Practical and Cultural Barriers to Reporting Incidents Among Health Workers in Indonesian Public Hospitals

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Purpose: This study investigated the practical and cultural barriers of reporting patient safety incidents in three accredited public hospitals in East Java, Indonesia.

Methods: This study employed a mixed methods approach using a convergent parallel design. We surveyed 1121 health workers and interviewed 27 managerial staff members from the sampled hospitals. A chi-square analysis was performed to evaluate differences in demographic factors, barriers to reporting, and practices of reporting between those who had reported an incident and those who had witnessed an incident but had not reported it. NVivo 11 software was used to perform the qualitative data analysis.

Results: This study had a 76.53% response rate. The quantitative evaluation identified significant differences in professions and work units and in participation in quality and safety training between the reporting group and the non-reporting group. The analysis of practical barriers displayed significant differences between the groups with the following responses: “did not know how to report,” “did not know where to report,” and “lack of feedback.” For cultural barriers, a significant difference was shown only for the response “did not want conflict.” In the qualitative assessment, most of the interview participants reported lack of knowledge and lack of socialization or training as practical barriers in reporting incidents. Furthermore, reluctance and fear to report were mentioned as cultural barriers by most of the interviewees.

Conclusion: Because there were conflicting findings in the barriers of reporting incidents, these barriers must be identified, discussed, and resolved by health workers and their managers or supervisors to improve incident reporting. Managers must foster open communication and build positive connections with health workers. Further research is necessary to focus on possible ways of addressing the barriers to reporting.

Keywords: practical barriers, cultural barriers, incident reporting, Javanese values, patient safety

Introduction
A patient safety incident reporting system is a type of surveillance that monitors, prevents, and reduces the occurrence of patient safety events in most hospitals. These systems rely on health workers to report any incidents prejudicial to patient safety, which enables the organizations and their staff to learn from the mistakes of others.1 Compared with other methods of reporting, successfully implemented incident reporting systems can be used to alter structures and processes to reduce both the actual harm and the potential for harm within an organization while also
Incident reporting systems have been in place in Indonesia for over a decade. National guidelines on hospital patient safety and some policies have been developed by the Indonesian government since 2005, and patient safety was included as part of hospital accreditation in 2008. Each hospital is required to establish a hospital patient safety team and enforce a patient safety program that includes incident reporting. Therefore, all accredited hospitals in Indonesia have reported incidents both internally and externally. Incidents that must be externally reported include near misses, adverse events, and sentinel events. Incidents that must be internally reported include unsafe conditions that must be reported to the hospital patient safety team.

Although Indonesia has 1227 accredited hospitals, only 668 incidents were reported in 2016 nationally. By comparison, more than 50,000 incident reports were received in the same year from Taiwan’s Patient Safety Reporting System, which was established at approximately the same time as the system in Indonesia. Thus, there appears to be under-reporting of patient safety incidents across the entire country in Indonesia.

Improving Indonesia’s incident reporting system and hospital participation in reporting requires a better understanding of the barriers to reporting incidents. Therefore, this study aimed to analyze the practical and cultural barriers to reporting incidents in Indonesian accredited public hospitals.

Materials and Methods

Study Design
Studies related to patient safety incident reporting in Indonesia are rare. Some previous studies have been quantitative and have mostly provided information based on statistical results. The use of a single method is often not sufficient because although quantitative data may provide information on research outcomes, the inclusion of qualitative data adds more information on the story or process behind the numbers.

Therefore, this study employed a mixed methods approach. We used a convergent parallel design in which both quantitative and qualitative data were collected during the same phase, with both considered having equal value. The two types of data were managed separately, with the results of each analysis merged during the interpretation phase. The design of the quantitative phase was a descriptive study, and data were collected by a survey conducted in three hospitals in East Java province. The inclusion criteria were as follows: public hospitals that had obtained accreditation status within the last five years, hospitals that acted as the referral center for their area, and hospitals with 150–650 beds. Using total population sampling, all health workers at the hospital with at least one year of working experience were invited to participate in the survey. The survey was conducted in 11 types of hospital work units: inpatient, outpatient, emergency department, surgical, pharmacy, radiology, laboratory, intensive care, hemodialysis, labor and delivery, and nutrition. These units were later categorized into clinical service or supporting unit services. In total, the survey was distributed to 1481 nurses, doctors, and allied health personnel in the sampled hospitals.

The qualitative study used a phenomenology design and was conducted using interviews and direct observations. The interviews were performed in the same three hospitals. Using purposive sampling, we involved staff at the managerial and supervisor levels, including hospital directors or managers, the heads or secretaries of the patient safety teams, and the heads of the hospital wards as the participants. Direct observation was used to examine the incidents reported at each hospital.

Study Variables
Three variables in this study were measured to assess practical and cultural barriers in reporting and the practice of reporting. Practical and cultural barriers were measured twice, once as closed-ended questions in the quantitative phase and once as open-ended questions in the qualitative phase. The practice of reporting incidents was measured once as a closed-ended question.

The quantitative study variables collected in this survey were related to practical and cultural barriers. The terms were borrowed from previous research. The cognitive value orientation and affective responses were considered cultural barriers whereas barriers related to actual use were considered practical barriers. In this study, practical barriers included a lack of knowledge about the reporting procedure, lack of a proper structure for reporting, insufficient time or effort required to report an incident, lack of support from colleagues, punitive environment, concern about the possible impact on the health worker’s career, or social and legal liability that could arise from making the report.
The cultural barriers were based on the following Javanese values: respect (aji), reluctance (sungkan), fear (ajrih), shame (lingsem), obedience (manut), harmonious integration (rