, receptive to suggestion/ideas. Decrease in requesting team input (NS). HFAS scores increase for some but not all areas, one of two speaking up metrics.
* Johnson, H. & Kimsey, D. (2012). Patient safety: break the silence. *AORN Journal, 95*(5), pp. 591–601.	Report on a QI in a PA hospital's perioperative area, introduction of CRM, TeamSTEPPS, and communication techniques.	Three-hour program titled "Enhancing Perioperative Teamwork to Improve Patient Safety", video and discussion with audience response system. EDUCATION	809 perioperative staff completed the course, including surgeons, residents, anesthesia providers, RNs, surgical techs and other staff	Post course survey and number of Root Cause Analysis (RCA) examined	Majority felt they could better question authority and ask questions after training. RCAs dropped from 12 to 4 a year (p. 600).

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Table 7

Cont.

Authors & Date	Study Aim	Intervention	Population	Outcomes Measured	Results
[*] Kent et al. (2014). Effects of a senior practicum course on nursing students' confidence in speaking up for patient safety. *Journal of Nursing Education 54*(3), pp. S12-S15.	To examine the effects of a senior practicum and leadership course on nursing students' confidence in speaking up for patient safety	8-week practicum and nursing leadership course for senior nursing students EDUCATION	63 senior nursing students from a class of 84. Class was required but study was optional.	Pretest-Posttest of perceptions with Health Professional Education in Patient Safety Survey (H-PEPSS). Reliability data provided from another study of a different population (p. S13).	Increased perception of comfort of speaking up when witnessing unsafe practices, but no change in "difficulty questioning actions and decisions of those with more authority" (p. S14).
McLaughlin, Winograd, Chung, Van de Wiele, & Martin (2014). Impact of the time-out process on safety attitude in a tertiary neurosurgical department *World Neurosurgery 82*(5), pp. 567–574.	Assessed the impact of the current protocol for the time-out on healthcare providers safety attitude and operating room safety climate.	Updated time-out process protocol put into use, added team member introductions, safety statement by leader in time out, two new checklist items, and pre-incision surgical care improvement project measures (p. 567). CHECKLIST & PROTOCOL	93 of 128 surgical team members completed the survey. Includes surgeons, anesthesia providers, RNs, scrub techs, and neuromonitoring technicians.	Locally designed survey based on the "phraseology" of the HSOPSC and SAQ was used to measure the safety attitudes in the neurosurgical OR teams (p. 568).	No pretest, only post survey. Positive reaction to time out process in general and new requirement of team introductions, though they did not feel a time out necessarily "reinforced teamwork" (p. 572). Leader must set the tone.

Table 7

Cont.

Authors & Date	Study Aim	Intervention	Population	Outcomes Measured	Results
[*] O'Connor et al. (2013). 'Excuse me:' Teaching interns to speak up. *Joint Commission Journal on Quality and Patient Safety 39*(9), pp. 426–431.	Describe a training needs assessment, which was followed by development and evaluation of the training program.	Small group, 90-minute training consisting of lecture and slides on human factors and communication skills followed by film clips of real stories and discussion, based on CRM (p. 428). EDUCATION	110 interns completed training, 35 did not (control group). Training was mandatory, evaluation survey was not. One hundred completed the reactions questionnaire.	Pre- and posttests of knowledge and attitudes for all intervention groups, behavior for some. Control group did all three at the same time as the post testing. Two factors, speaking up about stress and speaking up to seniors, Cronbach's for both were from 0.50 to 0.67 (p. 429).	Positive reaction to training but no significant effect from training on Stress scale and no significant differences between all groups after training in SU to seniors, including control. No sig. differences in behavior (p. 430).
[*] Pannick et al. (2015). A stepped wedge, cluster controlled trial of an intervention to improve safety and quality on medical wards: the HEADS-UP study protocol. *BMJ Open 5*, pp. 1–9.	To evaluate a new strategy to incorporate proactive team risk surveillance into routine care on general medical wards, with a facilitated organisational response: Hospital Event Analysis Describing Significant Unanticipated Problems (HEADS-UP)	Prompt-led team briefing called Hospital Event Analysis Describing Significant Unanticipated Problems (HEADS-UP) to be conducted on wards every 24 hours. CHECKLIST & PROTOCOL	Entire ward staff, including physicians and pharmacy, OT, PT, etc.	Plan to measure- Length of stay Mortality Readmission Complications of care Escalation of care Staff engagement with reporting system Safety and teamwork climate (p. 5)	No results, article states they will be published at a later date. Lots of exclusion reasons to remove patients from data (p. 4).

Table 7

Cont.

Authors & Date	Study Aim	Intervention	Population	Outcomes Measured	Results
[*] Pian-Smith et al. (2009). Teaching residents the two-challenge rule: a simulation-based approach to improve education and patient safety. *Simulation in Healthcare 4,* pp. 84–91.	To determine whether a debriefing intervention that emphasizes 1 joint responsibility for safety and 2 the "two challenge rule" using a conversational technique that is assertive and collaborative (advocacy-inquiry) can improve the frequency and effectiveness with which residents "speak up" to superiors	Two simulation cases, one before the 30- to 45-minute education debriefing and one after. Both cases had chances to challenge at 3 levels, attending anesthesiologist, attending surgeon, and circulating nurse. Training emphasized the use of the two-challenge rule. SIMULATION & EDUCATION	40 anesthesia trainees in years 1 through 4 of training.	Scored 1-5 by observer for challenging other staff; 1 was "say nothing" to 5 "use crisp advocacy-inquiry" (p. 87).	Increase in challenging and quality of challenges to surgeons and anesthesia, not to RNs. Simulation results only.
Pronovost et al. (2004). Patient safety: senior executive adopt-a-work unit: a model for safety improvement. *Joint Commission Journal on Quality and Safety 30*(2), pp. 59-68.	Describe how we implemented the senior executive adopt-a-work unit program and present care descriptions of how it helped to improve patient safety in five ICUs at JHH	Senior executives adopted various critical care units, meeting with the unit monthly to identify issues and work to address them. Part of a larger JHH Patient Safety Program LEADERSHIP INVOLVEMENT	Staff of 5 ICUs and senior executives, one assigned to each ICU. Staff included nurses, physicians, ward clerks, any other unit staff.	Unclear, goal is to identify problems and address them. Mention of survey of patient safety culture as well though no results. States it has been successful with the projects and encouraging speaking up.	Examples given of projects undertaken in an area or success stories given in the article, but no quantified results or patient outcomes.

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Table 7

Cont.

Authors & Date	Study Aim	Intervention	Population	Outcomes Measured	Results
[*] Raemer et al. (2016). Improving Anesthesiologists' Ability to Speak Up in the Operating Room: A Randomized Controlled Experiment of a Simulation-Based Intervention and a Qualitative Analysis of Hurdles and Enablers. *Academic Medicine 91*(4), pp. 530–539.	Addressed three questions: 1. would a realistic simulation-based educational intervention improve speaking-up behaviors of practicing non-trainee anesthesiologist? 2. What would those speaking up behaviors be when the issue emanated from a surgeon, a circulating nurse, or an anesthesiologist colleague? 3. What were the hurdles and enablers to speaking up in those situations?	50-minute workshop on speaking up incorporated into a mandatory 6-hour crisis management course. Intervention group received the intervention workshop before simulation was done and observed, control group after. Taught two challenge rule and advocacy plus inquiry (similar to Pian-Smith et al. (2009) who was also an author on this study). SIMULATION & EDUCATION	35 intervention group, 36 control group. All practicing non-trainee anesthesiologists.	Observed for response to three opportunities to speak up, one to surgeon, one to anesthesiologist colleague, one to circulating nurse. Rated based on response categories on page 535 Table 2.	There were no statistically significant differences between intervention and control groups speaking up behaviors. The authors rated the educational intervention "ineffective" (p. 530).
Roh, H., Park, J., & Kim, T. (2015). Patient safety education to change medical students' attitudes and sense of responsibility. *Medical Teacher 37,* pp. 908–914.	Examined changes in the perceptions and attitudes as well as the sense of individual and collective responsibility in medical students after they received patient safety education	Three-day patient safety program based on WHO patient safety guide for medical schools. Table 1 (p. 909) shows the structure and content of the course EDUCATION	Incoming third-year medical students, before beginning clinical clerkship, 103 students.	Local 12-item questionnaire to measure students' understanding of the basic concepts of patient safety plus two vignettes that was answered qualitatively. 98 of the 103 students completed the two measures.	Improvements in understanding of patient safety and willingness to speak up about error to colleagues but speak up to senior doctor remained low though improved.

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Table 7

Cont.

Authors & Date	Study Aim	Intervention	Population	Outcomes Measured	Results
Sax et al. (2009). Can aviation-based team training elicit sustainable behavioral change? *Arch Surg* *144*(12), pp. 1133–1137.	To quantify effects of aviation-based crew resource management training on patient safety-related behaviors and perceived personal empowerment.	6-hour course "Lessons from the cockpit", bringing CRM concepts to healthcare. Held on weekends and offered CEs and compensatory time or malpractice premium reduction. EDUCATION & PROTOCOLS	Two hospitals, NY 509 trained, in RI 349 trained. Of those 50% were nurses, 28% ancillary personnel, 22% physicians	Checklist use, self-reporting, and 10-point locally developed survey on empowerment; all before and after training.	Increase in empowerment scale though clear hierarchy in willingness to confront; checklist use went to 100% when scrub empowered to not hand knife until complete; incident reporting went from 709 per quarter to 1481 2 years post.
* Sayre et al. (2012a). A strategy to improve nurses speaking up and collaborating for patient safety. *JONA* *42*(10), pp. 458-460. AND * Sayre et al. (2012b). An educational intervention to increase "speaking-up" behaviors in nurses and improve patient safety. *J Nurs Care Qual* *27*(2), pp. 154-160.	To investigate whether in-service training could lead nurses to speak up, thereby enhancing perceptions of collaboration AND To evaluate an intervention designed to develop speaking-up behaviors among RNs and positively affect their choice of available behavior options in situations which patient safety is in jeopardy	Educational intervention with video from leaders, 5 scenarios, discussion and development of a personal action plan and formed support groups for going forward. EDUCATION & SUPPORT	Control group of 87 nurses, 58 RNs in intervention group, from 2 similar acute care hospitals.	Speaking Up Measure and Individual List of Nurse Behaviors instrument pre and post surveys. The nurse behaviors were judged by a panel RN experts as free form answer.	Increase in both measures post intervention, no change in control group. Not clear if significant difference between control and intervention group?

Note. * Increasing speaking up behaviors were an aim of their intervention.

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interventions aimed at nurses to four, the same number that had physicians and/or medical students as their population (Table 7).

The intervention used in six of the studies was solely education, defined here as an in-service, continuing education, or classroom-based instruction on speaking up behaviors (Delisle et al., 2016; Hughes et al., 2014; Johnson & Kimsey, 2012; Kent et al., 2014; O'Connor et al., 2013; Roh et al., 2015). Other studies augmented education with simulation or support groups to encourage speaking up behaviors (Raemer et al., 2009; Sayre et al., 2012b). Results from the educational interventions varied. For example, Raemer et al. (2016) rated their education and simulation intervention as "ineffective," finding no significant difference between the intervention and control groups (p. 530). Sax et al. (2009) saw improvement in checklist use, but this effect was seen after empowering the scrub technician or nurse to require completion of the checklist before they would hand the scalpel to the surgeon. These types of mixed results were common (Table 7). The study with the clearest positive results had an intervention that was very different from the other studies. Barzello-Salazar et al. (2014) conducted a randomized controlled trial with medical students who did not receive any specific training on speaking up. The simulation exercise was manipulated by having the surgeon explicitly encourage the students to speak up or discourage them by appearing busy and telling them to "save your questions for next time" (p. 1004). In the encouraged group, 82% of students spoke up when the surgeon made a mistake, whereas in the discouraged group only 30% did (Barzallo-Salazar et al., 2014). The only difference was the attitude projected by the surgeon in the simulation (Barzallo-Salazar et al., 2014).

Other interventions incorporated leadership rounds, checklists and protocols (Ashton, 2014; Donnelly et al., 2010; McLaughlin et al., 2014; Pannick et al., 2015; Pronovost et al.,

2004). Of those only Donnelly et al. (2010) provided any outcome data, showing a decrease in Serious Safety Events (SSEs) reported after changes were implemented. The changes implemented were extensive, including error prevention training, new cause-analysis program, and multiple other restructuring and education interventions (Donnelly et al., 2010).

Instruments Used to Measure Speaking Up Behaviors

A variety of instruments were used to measure speaking up behaviors. Most measures, like the Hospital Survey on Patient Safety Culture (HSOPSC), measured the perception speaking up behaviors as part of the assessment of perceived patient safety climate or culture (Sorra et al., 2016). The HSOPSC was used in sixteen studies, though in three studies it was modified from its original format. The HSOPSC is available in Appendix B. The HSOPSC was also translated into a language other than English for ten studies. Table 8 shows those articles with modifications and translations of the HSOPSC, including what modifications, translated language and technique, and the Cronbach's α of the translation, if provided. Communication Openness, the portion of the HSOPSC that is focused on speaking up behaviors, was the scale composite of greatest interest for this literature review. It is defined by the instrument authors as the extent to which "staff freely speak up if they see something that may negatively affect a patient and feel free to question those with more authority" (Sorra et al., 2016, p. 3). When available, Cronbach's α of the communication openness subscale is provided in Table 8.

In studies of the reliability and validity of the HSOPSC, Sorra and Dyer (2010) reported a Cronbach's α of 0. 73 for the communication openness dimension, while Belgen et al. (2009) reported 0.64 and 0.58, ratings from before and after their intervention. The Cronbach's α from translations and modifications of the HSOPSC are reported in Table 8 if

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they were available. Only one study (Mayer et al., 2011) reported Cronbach's α (0.72) for communication openness that had not translated or modified the HSOPSC. For the eleven articles that reported translations and/or modifications of the HSOPSC, eight reported at least some of the reliability scores for the instrument. Six studies reported the Cronbach's α for communication openness, with results ranging from 0.67 to -0.47, though it is difficult to judge if the -0.47 was an error as the article had multiple typographical errors (Nie et al., 2013; Table 8). Only one translation and/or modification had a communication openness Cronbach's α of over 0.6 (0.67, Verbeek-Van Noord, Wagner, Van Dyck, Twisk, & De Bruijne, 2013), the lower limit of reliability suggested by the instrument authors (Sorra & Dyer, 2010).

Table 8

HSOPSC Translations and Modifications

Article	Translation and/or Modification	Reported Reliability Statistics
Bowman et al., 2013. Enculturation of unsafe attitudes and behaviors: student perceptions of safety culture.	Omitted 4 domains (26 questions) from the HSOPSC that they felt were not relevant for student population and combined the remaining survey with a local survey.	No reliability statistics reported. Did list the modification as a limitation of the study.
Burstrom et al., 2014. The patient safety culture as perceived by staff at two different emergency departments before and after introducing a flow-oriented working model with team triage and lean principles: a repeated cross-sectional study	Translated to Swedish and two dimensions added- *Information and support to patients at adverse events and Information and support to staff at adverse events*.	No reliability statistics reported. Not discussed in limitations, HSOPSC characterized as "validated and widely used." No discussion of translation except that the translation was "validated by the Swedish National Board of Health and Welfare" (p. 4).

Table 8

Cont.

Article	Translation and/or Modification	Reported Reliability Statistics
El-Jardali et al., 2014. Patient safety culture in a large teaching hospital in Riyadh: baseline assessment, comparative analysis and opportunities for improvement	Translated to Arabic, pilot tested with 20 employees who are not in the final sample. Translation adapted from a study done in Lebanon.	Reports Cronbach's Alphas for 12 composites, ranging from 0.214 to 0.892 (Table 2, p. 7). Discusses the statistics on pp. 12 & 14, including stating that the HSOPSC user's guide states that 0.6 and greater is acceptable. Discusses low scores found in other Middle East translations, from 0.4 & up. Communication Openness Cronbach's α 0.536
Hamdan and Saleem, 2013. Assessment of patient safety culture in Palestinian public hospitals	Arabic translation from the American HSOPSC version.	Cronbach's reported, from 0.86 to 0.38. Discussed in article that the low composites had been found in another Arabic translation and that the "translation of the tools needs to be improved" (p. 172). Communication Openness Cronbach's α 0.38.
Khater et al., 2015. To assess patient safety culture in Jordanian hospitals from nurses' perspective	Arabic translation used with permission from an earlier Lebanon study, same as El-Jardali et al., 2014.	Cronbach's reported between 0.41 and 0.78 for the current study. Mentions on p. 90 that studies are needed to "examine the composites of patient safety culture and other outcomes composites." Communication Openness Cronbach's α 0.46.
Nie et al., 2013. Hospital survey on patient safety culture in China	Chinese translation modified to 10 dimensions with 29 items.	Cronbach's reported between 0.75 and -0.63 (Table 2), though in discussion states they ranged between 0.40 and 0.64 (p. 5) with an overall scale score of 0.84 (p. 10). Communication Openness Cronbach's α -0.47. Unclear if this a typo, multiple in the article.
Shu et al., 2015. What does a hospital survey on patient safety reveal about patient safety culture of surgical units compared with that of other units?	Chinese translation, 2 independent groups translated it then pilot tested, they adjusted the order of some questions	Cronbach's between 0.89 and 0.26. Discussed as a limitation. Communication Openness Cronbach's 0.48

Table 8

Cont.

Article	Translation and/or Modification	Reported Reliability Statistics
Top & Tekingunduz, 2015. Patient safety culture in a Turkish public hospital: A study of nurses' perceptions about patient safety	Turkish translation by first author, verified by "an independent translator" (p. 92).	Cronbach's reported between 0.74 and 0.82 with total scale at 0.76. Communication Openness not reported separately.
Verbeek-Van Noord et al., 2013. Is culture associated with patient safety in the emergency department? A study of staff perspectives	Dutch version of scale from an earlier study.	Cronbach's reported between 0.81 and 0.47. Communication Openness Cronbach's α 0.67.
Vlayen, Hellings, Claes, Peleman, & Schrooten, 2012. A nationwide hospital survey on patient safety culture in Belgian hospitals: setting priorities at the launch of a 5-year patient safety plan	Dutch and French translations. Validated was done by "using the original validation strategy"/statistics. No discussion of translation.	Cronbach's reported between 0.57 and 0.85 for Dutch version. For French version 0.52 and 0.87. Communication Openness not reported separately
Wagner, Smits, Sorra, & Huang, 2013. Assessing patient safety culture in hospitals across countries.	Dutch and Chinese translations for use in Netherlands and Taiwan, both using forward and back translation techniques and expert panel review.	No reliability statistics reported. States validation statistics are available in cited article.

Other instruments were used in 50 studies. Many of these were locally created or more widely available instruments that were modified locally, and some were not well identified beyond statements like 'a survey was administered.' The HSOPSC was the most frequently used, with sixteen articles reporting results from HSOPSC. Variations of the Safety Attitudes Questionnaire (SAQ) was the most commonly reported other instrument with nine articles, but it was discussed as being modified in almost all uses, or only certain scales were utilized from it. A wide variety of other scales and surveys were reported in the articles, many without any discussion of reliability or validity.

Discussion

It is clear that speaking up and its synonyms are widely discussed in the literature. It is also clear that speaking up is widely believed to be a positive behavior, as there were no

articles discouraging speaking up or whistleblowing among the 187 reviewed. What authors meant when they used the phrase was less clear. The interchangeability of terms varied widely. Whistleblowing and speaking up have not been thought to be the same thing by many, and whistleblowing articles were excluded by the authors of the most recent and often cited literature review of speaking up (Okuyama et al., 2014). However, it is clear from comparing definitions and discussions that most articles from Australia and many from the United Kingdom use the terms interchangeably (Ahern & McDonald, 2002; Bolsin et al., 2011; Mansbach & Bachner, 2010). The term 'report' was also widely used, ranking fourth among synonyms for speaking up (Appendix A). But what is meant by the term "report" is often unclear as well. One source of definitions has fourteen different definitions for the verb report, including to simply "to relate or tell" and "to make a charge against (a person), as to a superior" (http://www.dictionary.com/browse/report). Clearly, "report" has a wide variety of meanings, especially in the context of patient safety and medical error. Report was used interchangeably with both speaking up and whistleblowing in many articles (Fagan et al., 2016; Jackson et al., 2014; O'Connor et al., 2013). The ambiguity of the language used requires examination of the articles further to gain an understanding of what is meant by speaking up for patient safety.

Article Sources, Types, and Focus

Most articles focused on something other than speaking up or whistleblowing. The majority of the articles were more broadly focused on patient safety or some other area of patient safety, like checklists or team training (McLaughlin et al., 2014; Wagner, Smits, Sorra, & Hijang, 2013). Speaking up was often mentioned in passing in discussion sections looking at results related to perceptions of communication between providers or as a

recommendation to improve communication (Donnelly et al., 2010; Fernandez, Tran, Johnson, & Jones, 2010). The majority of articles classified as studies were also focused on something other than speaking up or whistleblowing (Figure 3). This seems to indicate increasing speaking up behaviors is being most frequently looked at as a part of a larger issue or picture, one of many options to improve patient safety, but less frequently seen as a standalone concept or possible intervention.

The majority of the non-study articles were focused on speaking up and whistleblowing, which indicated that the healthcare community has talked a lot about speaking up in the years since *To Err is Human*, but spent less time actually studying it (Kohn et al., 2000). When the studies that did look at speaking up behaviors are reviewed, the most common studies were surveys. Most focused on participants' perceptions of patient safety and/or communication (Berland, Natvig, & Gundersen, 2008; Bump et al., 2015). The second most common were qualitative studies, which explored perceptions or experiences with speaking up (Ahern & McDonald, 2002; Aydon, Hauck, Zimmer, & Murdoch, 2016; Johnston, Arora, King, Stroman, & Darzi, 2014). Out of the 110 studies reviewed, 76 were surveys or qualitative studies, including twenty focused on speaking up. This indicates that we have data about how healthcare professionals feel about and perceive speaking up and patient safety.

In contrast, only 16 intervention studies looked at speaking up, and of those only ten had increasing speaking up behaviors as an aim (Table 7). Studies looking at the actual impact of speaking up behaviors on patient safety indicators are even rarer, with only two speaking up intervention studies reporting patient safety outcomes (Johnson & Kimsey, 2012; Pannick et al., 2015). I conclude that while speaking up is a concern in the healthcare

literature, and speaking up is being encouraged, interventions to increase speaking up are scarce.

Populations and Clinical Specialties of Interest

This literature review did not specifically target nurses, but the majority of articles were intended for or studied nurses. It might be inferred that nurses are the primary population being discussed in relation to speaking up behaviors, despite there being a clear argument that speaking up is an important behavior for all healthcare professionals (Blanco et al., 2009). Yet more interventions intended specifically for physicians and medical students were found then intended for nurses, which is puzzling in light of seeming overall focus on nurses. This seems to indicate the medical community is doing more testing of interventions to increase speaking up behaviors, even if they are not discussing it as much in the literature.

More articles are focused on the perioperative area than others, indicating a greater interest in speaking up behaviors in these areas. Errors in operating rooms (ORs) result in obvious and highly publicized errors, such as wrong site surgeries and retained surgical supplies (PSNet, June 2017). These errors led to pressure to institute measures to increase patient safety and decrease errors (Kowalczyk, 2014). Operating rooms are also known for having a steep hierarchy, with the attending surgeon at the top (Makary et al., 2006). Multiple studies have shown the unwillingness of staff to challenge attending surgeons in the OR and that surgeons frequently do not welcome being challenged (Makary et al., 2006; Rosenstein & O'Daniel, 2006; Sur, Schindler, Singh, Angelos, & Langerman, 2016). These data, coupled with the visibility of OR mistakes, may have led to a more studies in the perioperative areas than others.

Definitions and Operationalizations

Speaking up is certainly a term in widespread use, though it is not often defined or operationalized. Even with broad search terms used to conduct this literature review, 'speak up' was the most commonly used term (Appendix A). "Raise concerns" and "whistleblower" were the next most common., Speaking up as a synonym to whistleblowing in articles from both Australia and United Kingdom, which makes including whistleblowing in any reviews of speaking up crucial (Jackson et al., 2010; Kelly & Jones, 2013). The interchangeability of these two words also indicates how varied speaking up is defined and used in healthcare. Although there is some agreement among definitions that both speaking up and whistleblowing for patient safety involve raising concerns or calling attention to an issue, the details about how, when, and to whom varied widely in the literature reviewed.

Interestingly, even studies that were focused on speaking up behaviors, including those conducting interventions to increase the behavior, often failed to define speaking up. Within the 10 articles reporting on speaking up interventions, only three offered a definition for speaking up, and two of those articles reported on the same intervention (Sayre et al., 2012a, 2012b; Raemer et al., 2016). It is possible this is due to the belief that speaking up is a generally understood term in health care, like patient safety or critical care, or that it is a considered a generic communication term, like calling or paging. But before any intervention is done a clear understanding of the desired outcome should be known, and this is difficult if the desired outcome is an undefined behavior.

When speaking up was operationalized it was done so in a variety of ways with a variety of purposes (Table 6). Although tools were mentioned as being a way to operationalize speaking up, no study actually evaluated their use for this purpose, indicating

that more research is needed on existing tools in relation to speaking up behaviors. A critical issue that needs to be addressed around how we define and operationalize speaking up is whether or not action beyond the speech act is needed for it to be speaking up. Some definitions include action beyond speech, and some operationalizations required it for the participants to have been considered to have spoken up (Tables 3 and 6). Do we judge professionals to have spoken up regardless of outcome, or is speaking up contingent upon actual action and change occurring? These questions need to be addressed by any investigator prior to any study of speaking up.

Interventions to Increase Speaking Up Behaviors

The mixed results from education-only interventions need to be considered when planning speaking up interventions. It is difficult to judge if this is from the education interventions themselves being ineffective or if this is an ineffective way to teach and encourage speaking up. Interventions aimed at increasing speaking up behaviors were also often packaged with other patient safety initiatives, making it more difficult to evaluate individual interventions. The impact of creating an environment that encourages speaking up should also be considered. The most successful reported intervention did not attempt to teach speaking up behaviors at all; instead it was focused on the impact the intended audience has on speaking up. It is possible that health care has been too focused on the actual act of speaking up and has not taken into account the importance of the intended audience and their response. Multiple examples can be found in the literature where nurses are described as not speaking up even though the incident described clearly indicates the nurse voiced a concern, sometimes repeatedly (Maxfield et al., 2011; Sayre et al., 2012b). Any future interventions

need to consider the impact of the intended audience on speaking up in addition to the act itself.

Hospital Survey on Patient Safety Culture (HSOPSC)

The HSOPSC was the most frequently used scale measuring speaking up behaviors, operationalized as communication openness (Sorra et al., 2016). The low reported reliability scores call into question the validity of measuring speaking up behaviors with the communication openness scale, especially when the measure is translated or altered in any way. Even Belgen et al. (2009) in testing an English, unaltered version of the HSOPSC got a Cronbach's α of 0.58 on one trial, and a just over 0.64 on another. The problem could be the measure itself, or the problem could be the lack of understanding about what speaking up means in general, meaning people are responding to the question in very different ways. Clearly more work is needed to be sure we are even measuring perceptions of this behavior accurately.

<div align="center">

Conclusions

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Speaking up is discussed frequently in the patient safety literature. Definitions vary, and there are many more articles and studies examining beliefs and perceptions around speaking up than those reporting intervention studies to increase speaking up. Results are also mixed among intervention studies as to the effectiveness of the few available interventions (Table 7). It is possible that speaking up needs to be conceptualized as multidimensional, as it appears that it is being used as a global term for raising concern about patient care. It may be helpful to look in non-healthcare disciplines for conceptualizations and definitions that could be brought in to clarify this term. Instruments also need to be reviewed to insure reliability, as statistics indicate some may not be capturing what is wanted

(Belgen et al., 2009; Nie et al., 2013). Although it appears to be universally agreed upon that speaking up is good and desirable in healthcare, there is far less agreement as to how speaking up should be defined and operationalized.

CHAPTER 3

STUDY METHODS

Creswell's (2014) explanatory sequential mixed methods design was used to complete this study. This method utilizes analysis of quantitative data to inform qualitative data collection and analysis. The quantitative data are collected and analyzed first, followed by qualitative data collection and analysis. The quantitative results are used to plan the qualitative portion of the study by informing the sampling procedures and to help decide the types of questions to be asked (Creswell, 2014). Once both phases of data collection and analysis are complete, the researcher then conducts a third phase of interpretation, looking at "how the qualitative findings help to explain the quantitative results" (Creswell, 2014, p. 225).

Phase 1: Quantitative Data for Purposive Sampling

For this study, the quantitative portion was based on results from the Hospital Survey of Patient Safety Culture (HSOPSC) from the Agency for Healthcare Research & Quality (AHRQ; Appendix B). The HSOPSC has been administered by hospital staff since 2004 and is used by many hospitals in the United States. In 2016, data from 680 hospitals were submitted to the AHRQ Hospital Survey on Patient Safety Culture User Comparative Database in 2016 (Hospital User Comparative Database Reports, 2016; Hospital Survey on Patient Safety Culture, 2016). The HSOPSC has 42 items that measure 12 patient safety dimensions. These dimensions fall under three levels, unit, hospital, and safety outcomes.

The twelve dimensions of the HSOPSC have been reported to have Cronbach's Alpha reliability ratings between 0.62 and 0.85 in one analysis (Sorra & Dyer, 2010) and between 0.44 and 0.83 in another (Blegen, Gearhart, O'Brien, Sehgal, & Alldredge, 2009). Factor analysis loadings for the dimensions were reported to be between 0.59 and 0.92 by Sorra and Dyer (2010), while Blegen et al. (2009) reported primary loadings between 0.437 and 0.851 when the staffing dimension was excluded from analysis. The authors found the lowest factor loading for the staffing dimension and did not recommend its use as a subscale (Blegen et al., 2009).

The purpose of this study is to explore how nurses located on medical-surgical units understand the concept of speaking up for patient safety. The working definition of speaking up for patient safety being used in this study is "the raising of concerns by health care professionals for the benefit of patient safety and care quality upon recognizing or becoming aware of the risky or deficient actions of others within health care teams in a hospital environment" (Okuyama et al., 2014, p. 1). The HSOPSC dimension of interest for this study is communication openness, which is defined as "the extent to which staff will freely speak up if they see something that may negatively affect patient care, and feel free to question those with more authority," a definition which aligns closely with the working definition of speaking up (Sorra et al., 2016, p. 3). Internal reliability of the communication openness scale has varied from 0.58 (Blegen et al., 2009) to 0.73 (Sorra & Dyer, 2010). HSOPSC scores reflect answers as a percentage of subjects responding positively, with any answer of "agree" or "strongly agree" included in the percentage (Sorra & Dyer, 2010). A higher percentage indicates that staff perceives higher communication openness on their unit.

The purpose of this study is to explore the experiences of nurses working in adult medical surgical areas, not including those labeled as intensive care or operating rooms. The aims are (a) to examine how nurses are defining and operationalizing speaking up in their work, (b) to explore the situational and environmental factors that impact nurses speaking up and silence behaviors, and (c) to evaluate the emotional and psychological impacts of speaking up of nurses. Nurses on medical surgical units were chosen because most of the studies to date have focused on intensive care and perioperative areas, with only three of 187 studies reviewed focused on medical-surgical units. Medical-surgical nurses are the largest specialty group in nursing and tend to have a larger patient load and different issues than intensive care and operating room nurses (www.amsn.org). Adding the experiences of these nurses to the existing studies done with other specialties will help create a more complete understanding of speaking up for patient safety among nurses.

Following approval of the study from the UNC Institutional Review Board and the UNC Nursing Research Council, de-identified data from the 2013 and 2015 HSOPSC administered at UNC Hospitals was used to identify medical-surgical units that had reported different levels of communication openness. Fifteen units were identified at UNC Main Hospitals that fit the profile of being adult medical surgical units and were ordered from the highest communication openness score, 87%, to the lowest 41%. As the goal with a phenomenology study is a heterogeneous sample, the plan was to conduct interviews with nurses on floors with a variety of communication openness scores, as this would increase variation in their experiences with speaking up. Sampling was focused on the units with the lowest and highest levels of communication openness first, and participants were added from the units scoring in the middle range. In both studies that evaluated the HSOPSC, the

researchers reported the survey was sensitive to differences between units, a key issue for the purpose of this study. Sorra and Dyer (2010) found intraclass correlations (ICCs) between .06 to .23 at the hospital nursing unit level, indicating that 6% to 23% of differences in individual responses could be attributed to unit membership (p. 7). Blegen et al. (2009) found that the HSOPSC administered before and after an intervention had ICCs of the mean interrater reliability for communication openness of 0.3822 and 0.8722 respectively. The sensitivity to the differences between units was key to obtaining a heterogonous sample for the phenomenology interviews.

Phase 2: Qualitative Interviewing

The qualitative portion of this explanatory sequential mixed methods design took the form of a phenomenological study exploring medical surgical nurses' experiences with speaking up for patient safety. Phenomenology focuses on describing "the common meaning for several individuals of their lived experiences of a concept or phenomenon," with a basic purpose to "reduce individual experiences with a phenomenon to a description of the universal essence" (Creswell & Poth, 2018, loc. 1719). Phenomenology has its roots in early 20th century philosophy, most commonly associated with German mathematician Edmund Husserl and those who expanded on his work, primarily Heidegger, Sartre, and Merleau-Ponty (Creswell & Poth, 2018; Guest, Namey, & Mitchell, 2013; Walters, 1995). Although there are multiple perspectives within phenomenology, they do share some common philosophical assumptions. These include: focus on the study of the lived experience of people; the idea that these experiences are conscious ones; and the importance of descriptions, not explanations or analyses (Creswell & Poth, 2018). The relationship between consciousness of self and object is essential in phenomenology, often referred to as the

intentionality of consciousness (Creswell & Poth, 2018; LeVasseur, 2003). The object can be concrete or material, like an apple, or a concept or idea like grief. Whether one can touch or see an object or not, it cannot be understood separate from one's consciousness. Consciousness is always directed toward an object, and the two are always linked. "Reality of an object, then, is inextricably related to one's consciousness of it" (Creswell & Poth, 2018, loc. 1748). This is why in phenomenology the lived experience is key. The object and the consciousness are always linked, so to understand any concept or phenomenon we must study how people experience it. Although how people experience any phenomenon can and does vary, there are usually similarities between experiences. An apple, for example, may be a perceived differently on some levels for different people, (tastes good, tastes bad; healthy, too much sugar), but there are universal characteristics that are described by people in relation to their experience with an apple. These universal characteristics are referred to as the "essentials" of the experience and make up the essence of the phenomenon (Creswell & Poth, 2018). Describing this essence is the goal of phenomenology (Creswell & Poth, 2018).

For this study, descriptive, transcendental, or psychological phenomenology based on Moustakas (1994) was used. This type of phenomenology is focused on describing the experiences of the participants more so than hermeneutical or existential phenomenology, which places more emphasis on the interpretations of the researcher (Creswell & Poth, 2018; LeVasseur, 2003; Moustakas, 1994). It also attempts to "bracket" the researcher from the study, a concept where a researcher sets aside their own experiences to perceive the phenomenon naively (Moustakas, 1994). Bracketing is controversial in phenomenology as it seems to clash with the main underlying assumptions around consciousness and object, in that we can never truly separate our consciousness from anything, and therefore we are

always influenced by our past experiences and knowledge (LeVasseur, 2003). Hermeneutical phenomenology does not attempt to bracket, instead the researcher discusses their own experiences in relation to the concept under study, and acknowledge these experiences influence of analysis of the study data (Creswell & Poth, 2018). However, Moustakas (1994) and others argue that although bracketing is difficult to achieve, it is important for gaining a fresh perspective and broader understanding of a phenomenon. Therefore, bracketing was used in this study (Creswell & Poth, 2018; LeVasseur, 2003). Bracketing was done by the study author by fully exploring and describing her experiences with the phenomenon in advance of undertaking any interviewing in an attempt to recognize and set aside any preconceived ideas about the phenomenon (Creswell & Poth, 2018).

Criterion purposeful sampling, where a sample is chosen from those who have meet a predetermined criterion, was used for this study (Guest et al., 2013). The criterion for sampling was that medical-surgical nurses on one of the identified hospital units needed to have at least one experience with speaking up for patient safety. The HSOPSC data allowed for identification of units with different levels of communication openness, with the goal of a heterogeneous sample of nurses who had experience with speaking up. After obtaining approval from the University Institutional Review Board and the hospital Nursing Research Council, and gaining the permission of unit managers, a flyer was distributed by email and posted in unit breakrooms to recruit nurses for the study (Appendix C). Study participants were given a $10 gift card for their time. Suggested sample size for phenomenology studies is usually between 5 and 20, with sampling coming to an end when no new themes are emerging with new participants (Creswell & Poth, 2018). The emergence of no new themes is referred to as theoretical saturation (Creswell & Poth, 2018; Guest et al., 2013).

Data collection for this study was done in the form of in-depth interviews, conducted in person or by telephone, which were recorded and then transcribed. All participants chose to complete their interviews over the phone. Consent was obtained from all participants through the completion of the IRB-approved verbal consent form, that was reviewed verbally with the participant before the interview. Each interview opened with the two main questions used for this type of phenomenology study: "What have you experienced in terms of the phenomenon (speaking up)?" "What contexts or situations have typically influenced or affected your experiences of the phenomenon (speaking up)? "(Moustakas, 1994). Other open-ended questions were also asked to gain thorough descriptions of the participants' experiences. For example, the question, "How do you define the term speaking up?" helped elicit how nurses were defining speaking up. Appendix D contains the interview guide for this study. Any participant identifiers were stored separately from the transcripts, with original digital recordings stored on an approved and encrypted laptop and any personal information collected for possible follow up stored separately from interview recordings or transcripts in a locked cabinet.

The transcripts were then entered into ATLAS.ti 8 data management software and analyzed individually for significant statements and quotes that reflected the participant's experience with speaking up. Saldaña (2016) calls this theming, where from these statements and quotes, theoretical constructs or meaning units were identified, combining the significant statements and quotes of the participants into common themes (Creswell & Poth, 2018; Saldaña, 2016). The data was also coded using a method referred to as eclectic coding, "a purposeful and compatible combination of two or more first cycle coding methods" (Saldaña, 2016, p. 293). First cycle coding refers to the first analysis of the qualitative data, the same

level as finding significant statements in horizonalization (Creswell & Poth, 2018; Saldaña, 2016). The three codes were emotion, In Vivo, and versus. Emotion coding looks to label the emotions experienced by the participants, while In Vivo uses the participant's own language in words or short phrases as codes, similar to theming (Saldaña, 2016). Versus coding identifies binary or dichotomous terms and conflicts, which can help identify competing goals and power imbalances participants experience (Saldaña, 2016). Versus coding is useful when looking at situations with competing goals and intercultural conflict, such as a hospital setting were nurses are dealing with other healthcare professionals and often encounter conflicts between administration expectations, patient needs, and provider demands.

The codes from the eclectic coding were reviewed in a second cycle of coding using pattern coding, which assigned a category label or meta code to similarly coded data from the first cycle, similar to the theoretical constructs from Moustakas (1994) method. These categories were compared to the theoretical constructs found in the theming for similarities and differences. These common themes and categories were developed into the textural description, "or what happened," and the structural description, "how the phenomenon was experienced" (Creswell & Poth, 2018, loc. 4088; Moustakas, 1994). These two descriptions were then combined into the composite description, or "essence" of the phenomenon (Creswell & Poth, 2018). The data analysis was ongoing during the data collection period, and participants were asked if they were willing to be contacted again for possible follow up interview or to review findings with the researcher.

Reviewing findings with participants, or member checking, was one of the validation strategies used for this study. Participants who had agreed to be contacted again were asked to review the primary data analysis result, the composite description or essence of speaking

up, and provided feedback as to how well it reflected their experiences. Validation refers to the "process for assessing the accuracy of the findings as best described by the researcher and the participants" (Creswell & Poth, 2018, loc. 5177). Another method to increase validation that was used was bracketing to clarify researcher bias. (Creswell & Poth, 2018). The author was the only coder for this study, as it was completed as part of a dissertation and there were no volunteers to co-code. A second coder will be recruited before the study is sent for review prior to publication, as multiple coders are important to ensure reliability of the findings (Creswell & Poth, 2018). Although a second coder will be sought, it is not uncommon in descriptive phenomenology for the participants to be considered "co-researchers" and their review of the data to be sufficient (Moustakas, 1994, p. 111). Reliability refers to "the stability of responses to multiple coders of data sets," and is important to ensure reliable interpretation of the data (Creswell & Poth, 2018, loc. 5371). However, with descriptive phenomenology the focus is not on interpretation, it is on describing the experiences of the "co-researchers," so more importance is placed on member checking (Moustakas, 1994).

Utilizing the HSOPSC results allowed me to target my sampling to increase the chances of a heterogeneous sample of medical-surgical nurses, which is the goal in a phenomenology study. By taking the most diverse experiences with speaking up for patient safety among this population and exploring them for the common themes and emotions, I was able to gain a clear picture of what speaking up for patient safety meant to these nurses. The utilization of clear data analysis framework and analysis software, combined with member checking and bracketing of my own experiences, increased the validity of the findings. These findings are presented in Chapter 4.

CHAPTER 4

RESULTS

After receiving approval from both the Institutional Review Board and the hospital's Nursing Research Council, recruitment began in May of 2017 for interview participants for the qualitative portion of this research project. Recruitment was done through a combination of flyers posted on nursing units at the hospital and emails sent out by unit managers. Three different waves of recruitment were done. In May 2017 recruitment began on the first four units, those with highest and lowest levels of communication openness according to the results of Hospital Survey, on Patient Safety Culture (HSOPSC) (Table 9). Recruitment was increased to all 15 units in August of 2017, and in October 2017 another round of recruitment with emails and flyers was done. Between May and December, ten participants completed interviews about their experiences with speaking up for patient safety.

All interviews were completed over the phone after verbal consent was obtained. The interviews followed the interview guide found in Appendix D. Interviews lasted between 22 and 41 minutes, averaging 29 minutes. Interviews were recorded and then transcribed from the recordings by a transcription service. All transcriptions were checked against the recordings by the author before being imported into Atlas.ti 8 for data analysis.

There are at least two ways to present phenomenology study results discussed in the literature: the essence can be presented in the beginning of the paper or at the end; both are considered acceptable (Creswell & Poth, 2018; Moustakas, 1994). For this study, I have

chosen to present the essence of the phenomenon in the beginning, with the themes, verbatim examples, and synthesis of meanings presented after (Moustakas, 1994). It is also common for study authors to reflect on their own personal experiences with a phenomenon, if it relates to them (Creswell & Poth, 2018; Moustakas, 1994). My personal reflections are presented in the conclusion of this paper.

Table 9

Units of Interest for Speaking Up Study—HSOPSC Rankings

Unit Identifier	Communication Openness 2015 Ranking	C4 2015 Ranking
Unit 1	1	1
Unit 2	15	15
Unit 3	2	6
Unit 4	14	14
Unit 5	3	3
Unit 6	13	13
Unit 7	4	3
Unit 8	12	6
Unit 9	4	11
Unit 10	11	8
Unit 11	6	10
Unit 12	10	11
Unit 13	7	2
Unit 14	7	8
Unit 15	9	5

Note. 1= highest Communication Openness scores among these units in 2015; 15= lowest Communication Openness scores; C4 Refers to the Communication Openness item most related to this study.

Participants

The ten participants came from six different adult medical-surgical areas of the hospital. They were all Registered Nurses and all were female. Their work experience ranged from over twenty years in nursing to fewer than one, and they had been on their current units

from over five years to fewer than six months. Those nurses that had worked on more than one unit in their careers were free to share experiences from past units, and many chose to. The primary goal of the interviews was to gain a "description of the universal of essence" of the phenomenon of medical-surgical nurses speaking up for patient safety, so all of their experiences enriched the description (Creswell & Poth, 2018, loc. 1719).

The Phenomenon of Speaking Up

Speaking up for patient safety is viewed as an important and required part of their role as a nurse. Key aspects voiced by nurses were identifying the problem that could cause the patient harm and bringing it to the attention of someone who could address it. Providing suggestions and recommendations when nurses raised concerns was also important. Speaking up was viewed by nurses successful if the patient was safe and the nurse got the desired response from whomever they brought the problem. Perceived danger to the patient's wellbeing was the most important factor influencing these nurses' willingness to speak up. Past experiences with speaking up and the anticipated response also strongly impacted their techniques and willingness to raise concerns. Nurses did not situate speaking up in any particular environment or situation; speaking up was considered an integral part of nursing on any unit and in all situations. The primary emotions around speaking up were frustration and discomfort, though successful speaking up led to positive emotions like satisfaction and happiness.

Role of Nurse

I definitely think nurses are all on the same page. We all feel the same way. We have to speak for our patients when they can't. (Nurse J)

Speaking up was seen as a type of advocacy, and all the nurses felt this was a critical role for nurses. Advocacy has long been viewed as a core duty of nurses and is part of the

American Nurses Association (ANA) definition of nursing (FAQ, n.d.). The nurses

interviewed clearly embraced this role, to the point that if they thought they could not

advocate they should leave the profession. One nurse, who had reached a point she felt she

could no longer speak up for her patient talked about how she was thinking of leaving

nursing.

> I'm at a crossroads. Do I stay in nursing or do I get out to find a different profession? Because what the hell am I in this field for? I'm not doing good care for my patient if I'm not speaking up for them. (Nurse A)

Speaking up was described as important as the nurse was both literally the patient's voice

when the patient couldn't speak, and the patient's last line of defense from harm.

Being at the bedside was also a defining factor of the nurses' role and clearly tied to

speaking up. Nurses are with the patients for 8- to 12-hour shifts around the clock and this

time spent with the patients, along with the intimacy of the care given, leads to both feelings

of responsibility and a belief they know the patients better than other care providers. "I'm the

one at the bedside and I know what I see. I know my patient" (Nurse J). This knowing of the

patient was viewed as another aspect of the role of nurse, as was the responsibility to provide

the best possible care while on duty. The nurses often spoke of being there for the patients;

their focus was on keeping their patients' safe, another key aspect of their role as a nurse.

"Always my patients come first, their safety, their health and welfare" (Nurse E). This sense

of responsibility to keep the patient safe often led to raising concerns with providers and

management. The first step in the process of speaking up for patient safety was identifying

the problem.

Identifying the Problem

"I noticed over a progression of three nights that this patient was starting to have some edema in one of his extremities" (Nurse I)

The two themes most related to identifying the problem were nursing judgement and at the bedside. The amount of time the nurses spent with the patient at the bedside, providing hands on care, placed them in an excellent position to identify threats to safety. These threats were identified using nursing judgement, which the nurses relied on and felt improved with time in nursing. Nursing judgement was described by the nurses as a feeling, their instincts, or just "knowing."

> Just from experience, from the amount of patients you worked with, the type of patients you worked with, the conditions that they are having, they may not always have abnormal vital signs, or they may not always have the signature things that people look for, but you as a nurse, sometimes you feel they are just sicker. They are requiring more care, they are requiring attention. You feel like they will be better off with closer monitoring. (Nurse H)

Although nurses relied on their nursing judgement to identify problems, they often expressed that it was not enough of a reason to bring the problem to another healthcare professional, especially a physician. They felt they needed a concrete reason before they approached a provider, defined here as physicians or mid-level providers who are part of the medical or surgical team caring for the patient. Objective symptoms, like blood pressure issues, were acceptable reasons to contact the provider. More subjective concerns, like Nurse H described above, were not usually seen as a good enough reason.

The most common identified threats were declining patient status, inappropriate orders, need for a higher level of care/greater supervision, and inaccessibility of providers. Declining patient status was often discussed with inaccessibility of providers, as multiple

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nurses felt the providers did not respond to concerns fast enough when patients weren't doing well.

> One of the bigger issues that we have with our surgical patients is a lack of responsiveness from physicians, and that's any time, day or night. We find them to just be very hard to get in touch with, and with a changing patient condition that can be a big safety risk. (Nurse I)

This inaccessibility of providers effected almost every other problem as well, as getting orders changed or transferring patients to different levels of care required the provider's assistance. Once a problem was identified, nurses began the often-long process of bringing the problem to someone who could address it.

Bringing the Problem to Someone Who Can Address It

"I advised the physician, I said, 'Hey, I think this is too much bleeding, I really think that you should come see the patient and I think you should do something.'" (Nurse D)

The most common way to contact another healthcare professional was either by paging or going to them in person. If it was a provider, paging was most common. For management, defined here as nurses holding positions of authority higher than the staff/bedside nurse, the most common way was to go talk to them in person. Nurses felt they had to have a reason beyond nursing judgement to go to the provider about a patient. Their concerns, based on that judgment, had to have concrete evidence before many nurses felt comfortable approaching a provider. It was important to "have my rationale ready to go" as Nurse F phrased it before contacting anyone. Or, if they had doubts about raising concerns, they would start with their own management before going to a provider, usually the charge nurse. Sometimes this meant just running their reasons and concerns past the charge nurse before calling, sometimes this meant they had the charge nurse do the speaking up for them. Though many nurses did this confirmation of nursing judgement on their own, on one floor

the nurse reported they had recently been told by management and the providers that at night they were required to talk to the charge nurse before paging.

> I guess they felt like they were getting a lot of unnecessary pages overnight. And so they wanted us to confer with our charge nurses, and have the charge nurses handle everything that they could first. So to not page overnight, to avoid if at all possible. (Nurse I)

When nurses faced issues such as being discouraged from paging or no response to page, two themes emerged: time and persistence. Time was spent preparing to page by gathering support for their concerns, making the actual calls, and waiting for provider response. Sometimes there was no response at all, or a response could take anywhere from twenty minutes to over five hours. "Having to page three, or four times to get a response" was reported by Nurse I and others, with having to page more than twice a common issue. The slowness of providers to respond was also reported as an issue, as nurses often felt their patients' conditions worsened while they were waiting. As mentioned above, this delay in response was viewed by the nurses as detrimental to the patient.

The lack of responsiveness from providers led to nurses needing to be very persistent to get their patients' needs met. Repeated paging, involving the charge nurse, and working their way up the provider hierarchy were all listed as methods of persistence. Nurse C reported spending "probably like five hours" trying to get an unstable patient moved to a higher level of care while "his condition was getting worse." This lack of responsiveness was often attributed to three things; providers were busy, lacked faith in nursing judgement, or there were different opinions between nurses and physicians as to what needed to be done. Nurse H talked about how the providers are "backed up sometimes," and Nurse E mentioned how they are "in a hurry" and have "got to go scrub up for OR." Night nurses mentioned that there was usually one inexperienced provider like an intern covering "hundreds" of patients,

which multiple nurses mentioned they felt was unsafe and certainly delayed care (Nurse E).

The perceived lack of faith in nursing judgement intensified nurses' feeling that they needed a concrete reason for even contacting a provider, as discussed above. This perception also left nurses feeling as if the providers were not interested in their concerns or did not think nurses' concerns were very important. Nurse D, in talking about a past experience where she had felt her concerns were disregarded, put it this way: "It makes me feel like I'm not respected as a nurse and that my opinion doesn't matter. It makes me feel like they think I know nothing, and I know that's not true." The most common differences of opinion seemed to come in terms of level of care needed. Nurses spoke of assessing that their patients needed more monitoring than they could provide but being unable to get them moved to a higher level or get more help, like a sitter for the room. Nurse C talked about how she felt one of her patients was unsafe as "we can't monitor the patient how they need to be monitored for that type of issue," and Nurse H talked about the safety risk created when a patient needs greater care than that which the unit is staffed to handle.

> A lot of times what happens is that it causes our staff to become short because if there is really a truly inherent safety risk, we'll have to use one of our NAs to sit with the patient. Sometimes that leaves the floor with no NA. I think when you have no NA and it's just the nurses, or when you are short staffed period, I think that's a safety concern because of how aware you have to be as a nurse. How many details you have to keep in your head, how many things you have to pay attention to if you don't have that extra helper. That's a general safety issue period because you are just not going to catch as many things as you would. You are not going to be able to stay on the top of it especially through 12 hours.

But providers often appeared uninterested in these types of problems, which did lead a few nurses to speaking up to management in hopes of improving situations they felt were unsafe.

Only two nurses talked about speaking up to management beyond using management to facilitate speaking up to providers. Both of the nurses who talked about speaking up to

management had over 10 years of nursing experience, and both brought issues about how the unit operated to management. One of them felt she had been fired from one unit for speaking up about safety issues, and the other discussed how she felt her speaking up was usually ignored due to what she called "the okeydokey syndrome." "You feel like you're not believed because they don't want to hear it" (Nurse E). Both of these nurses talked about management just wanting to ignore safety issues. One of them did share a past success story where they had changed a transfer process and improved communication between services after she had spoken up about the issues she was seeing. But that same nurse had also been fired from a unit for "not fitting in" after she had brought a safety concern to her manager. That experience had now left her more focused on self-preservation and considering leaving nursing altogether.

> But if I come to you with the safety problem, then you're going to be negative at me to make me feel like, do it again, you're out of here, or they'll make it very difficult for you. It's very, very negative that they will train you to go into your corner, and if you don't get the message, you're out of here. So it makes it for like, a negative environment, and how much do you keep going to work in that kind of environment. (Nurse A)

The negative responses she had received when she had brought forth safety concerns not only discouraged her from speaking up again, they were also making her consider leaving nursing. Response, both the anticipated one and what is actually said, clearly impact speaking up behaviors. Part of the nurses' way of influencing the response they received was to provide a recommendation when speaking up.

Providing Recommendations

> *I went ahead and just tried to facilitate and speak up for the patient that it would probably be best, if they're in that gray area and they're staying there, let's go ahead and move them to ICU. (Nurse G)*

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Having a recommendation, even one as simple as requesting the provider at the bedside, was expressed as a frequent part of speaking up. Though it was mixed as to whether or not it was required. Some nurses provided a recommendation to reinforce that they had a clear understanding of the problem and their concerns should be taken seriously. Others used recommendations to clearly state what their goal was in contacting the other professional. Some nurses talked about talking to the doctor and even when directly asked for their opinion, responding with statements like "we want you to be the doctor, make these calls because it is your job" (Nurse B) and "you went to med school, I didn't and that's for you to figure out" (Nurse E). But other nurses felt having a recommendation was important, reporting making recommendations from asking for the physician to come to the bedside to letting them know "I think you need to either stitch it back up or just do something" when an incision was bleeding too much (Nurse D). So, although recommendations were common, they were not seen as required for speaking up by all participants. This made a major difference in how nurses then viewed the success of their speaking up. If they were looking for a response, such as a response to a recommendation they made, whether or not they got what they had hoped impacted how successful they viewed their speaking up.

Success Versus Failure

I raised a valid point, and there was valid action brought on that point. (Nurse I)

Success of speaking up was judged mostly in relation to the patient. If they felt the patient was safe and receiving proper care, nurses were satisfied with the outcome of their raising concerns. The other big indicator of success was response received. Primarily, nurses were looking for any valid, professional response, even if it was disagreement. Nurses spoke frequently about feeling like no one was listening. "Sometimes I feel like they are listening to

me but not really hearing what I'm saying" (Nurse E). "It's frustrating when you maybe feel like your voice isn't getting heard" (Nurse B). "Some (providers) are just nicer and willing to listen" (Nurse D). Three nurses talked about what would be classified as disruptive behavior from providers in response to their speaking up. Disruptive behavior is defined as "inappropriate conduct, whether in words or actions, that interferes with, or has the potential to interfere with, quality health care delivery" (Leape et al., 2012, p. 846, attributed to College of Physicians and Surgeons of Ontario). Two nurses reported being yelled at, and one nurse reported an instance where she saw her colleague shoved and shouted at by a provider during an emergency situation. This type of response was viewed as very unsuccessful by the nurses and made them not want to speak up. Nurse D spoke about being yelled at by providers when attempting to speak up for her patients, and when asked about how this made her feel about speaking up she stated- "I wouldn't want to. It makes me not want to. It makes me feel like I'm not respected as a nurse and that my opinion doesn't matter." However, even those nurses who talked about unsuccessful and disrespectful interactions following speaking up stated that they would not stop speaking up. They all viewed it as a key aspect of the nursing role and therefore felt they had to keep doing it for their patients if they felt it was a serious safety concern. When nurses were asked if they had ever stayed silent on an issue or given up before getting the outcome they wanted, all nurses agreed that they had. But they all also agreed that if they did give up or stay silent it was because they didn't think it was a serious enough safety issue to require them to speak up.

> If I'm going to drop an issue, it's not going to be something that's going to directly harm the patient. Like if it's something that's going to directly harm the patient or something that's unnecessary or something like that, I would speak up. (Nurse F)

For the nurses, success was defined by keeping their patients safe and getting them what they needed, preferably through respectful and professional interactions with providers or management. Being listened to and getting a response that addressed their concern contributed to nurses' feelings of success, but being ignored, disregarded, or disrespected contributed to feelings of failure.

The Emotions of Speaking Up

If it is successful you feel like happy, like you're contributing something and you're needed by the team. Then I guess if they go unsuccessful it's awkward and frustrating. (Nurse F)

Most of the emotions nurses discussed around speaking up for patient safety were negative ones (Table 10). The nurses often felt uncomfortable and intimidated when speaking up, and process of raising concerns and the responses they received frequently led to feeling frustrated and disrespected. Feeling uncomfortable speaking up was strongly related to their doubt about the validity of their claims or was related to their fears about how it would be received. The two factors of increased knowledge and experience in nursing positively impacted emotions about speaking up, leading to higher confidence and comfort with speaking up. As Nurse G discussed when she talked about how her speaking up had evolved:

> I feel like when I first started I was always really hesitant to speak up because, and I think it depends a lot on personalities too because some people are just much more aggressive, I feel like in the beginning in nursing and even like sometimes still today, I'm not 100% confident in myself all the time, so, it makes it hard to know when to speak up because I'm like, well maybe I'm just wrong, you know? But I feel like with time that really improved and with time like you recognize things faster or, you know, and just like your understanding and your comfort level is better. So, I feel like, now, a few years after graduating, I'm much more comfortable than I was then to speak up or at least to feel that confidence and that, in that mentality that like, well, if you speak up, you know, it can't ever hurt anything. So, why ever hesitate, you know? But I definitely don't feel I felt that way in the beginning of graduating in nursing school. I think in the beginning it's still so intimidating.

Table 10

Emotions around Speaking Up

Positive Emotions	Negative Emotions
Satisfaction	Frustrated
Happiness/Glad	Uncomfortable
Confidence	Disrespect
Respected	Anxious
Relief	Fear
At ease	Annoyance
Valued	Intimidated
	Irritated
	Awkward
	Passive
	Know nothing

Nurses who were more experienced and had more knowledge about that which they were speaking up were more confident about speaking up. However, if nurses' prior experiences were negative, they had more fear about speaking up, especially if the person they were speaking up to was known to respond poorly. Nurses were more willing to speak up if they had positive experiences and were more fearful if they had negative experiences. Nurse A, who had been fired from a job for speaking up at one point in her over 20 years in nursing, expressed a lot of anxiety and fear around speaking up, "I'm scared, I'm scared." Even with her fears, she did continue to speak up, but it was clearly an uncomfortable and unpleasant experience for her. Nurses who had not had negative prior experiences were much more confident in their abilities to speak up, even if they lacked Nurse A's years of nursing experience. Emotions around speaking up were clearly tied to prior experiences.

Frustration was a widely discussed emotion, mostly relating to the response, or lack of response, they received to their speaking up. Nurses felt they spent a lot of time "chasing their tail" to get someone to listen to their concerns, and also time having to "go back several

times" to get what they needed (Nurse I and Nurse J). They were also frustrated by the perceived lack of interest in their concerns among providers and management. Nurses felt if they were taking the time and energy to bring a safety concern to someone, that person should take their concern seriously and respond appropriately. When they didn't, feelings of frustration, disrespect, and unimportance were expressed. "Some of the time they think I don't know anything" (Nurse D). "Am I really an important member of the team?" (Nurse E). These nurses spent large amounts of time at the bedside, and in their role felt they developed a clear understanding of what was needed to keep the patients safe and to give the best care. When their input into that care was disregarded frustration resulted, especially if they felt their patient "got screwed" as a result (Nurse H).

Fears about speaking up were frequently related to the fear of being wrong, that "I could have a suggestion, and then they would take it and be wrong" (Nurse D). This fear was based in fear of harming the patient and fear of harming their own reputation as a nurse. Nursing judgement was questioned automatically by providers, so the stakes were high to get every call correct. This made speaking up a risk for nurses even though it was a key part of their professional role. If they were wrong, their reputation could be damaged, giving providers more reasons to doubt their nursing judgement. These events would make advocating in the future more difficult. Therefore, the decision to speak up required weighing the risk to the patient against the risk to the nurse.

Successful speaking up and feeling supported in their speaking up led to positive emotions, mostly increased confidence and happiness. Increased confidence was expressed when speaking up went well, not just in relation to speaking up but also in their assessment

skills and nursing judgement. Positive responses "build confidence" and makes the nurse "feel more a part of the team" (Nurse I).

Happiness was the other positive emotion primarily expressed, and it came mostly from feeling the patient was well cared for and safe. It also came from the satisfaction of "I feel like I did my job today," as successful speaking up or advocacy was seen as key to being an effective nurse (Nurse H). These positive emotions also helped encourage future speaking up, as it reinforced the importance and impact their advocacy could have on the patients' outcomes, along with the satisfaction of doing their job well.

External Influences on Speaking up Behaviors

I lean on the fact that I can go to my charge nurse or assistant manager, they do a lot to help us out. (Nurse J)

Although nurses expressed a commitment to speaking up for their patients in all situations they perceived to be dangerous to the patient, there were external factors that impacted both their willingness to speak up and how they went about it. The four factors that had the most impact were management culture, hierarchy, policies & protocols, and tools. These factors did not seem to change whether or not they spoke up, but how they spoke up and at times, to whom they spoke up.

Management culture, defined here as how the nursing management perceived and supported speaking up, was a major influence on speaking up behaviors. Nurses expressed increased comfort and confidence in speaking up if they felt they had management who would support them. Nurse J talked about going to her charge nurse or assistant manager with a concern before contacting a provider, and how when they supported her decision and judgement that she needs to speak up, "then I'm more confident to go to the doctor or whoever to ask for what I want." This step was viewed as a important support when they had

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fears and/or doubts about what they wanted to bring to the provider. Nurses also expressed more comfort and confidence in speaking up when it was something they were "really encouraged to do by our management," which was the case for multiple nurses (Nurse I).

When nurses felt management culture was not supportive, or even discouraged speaking up, they expressed less comfort and confidence and more frustration and fears. This was especially true for nurses who felt their management actively discouraged speaking up, whether overtly, like firing someone who spoke up, or more subtly, like just not responding to concerns. These types of management culture were found to be unhealthy, and nurses talked about wanting to leave or having left those units.

Hierarchy could be a positive or a negative. If the hierarchy supported the unit nurses and helped to back them up when they spoke up to the provider hierarchy, then it was seen as a strong positive to the nurses. Going to the charge nurse to "page the upper," was a tactic used by multiple nurses (Nurse E). The upper was a term used to describe those providers above the intern, who was often mentioned as being unwilling to page their upper themselves. Those that worked as charge nurses felt it was sometimes their responsibility to "take things over and get things going," and to "empower" the other nurses to speak up (Nurse C). Nurses went to the charge nurses as they were nurses who's experience and leadership position gave their speaking up greater weight; their nursing judgement was less likely to be questioned by the providers and their speaking up was more successful.

Hierarchy also impacted speaking up behaviors in terms of who they were speaking up to. Even charge nurses admitted they "would not feel comfortable" speaking up to attending physicians about some issues, especially issues around disruptive behavior and communication (Nurse B). Attending physicians, those who have completed all of their

training and supervise the interns and residents, are viewed as the top of the provider

hierarchy and were clearly the most intimidating providers with whom to raise concerns.

Attending physicians were seen as having the greatest knowledge and experience, and this

added to the power gradient felt between staff nurse and provider. Interns, the lowest position

in the provider hierarchy, were viewed more as equals by nurses than physicians higher up in

the hierarchy (residents, chief residents, and fellows). This meant the nurses were

comfortable contacting the intern, and it also meant that they were comfortable going above

them if they did not agree with their judgement. However, nurses viewed the attending

physician's decision as final. "If I've gone through the intern, the chief and then the

attending, and the attending is telling me, X, Y, Z, I just say, 'Okay'" (Nurse B). At that

point the outcome for the patient was "their responsibility" (Nurse D). The nurses did express

they felt the attending physicians almost always made the right call, so further speaking up

was judged to be unnecessary.

Policies and protocols impacted speaking up as they were used as support for nursing

judgement, and as a reason to say no to a provider. This was not universal, as if the providers

requested something that was against policy that the nurse felt would not harm the patient,

such as an additional lab test discussed by Nurse F, they would follow the order. But if

speaking up was viewed as a danger to the patient and they had a policy or protocol backing

them up, nurses were willing to challenge the providers, and did so in multiple situations they

shared in the interviews. Nurse F described a situation where the providers wanted her to

both change the frequency of a lab draw and increase a medication dose faster than the

protocol allowed. "The team had told me, well not the team the doctor had told me, well why

don't you adjust it by two instead, and I was like no, I'm not going to do that" (Nurse F).

Having a written policy in front of her allowed Nurse F to stand her ground and refuse an order she felt was unsafe for her patient, while still offering the providers a concrete reason for doing so.

Educational intervention tools, those that are taught as a class for speaking up, in this case CUS, TeamSTEPPS, and SBI were mentioned as having been taught, but no nurse actually described using these. The CUS tool was mentioned, but it was not described in the usual I'm Concerned, I'm Uncomfortable, this is a Safety issue manner by all (CUS Tool, May 2017). One nurse described it as "like a concern and then your reasoning and suggest a solution" (Nurse H), while another described it as "uncomfortable, this doesn't feel safe" (Nurse I). TeamSTEPPS was mentioned as having be taught by one nurse, but she did not feel it was being used at all. SBI was described as "a way to communicate person-to-person, especially if you're frustrated, if a nurse mistreated you" and as "Situation, background, and intervention" (Nurse E). Though nurses felt they could use these tools, they did not share any experiences where they had used them.

Two non-education tools were discussed, rapid response teams and multidisciplinary rounds. Multidisciplinary rounds were not viewed as effective for nurses to speak up. Nurses described them as "the biggest waste of time ever" and felt their input was not valued by the other participants (Nurse E). They were also stated that rounds took the nurse away from the bedside at critical times in the AM when nurses had a great deal of work to accomplish. Although the other tools mentioned were not seen as effective, Rapid Response Teams (RRTs) were viewed as a very positive and effective tool, for both the patients and to help nurses speak up.

> The rapid response team, they are always encouraging like the nurses to like call them because they are very good in between person to speak with the doctors, and kinda of

like give them some recommendations and stuff like that. I feel very encouraged to speak up for whatever it might be. (Nurse C)

Nurses felt they could call the RRT whenever they needed to and the team would take their concerns seriously. They also felt the providers accepted the RRT judgement more readily, as Nurse C described above. This often led to faster interventions for the patient the nurses felt were needed. Another response team, the Behavior Response Team, was described as less helpful, as the nurses felt the Behavior team did not take their concerns seriously and therefore were unwilling to help with the situation. But the nurses made it clear the RRT was viewed as a valuable tool for speaking up and to keep the patients safe.

All of these factors impacted the nurses' experiences with speaking up, and their confidence and willingness to continue to raise concerns. Those nurses who reported perceptions that they were that increased feelings of being encouraged to speak up were positive management culture, supportive hierarchy, policies and protocols, and RRTs. Negative or dismissive management culture, steeper hierarchy, and ineffective tools had a negative or no impact on speaking up behaviors.

Defining Speaking Up for Patient Safety

At each interview, the nurses were asked to share how they defined speaking up for patient safety. Each nurse gave a definition, from a few words to almost a paragraph (Table 11). These definitions all required the nurse to bring the patient to someone who could address it, but they did not all include making suggestions or require action to be done as part of speaking up. Only some nurses indicated this was required of speaking up, others indicated identifying the problem and bring it to the attention of a provider was enough to define speaking up. When they described their experiences with the phenomenon of speaking up, the outcome for the patient and for the nurse was clearly important. Speaking up was

done with a purpose and an outcome in mind, from bringing the provider to the bedside to getting the patient moved to a higher level of care. These definitions and those pulled from the Chapter 2 literature review will be analyzed in Chapter 5.

Table 11

Definitions from Interviews

It's means going, almost challenging what their plan is or making a suggestion that differs from their plan of care to something that may suit the patient better when you speak and you have a concern about the patient and don't get your needs addressed in a timely manner, having to try to reach out to the provider again to try to get your needs addressed. (Nurse D)	Well, what I feel like is that if you have—this should be more objective, but just be like, I see this is a problem. These would be my suggestions, describe the problem, what your suggestions would be, and then on management side, they say, "Okay. Name, received your suggestions. Thank you very much. Appreciate your concern, we'd be looking into it." Then they on their part decide what they can, they can't, and then they get back with you, and say, "Well, we—I've checked with so and so who would be able to address that problem, and at this time we feel like, this is—and then they gave the answer to that. That to me is a healthy communication closed loop, because I get to tell them, I get suggestions, they give me back, I followed up on it. It was addressed, and this is where we're going to be at least right now where we are with our budget, and what we can do, that's like being with a healthy close loop. And no one is talking about—no one is negative in it, no one's—it's—and so then that would just like a free-flowing communication system. (Nurse A)
So speaking up is having the confidence to speak up, relay the information in accurate manner, and I guess present the issue at hand and what we want to have done. (Nurse E)	It means that if something is going on with your patient, be it assessment, be it localization of the patient or whatever else, and something is out of the ordinary or different, then you need to alert somebody of that, and do some interventions. Especially if it's going to be harmful or something serious that could end up hurting the patient, or have them decline, go into sepsis or whatever it may be. (Nurse B)
you get an order for something and you don't think it's right or doesn't apply to that patient or maybe there is an error or just anything using like nursing judgement to question orders and then putting that up to the practitioner . . . questioning anything that doesn't seem right. (Nurse F)	maybe, maybe challenging the doctors. (Nurse C)

Table 11

Cont.

you are concerned about something and you express why you are concerned and you like say a solution, or ask the doctor something, and they have a different solution, or you just address, you talk to the doctor, you send them the page like, please call back about XYZ. (Nurse H)	When you see something that is endangering the patient or in any way putting them in harm's risk; that you would be willing to speak up either to the patient, to the family, to the team or to like your fellow co-workers about what's going on and then how it's putting the patient at risk of harm and how we could go about fixing the problem. (Nurse G)
To me, it makes me think of like, the CUS words. Uncomfortable, this doesn't feel safe, my role as an advocate for the patient if something makes me uncomfortable that it's my responsibility to communicate that to the physician. (Nurse I)	just means like advocating for my patients. Like advocating and making sure that they get like I said, the best they can, they get what that they need. Sometimes it's very literal because like I said my patients can't always talk for themselves. So it can be very literal in my head but just speak out for them, to speak for them, to say what they need. (Nurse J)

Conclusions

When I undertook this project, I attempted to bracket my personal experiences with speaking up by examining and identifying my own beliefs about this phenomenon, a technique discussed in Chapter 4. I could only think of a few examples from my ten-year career as a hospital unit nurse. For example, I had to call a physician over a dangerous medication order when I worked pediatrics; another time I paged for a provider to come to the bedside as my patient was actively seizing. I had a narrower view of speaking up for patient safety than the nurses I interviewed presented, as the situations they described had certainly occurred during my hospital career as well. I also considered speaking up to always be a challenge, disagreeing with the physician. But nurses expressed speaking up as sometimes a challenge, sometimes just getting information to someone who needed it. The descriptions that emerged—that nurses must speak up, that it is so important to their professional identity that if they felt they could not do they should leave their unit or nursing altogether—raises important questions about how we approach interventions to encourage

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speaking up for patient safety. These nurses described that they were speaking up and that they understood the critical nature of doing so. But if nurses are already raising concerns, is the issue we need to address increasing speaking up or increasing listening?

CHAPTER 5

CONCLUSIONS

Speaking up for patient safety is clearly a concept of interest in health care and was viewed as a positive behavior throughout the literature and by the participants in this study. However, speaking up means different things to different people, and the lack of clarity about its meaning makes it difficult to create and implement effective interventions to promote it. Additionally, the research and discussion around speaking up to date has been one-sided, examining the speaker but not the intended audience, placing all the responsibility on the individual speaking up. In this conclusion, I will offer a definition for speaking up for patient safety and discuss how we need to expand the language of speaking up beyond that singular phrase. I will also examine what the data we have indicates about speaking up, the current tools we have available for speaking up and the measurement of speaking up behaviors. I will also discuss factors that need to be considered before further intervention studies are undertaken, the implications for practice and research, and limitations of this work.

Defining Speaking Up for Patient Safety

Twenty-five definitions of speaking up and related terms were extracted from the literature, and ten definitions were provided by study participants (Tables 3, 4, 5, and 10). There were two common themes; raising concerns about patient safety and bringing it to the attention of someone with the power to intervene. Other aspects, such as when and how, varied between definitions. Whether or not speaking up ended at the speech act itself or

required actual action beyond speech also varied between definitions. Is it fair to say speaking up did not occur if action did not result from it? As multiple authors have categorized unsuccessful speaking up speech acts as silence, it does indicate some sources believe that speaking up only occurs in the presence of action (Maxfield et al., 2010; Sayre et al., 2012b). But to define speaking up this way is an oversimplification. Speaking up is a type of communication, and, as such, it is not solely within the power of the person speaking as to how successful the communication can be. Communication requires both a sender (speaker) and a receiver (listener) to be successful (Dayton & Henriksen, 2007). If the sender is completely silent, they can be held responsible for the failure of communication. But if the sender does speak up, the listener is now part of the communication, and must be taken into account when evaluating the success or failure of that communication. A lack of action is not the same as a lack of speech, and that distinction needs to be made clear in the language around speaking up. Holding the speaker solely responsible for the communication implies speaking up is an individual behavior—something that does not require anyone else to determine the outcome. This is appropriate if speaking up is defined to just include the speech act, whether the professional spoke up at all or remained silent. But forms of speaking up that are done to get input and possibly action from someone else should not be viewed as an individual act.

The broad definition of the term "speaking up" is also problematic. Two hundred and twenty-one synonyms were found for speaking up in the literature review; the top 15 most frequently used are shown in Appendix A. Authors used everything from whistleblowing to the media to conversations in the operating room as synonymous with speaking up, and the nurses interviewed in this study described speaking up in a variety of ways. These included

situations such as disagreeing with a medication order to discussing computer issues with management (Barzallo-Salazar et al., 2014; Kelly & Jones, 2013). All these types of speaking up have value, and there are good arguments that all of them contribute to patient safety. However, the definitions vary and need to be defined and conceptualized more discretely.

It is beyond the scope of this dissertation to identify and offer definitions for all types of speaking up behaviors in health care. That will require future research into what distinguishes one type from another and how best to define and conceptualize them. But a definition for speaking up for patient safety in its broad form is possible based on the definitions pulled from the literature and those offered by study participants. Adapted from Law and Chan (2015), which they attribute to Sayre et al. (2012b), I define speaking up for patient safety as *A healthcare professional identifying a concern that might impact patient safety and using his or her voice to raise the concern to someone with the power to address it.* This definition does not require a recommendation or action for speaking up, and therefore is an individual action solely in the control of the speaker. However, the type of speaking up that requires action, along with other speech acts like whistleblowing to an external agency, are types of speaking up, and the expansiveness of this definition allows them to be included.

Speaking up for patient safety is an important behavior and should be encouraged for all healthcare providers (Blanco et al., 2009). But forms of speaking up that require action to be successful, where the provider is challenging the decisions of another provider and advocating to change the plan and outcome for a patient, go beyond speaking up and should be classified separately. To differentiate the types of speaking up it could be helpful to look outside of health care, possibly to areas of study like organizational communication, which "focuses on the role of messages, media, meaning, and symbolic activity in constituting and

shaping organizational processes" (Putnam, Woo, & Banghart, 2017, paragraph 1). Although

work needs to be done to move concepts from organizational communication into health

care, the research done into concepts like employee voice and organizational dissent could be

helpful in establishing clear definitions for speaking up behaviors. Parallels can be drawn

between speaking up for patient safety and employee voice, defined as "actively and

constructively trying to improve conditions through discussing problems with a supervisor or

coworkers, taking action to solve problems, suggesting solutions, seeking help from an

outside agency like a union or whistle-blowing" (Kassing, 2011, p. 32). Like the broad

definition of speaking up presented above, employee voice includes other speaking up

behaviors, like whistleblowing, "the disclosure by organization members (former and

current) of illegal, immoral, or illegitimate practices under the control of their employers, to

persons or organizations that may be able to effect action" (Near & Miceli, 1985, p. 525.

Organizational dissent, "expressing disagreement or contradictory opinions about

organizational practices, policies and operations" could be useful in defining speaking up for

patient safety that requires challenging others' decisions and attempting to change the plan of

care for the patient (Kassing, 2011, p. 32; attributed to Kassing, 1998, p. 183).

Bringing the concept of dissent into healthcare is critical if we want to empower

health care professionals to actually challenge each other when they believe the patient's

well-being is at risk. Nurses are taught to speak up for and protect their patients from harm;

they consider it a key aspect of their professional role (Lyndon, 2008; Sundqvist & Carlsson,

2013; Szymczak, 2016). But in the current health care environment, nurses express

frustration with how difficult it is challenge providers for what they feel their patients need,

to the point some have indicated they stopped trying (Lyndon et al., 2012). What is needed to

improve patient safety is the acceptance of the idea that all members of the team should be able to express disagreement, and other members need to listen and take their concerns seriously.

What is Known

Nurses speak up. Although some studies indicate a minority of nurses (12% and 34%; Lyndon et al., 2012; Black, 2011, respectively) do not speak up when they see serious safety issues, all studies find the majority of nurses do speak up to protect their patients (Black, 2011; Lyndon et al., 2012; Schwappach & Gehring, 2014; Sundqvist & Carlsson, 2013; Szymczak, 2016). But we also know that speaking up is often unsuccessful; nurses described that they did not get the action or change they were looking for and frequently felt others were not interested in what they have to say (Black, 2011; Garon, 2012; Lyndon et al., 2014). Nurses define patient safety issues quite broadly, from staffing to errors in medication orders (Garon, 2012; Szymczak, 2016). Speaking up is often viewed as an individual act, with all the responsibility for success or failure placed on the speaker (Maxfield et al., 2011). Silence and unsuccessful speaking up are viewed by some as the same issue, which contributes to a lack of clarity in both defining and operationalizing speaking up (Maxfield et al., 2011; Sayre et al., 2012). Nurses view their primary role to be "there for my patients and to do whatever it is that's best for them to make sure they get what they need" (Nurse J). Speaking up that is successful and well received empowers nurses to keep speaking up and increases their confidence in their knowledge and nursing judgement (Aydon, Hauck, Zimmer, & Murdoch, 2016; Garon, 2012). Speaking up that is poorly received or unsuccessful has the opposite effect and increases fears and frustrations around speaking up (Garon, 2012; Schwappach & Gehring, 2014). More knowledge and experience increase willingness to speak up, with new

nurses and students expressing a great deal of discomfort with speaking up (Aydon et al., 2016; Lyndon et al., 2012).

There are multiple studies presenting robust data as to how nurses perceive speaking up, including the facilitators and barriers as described above (Aydon et al., 2016; Black, 2011; Garon, 2012; Lyndon et al., 2012; Schwappach & Gehring, 2014; Szymczak, 2016). These data can provide a good basis to examine what interventions and further research is needed to increase speaking up behaviors in health care.

Clinical Tools for Speaking Up

A few clinical tools for speaking up were discussed in the literature review, and one was used for the study, but they all showed mixed results at best, and were mostly used as part of a larger safety program (Table 7). The main clinical tool mentioned as being taught in both the literature review articles and the study, CUS (Concerned, Uncomfortable, Safety Issue), did not appear to be actually used in practice (CUS Tool, May 2017). As have I discussed in previous Chapters, the literature review and study found no evidence that supported its effectiveness in promoting speaking up. CUS also puts all of the responsibility on the speaker, as there are no instructions or requirements for the listener at all (CUS Tool, May 2017). The Two-Challenge Rule, which is adapted from aviation's Crew Resource Management (CRM), was found to be effective to increase residents speaking up in simulations (Pian-Smith et al., 2009), but was found to be ineffective for increasing speaking up behaviors with anesthesiologists in simulations by Raemer et al. (2016). The Two-Challenge Rule has advantages over CUS in that it is simple, (repeat your concern twice), direct (to the person your concern is with) and requires an outcome to be reached after those two challenges that satisfies the challenger or involving a third party, requiring the listener to

address the speaker's concerns before moving forward with care (Pian-Smith et al., 2009).

More research is needed on clinical tools to increase speaking up behaviors, as no tool was

found in this review have more than mixed effectiveness, nor were there any studies found

that looked at these tools as a standalone intervention in real clinical situations.

Measurements of Speaking Up

The main instrument used to evaluate speaking up behaviors (Communication

Openness subscale) was the Hospital Survey of Patient Safety Culture (HSOPSC). The low

Cronbach α's reported for the Communication Openness composite indicate a lack of

reliability (Table 8). The lack of clarity around meaning and usage of the term speaking up

could account for at least some of the reliability issue. It is also important to note that this

scale only evaluates one side of communication openness, as there are no items that ask

about the listener or receiver receptiveness. Adding items to the scale that ask questions like

"Those in positions of greater authority listen and respond appropriately when I speak up," or

"Everyone's input is listened to and valued on our unit when it comes to patient safety" could

help give a more thorough measurement of communication openness. As current constructed,

results from the HSOPSC Communication Openness composite should be interpreted

cautiously, especially if the scale is translated or altered in anyway (Table 8).

Implications for Practice and Future Research

There are significant data on exploring speaking up from the speaker's viewpoint;

there are limited data on speaking up communications from the receiver's viewpoint. The

articles and studies found in the literature review were overwhelmingly focused on the

speaker; the importance of them speaking up, examining how they spoke up, feelings and

issues around their speaking up, and suggestions to make their speaking up more successful

(Appendix A). Only two articles looked at speaking up in relation to the listener or intended audience. One asked speakers about how they perceived their speaking up was received (Lyndon et al., 2014), and the other article was the Barzallo-Salzar et al. (2014) study of the impact of surgeon encouragement of speaking up behaviors on medical students speaking up when they saw an error in simulated surgery. That study had the most significant results of the intervention studies, as medical students spoke up over twice as much in the encouraged group (82%) versus the discouraged group (30%) (Barzallo-Salzar et al., 2014).

The fact that the most effective intervention to increase speaking up behaviors was not aimed at the speaker at all indicates that past interventions may have been aimed at the wrong part of the communication or failed to identify that speaking up is not always an individual act. Multiple studies, including the one presented in chapter 4, found that nurses speak up for patient safety (Lyndon et al., 2012; Schwappach & Gehring, 2014). Multiple studies have also found that nurses report difficulty with getting their intended audience to listen and respond to their concerns (Black, 2011; Garon, 2012; Lyndon et al., 2014). Going forward it will be important to explore the reasons for these issues if interventions are to be effective in increasing speaking up that leads to better outcomes for patients.

One issue that should be examined is why nurses report so much difficulty with contacting providers (Lyndon et al., 2014). Is this an issue with the way we are communicating (e.g., paging systems), or is it more an issue with the responsiveness of the audience? If the issue is with the providers, what is causing it? The other issue that needs to be examined from the provider view is how seriously they take nurses' concerns. Many nurses in both the literature reviewed and the interviews felt that physicians doubted their nursing judgement and therefore did not take their concerns seriously (Lyndon et al., 2014;

Szymczak, 2016). Studies that have examined teamwork and communication have found that the way physicians view good teamwork with nurses is discrepant from the way nurses view it. Makary et al. (2006) reported that nurses described good teamwork as "having their input respected," while physicians described good collaboration as "having nurses who anticipate their needs and follow instructions" (p. 748). Understanding the expectations and assumptions of the receiver of the speaking up is critical to designing effective interventions. Qualitative or survey studies with providers about how they respond to speaking up attempts could be extremely informative in terms of the issues they encounter that interfere with communication.

Future research also needs to examine management issues with speaking up, as nurses report unresponsive management as often as they report unresponsive physicians. Some patient safety issues nurses encounter, such as inadequate staffing, have to be taken to management if nurses want to see change, but both the literature and interviews indicate nurses often feel management is uninterested and unresponsive to their concerns (Garon, 2012). This needs to be examined from the receiver side as well. If hospital administrations are ignoring patient safety issues that is an issue that needs to be brought to light and addressed, or it may just be that management needs to communicate better overall with unit nurses. But with many nurses currently reporting they feel it is pointless to speak up to management as "nothing ever changes," more research is needed in this area (Black, 2011; Morrow et al., 2016).

Limitations

One of the goals of the study done was to look at nurses' views on speaking up from units with reported high and low levels of communication openness, to both get a

heterogeneous sample, and to see if differences emerged among those populations. However, no participants were employed on the units with higher reported communication openness levels, so this comparison was not possible. Recruitment began and continued throughout the study on the highest rated units, but no nurses volunteered to participate from these units. A larger study that includes nurses from units with high levels of communication openness could help identify differences in the environment and speaking up behaviors among those that view their speaking up as successful or not. A change in recruitment techniques may have led to an increase in sample size as well; it is possible more in-person appeals or offering the nurses a chance to submit their experiences in writing instead of through an interview could have increased participation. The small sample size also prevented me from identifying more specifically the units' communication openness levels, as I do believe it would have made it too easy to identify study participants if this information were included. A larger study, across multiple hospitals, could help increase our understanding of the issues around speaking up without endangering participant anonymity.

The use of the search term "patient safety" in all searches could have impacted the articles returned, especially in light of the broad use of the term speaking up that was found in the study and literature review. The goal was to examine speaking up in light of a perceived immediate threat to patient safety that needed to be addressed, but the study brought to light that many nurses perceive immediate threats to patient safety to include a patient's need for more supervision or care and staffing issues. This further points out the need for more discrete definitions and language around speaking up, as it is possible articles were not included that could have been due to the use of "patient safety" in the search.

It is clear more research is needed to better define and distinguish speaking up behaviors, along with work to increase our understanding of listening and speaking up. The one-sided nature of research to date calls into question the idea that we need more speaking up, especially in light of all the studies indicating the majority nurses are speaking up (Black, 2011; Lyndon et al., 2012; Schwappach & Gehring, 2014; Sundqvist & Carlsson, 2013; Szymczak, 2016). It is possible that the real issue with speaking up for patient safety lies with the listener and how they respond to the concerns raised.

FIFTEEN MOST FREQUENTLY USED SYNONYMS FOR SPEAKING UP

15 Most Frequently Used Synonyms for Speaking Up

Synonym	Frequency
Speak Up	118
Raise Concern	59
Whistleblower	52
Report	45
Question	43
Voice Concern	42
Advocate	37
Express Concern	36
Speak Out	34
Ask Question	30
Challenge	28
Report Concern	26
Voice	25
Communication Openness	19
Complain	14

HOSPITAL SURVEY ON PATIENT SAFETY

Hospital Survey on Patient Safety

Instructions

This survey asks for your opinions about patient safety issues, medical error, and event reporting in your hospital and will take about 10 to 15 minutes to complete.

If you do not wish to answer a question, or if a question does not apply to you, you may leave your answer blank.

- An **"*event*"** is defined as any type of error, mistake, incident, accident, or deviation, regardless of whether or not it results in patient harm.

- **"*Patient safety*"** is defined as the avoidance and prevention of patient injuries or adverse events resulting from the processes of health care delivery.

SECTION A: Your Work Area/Unit
In this survey, think of your "unit" as the work area, department, or clinical area of the hospital where you spend *most* of your work time or provide *most* of your clinical services.

What is your primary work area or unit in this hospital? Select ONE answer.

- ☐ a. Many different hospital units/No specific unit

☐ b. Medicine (non-surgical)	☐ h. Psychiatry/mental health	☐ n. Other, please specify:
☐ c. Surgery	☐ i. Rehabilitation	
☐ d. Obstetrics	☐ j. Pharmacy	
☐ e. Pediatrics	☐ k. Laboratory	
☐ f. Emergency department	☐ l. Radiology	
☐ g. Intensive care unit (any type)	☐ m. Anesthesiology	

Please indicate your agreement or disagreement with the following statements about your work area/unit.

Think about your hospital work area/unit…	Strongly Disagree ▼	Disagree ▼	Neither ▼	Agree ▼	Strongly Agree ▼
1. People support one another in this unit	☐1	☐2	☐3	☐4	☐5
2. We have enough staff to handle the workload	☐1	☐2	☐3	☐4	☐5
3. When a lot of work needs to be done quickly, we work together as a team to get the work done	☐1	☐2	☐3	☐4	☐5
4. In this unit, people treat each other with respect	☐1	☐2	☐3	☐4	☐5
5. Staff in this unit work longer hours than is best for patient care	☐1	☐2	☐3	☐4	☐5

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SECTION A: Your Work Area/Unit (continued)

Think about your hospital work area/unit...	Strongly Disagree ▼	Disagree ▼	Neither ▼	Agree ▼	Strongly Agree ▼
6. We are actively doing things to improve patient safety	☐1	☐2	☐3	☐4	☐5
7. We use more agency/temporary staff than is best for patient care	☐1	☐2	☐3	☐4	☐5
8. Staff feel like their mistakes are held against them	☐1	☐2	☐3	☐4	☐5
9. Mistakes have led to positive changes here	☐1	☐2	☐3	☐4	☐5
10. It is just by chance that more serious mistakes don't happen around here	☐1	☐2	☐3	☐4	☐5
11. When one area in this unit gets really busy, others help out	☐1	☐2	☐3	☐4	☐5
12. When an event is reported, it feels like the person is being written up, not the problem	☐1	☐2	☐3	☐4	☐5
13. After we make changes to improve patient safety, we evaluate their effectiveness	☐1	☐2	☐3	☐4	☐5
14. We work in "crisis mode" trying to do too much, too quickly	☐1	☐2	☐3	☐4	☐5
15. Patient safety is never sacrificed to get more work done	☐1	☐2	☐3	☐4	☐5
16. Staff worry that mistakes they make are kept in their personnel file	☐1	☐2	☐3	☐4	☐5
17. We have patient safety problems in this unit	☐1	☐2	☐3	☐4	☐5
18. Our procedures and systems are good at preventing errors from happening	☐1	☐2	☐3	☐4	☐5

SECTION B: Your Supervisor/Manager

Please indicate your agreement or disagreement with the following statements about your immediate supervisor/manager or person to whom you directly report.

	Strongly Disagree ▼	Disagree ▼	Neither ▼	Agree ▼	Strongly Agree ▼
1. My supervisor/manager says a good word when he/she sees a job done according to established patient safety procedures	☐1	☐2	☐3	☐4	☐5
2. My supervisor/manager seriously considers staff suggestions for improving patient safety	☐1	☐2	☐3	☐4	☐5
3. Whenever pressure builds up, my supervisor/manager wants us to work faster, even if it means taking shortcuts	☐1	☐2	☐3	☐4	☐5
4. My supervisor/manager overlooks patient safety problems that happen over and over	☐1	☐2	☐3	☐4	☐5

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SECTION C: Communications

How often do the following things happen in your work area/unit?

Think about your hospital work area/unit...	Never	Rarely	Some-times	Most of the time	Always
1. We are given feedback about changes put into place based on event reports	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
2. Staff will freely speak up if they see something that may negatively affect patient care	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
3. We are informed about errors that happen in this unit	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
4. Staff feel free to question the decisions or actions of those with more authority	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
5. In this unit, we discuss ways to prevent errors from happening again	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
6. Staff are afraid to ask questions when something does not seem right	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$

SECTION D: Frequency of Events Reported

In your hospital work area/unit, when the following mistakes happen, *how often are they reported?*

	Never	Rarely	Some-times	Most of the time	Always
1. When a mistake is made, but is *caught and corrected before affecting the patient*, how often is this reported?	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
2. When a mistake is made, but has *no potential to harm the patient*, how often is this reported?	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
3. When a mistake is made that *could harm the patient*, but does not, how often is this reported?	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$

SECTION E: Patient Safety Grade

Please give your work area/unit in this hospital an overall grade on patient safety.

$\square$	$\square$	$\square$	$\square$	$\square$
A	**B**	**C**	**D**	**E**
Excellent	Very Good	Acceptable	Poor	Failing

SECTION F: Your Hospital

Please indicate your agreement or disagreement with the following statements about your hospital.

Think about your hospital...	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1. Hospital management provides a work climate that promotes patient safety	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
2. Hospital units do not coordinate well with each other	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
3. Things "fall between the cracks" when transferring patients from one unit to another	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
4. There is good cooperation among hospital units that need to work together	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$

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SECTION F: Your Hospital (continued)

Think about your hospital...

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
5. Important patient care information is often lost during shift changes	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
6. It is often unpleasant to work with staff from other hospital units	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
7. Problems often occur in the exchange of information across hospital units..	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
8. The actions of hospital management show that patient safety is a top priority	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
9. Hospital management seems interested in patient safety only after an adverse event happens..	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
10. Hospital units work well together to provide the best care for patients	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
11. Shift changes are problematic for patients in this hospital.........................	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$

SECTION G: Number of Events Reported

In the past 12 months, how many event reports have you filled out and submitted?

$\square$ a. No event reports $\square$ d. 6 to 10 event reports

$\square$ b. 1 to 2 event reports $\square$ e. 11 to 20 event reports

$\square$ c. 3 to 5 event reports $\square$ f. 21 event reports or more

SECTION H: Background Information

This information will help in the analysis of the survey results.

1. How long have you worked in this hospital?

$\square$ a. Less than 1 year $\square$ d. 11 to 15 years

$\square$ b. 1 to 5 years $\square$ e. 16 to 20 years

$\square$ c. 6 to 10 years $\square$ f. 21 years or more

2. How long have you worked in your current hospital work area/unit?

$\square$ a. Less than 1 year $\square$ d. 11 to 15 years

$\square$ b. 1 to 5 years $\square$ e. 16 to 20 years

$\square$ c. 6 to 10 years $\square$ f. 21 years or more

3. Typically, how many hours per week do you work in this hospital?

$\square$ a. Less than 20 hours per week $\square$ d. 60 to 79 hours per week

$\square$ b. 20 to 39 hours per week $\square$ e. 80 to 99 hours per week

$\square$ c. 40 to 59 hours per week $\square$ f. 100 hours per week or more

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4. What is your staff position in this hospital? Select ONE answer that best describes your staff position.

☐ a. Registered Nurse   ☐ j. Respiratory Therapist

☐ b. Physician Assistant/Nurse Practitioner   ☐ k. Physical, Occupational, or Speech Therapist

☐ c. LVN/LPN   ☐ l. Technician (e.g., EKG, Lab, Radiology)

☐ d. Patient Care Asst/Hospital Aide/Care Partner   ☐ m. Administration/Management

☐ e. Attending/Staff Physician   ☐ n. Other, please specify:

☐ f. Resident Physician/Physician in Training

☐ g. Pharmacist

☐ h. Dietician

☐ i. Unit Assistant/Clerk/Secretary

5. In your staff position, do you typically have direct interaction or contact with patients?

☐ a. YES, I typically have direct interaction or contact with patients.

☐ b. NO, I typically do NOT have direct interaction or contact with patients.

6. How long have you worked in your current specialty or profession?

☐ a. Less than 1 year   ☐ d. 11 to 15 years

☐ b. 1 to 5 years   ☐ e. 16 to 20 years

☐ c. 6 to 10 years   ☐ f. 21 years or more

SECTION I: Your Comments

Please feel free to write any comments about patient safety, error, or event reporting in your hospital.

THANK YOU FOR COMPLETING THIS SURVEY.

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Hospital Survey on Patient Safety Culture: Composites and Items

In this document, the items in the *Hospital Survey on Patient Safety Culture* are grouped according to the safety culture composites they are intended to measure. The item's survey location is shown to the left of each item. Negatively worded items are indicated.

1. Teamwork Within Units

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree)

A1.   People support one another in this unit.
A3.   When a lot of work needs to be done quickly, we work together as a team to get the work done.
A4.   In this unit, people treat each other with respect.
A11. When one area in this unit gets really busy, others help out.

2. Supervisor/Manager Expectations & Actions Promoting Patient Safety[1]

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree)

B1.   My supervisor/manager says a good word when he/she sees a job done according to established patient safety procedures.
B2.   My supervisor/manager seriously considers staff suggestions for improving patient safety.
B3.   Whenever pressure builds up, my supervisor/manager wants us to work faster, even if it means taking shortcuts. (negatively worded)
B4.   My supervisor/manager overlooks patient safety problems that happen over and over. (negatively worded)

3. Organizational Learning—Continuous Improvement

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree)

A6.   We are actively doing things to improve patient safety.
A9.   Mistakes have led to positive changes here.
A13. After we make changes to improve patient safety, we evaluate their effectiveness.

4. Management Support for Patient Safety

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree)

F1.   Hospital management provides a work climate that promotes patient safety.
F8.   The actions of hospital management show that patient safety is a top priority.
F9.   Hospital management seems interested in patient safety only after an adverse event happens. (negatively worded)

NOTE: Negatively worded questions should be reverse coded when calculating percent "positive" response, means, and composites.

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[1] Adapted from Zohar D. A group-level model of safety climate: testing the effect of group climate on microaccidents in manufacturing jobs. J Appl Psychol 2000;85(4):587-96. http://psycnet.apa.org/journals/apl/85/4/587.html. Accessed January 15, 2015.

5. Overall Perceptions of Patient Safety

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree)

- A15. Patient safety is never sacrificed to get more work done.
- A18. Our procedures and systems are good at preventing errors from happening.
- A10. It is just by chance that more serious mistakes don't happen around here. (negatively worded)
- A17. We have patient safety problems in this unit. (negatively worded)

6. Feedback & Communication About Error

(Never, Rarely, Sometimes, Most of the time, Always)

- C1. We are given feedback about changes put into place based on event reports.
- C3. We are informed about errors that happen in this unit.
- C5. In this unit, we discuss ways to prevent errors from happening again.

7. Communication Openness

(Never, Rarely, Sometimes, Most of the time, Always)

- C2. Staff will freely speak up if they see something that may negatively affect patient care.
- C4. Staff feel free to question the decisions or actions of those with more authority.
- C6. Staff are afraid to ask questions when something does not seem right. (negatively worded)

8. Frequency of Events Reported

(Never, Rarely, Sometimes, Most of the time, Always)

- D1. When a mistake is made, but is <u>caught and corrected before affecting the patient</u>, how often is this reported?
- D2. When a mistake is made, but has <u>no potential to harm the patient</u>, how often is this reported?
- D3. When a mistake is made that <u>could harm the patient</u>, but does not, how often is this reported?

9. Teamwork Across Units

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree)

- F4. There is good cooperation among hospital units that need to work together.
- F10. Hospital units work well together to provide the best care for patients.
- F2. Hospital units do not coordinate well with each other. (negatively worded)
- F6. It is often unpleasant to work with staff from other hospital units. (negatively worded)

10. Staffing

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree)

- A2. We have enough staff to handle the workload.
- A5. Staff in this unit work longer hours than is best for patient care. (negatively worded)
- A7. We use more agency/temporary staff than is best for patient care. (negatively worded)
- A14. We work in "crisis mode" trying to do too much, too quickly. (negatively worded)

NOTE: Negatively worded questions should be reverse coded when calculating percent "positive" response, means, and composites.

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11. Handoffs & Transitions

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree)

F3. Things "fall between the cracks" when transferring patients from one unit to another. (negatively worded)
F5. Important patient care information is often lost during shift changes. (negatively worded)
F7. Problems often occur in the exchange of information across hospital units. (negatively worded)
F11. Shift changes are problematic for patients in this hospital. (negatively worded)

12. Nonpunitive Response to Errors

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree)

A8. Staff feel like their mistakes are held against them. (negatively worded)
A12. When an event is reported, it feels like the person is being written up, not the problem. (negatively worded)
A16. Staff worry that mistakes they make are kept in their personnel file. (negatively worded)

Patient Safety Grade

(Excellent, Very Good, Acceptable, Poor, Failing)

E1. Please give your work area/unit in this hospital an overall grade on patient safety.

Number of Events Reported

(No event reports, 1 to 2 event reports, 3 to 5 event report, 6 to 10 event reports, 11 to 20 event reports, 21 event reports or more)

G1. In the past 12 months, how many event reports have you filled out and submitted?

NOTE: Negatively worded questions should be reverse coded when calculating percent "positive" response, means, and composites.

Nurses, have you ever spoken up for your patient's safety? Did you feel like you were heard?

We are conducting a research study to learn more about how nurses use and define speaking up as it relates to patient safety, especially in direct patient care situations. Speaking up is sometimes called voicing concerns, advocating, or disagreeing with the plan of care.

This study involves an interview to discuss your experiences with speaking up. Interviews can be done over the phone or in person and no identifiable information will be kept with the interviews. This study will take no more than 2 total hours of your time. A $10 gift card is offered upon completion of the interview.

This research study had been approved by the UNC Institutional Review Board and the UNC Nurse Research Council. IRB Number 17-0635.

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APPENDIX D

INTERVIEW GUIDE

Interview Guide—Speaking Up Study

Consent process, recording device on.

Thank you for participating in this study. I will be asking you about any experiences you have had with speaking up for your patients' safety, including talking about the reasons and emotions around the experience. Remember your participation is completely voluntary and you can refuse to answer any question and stop the interview at any time. All identifying information will be removed from your answers when the audio is transcribed, including names, units, dates, and diagnoses. Once transcriptions are done and checked the audio recordings will be deleted.

1. What have you experienced in terms of speaking up for patient safety?

2. What context or situations have typically influenced or affected your experiences with speaking up for patient safety?

Other open-ended questions can be added based on the participant's response, these two are the primary focus of this type of phenomenology study.

Probable additional questions include:

3. How would you define speaking up in relation to patient safety?

4. What were your concerns or fears about speaking up?

5. What motivates you to speak up for your patients?

6. What influences you to remain silent?

7. How was your speaking up received by those around you?

8. What else would you like me to know about your experience(s) with speaking up?

9. What were the repercussions from speaking up? (If any)

Additional possible follow ups include:

10. When this experience occurred, what was going on around you?

11. What was the outcome for your patient from this experience?

12. What are your emotions as you talk about the event?

13. You stated you knew no one would listen to you anyway. How did you know no one would listen?

14. You stated you felt like you were ignored/listened to/valued/ridiculed. How did that make you feel?

15. How has the experience influenced your willingness to speak up for your patients now?

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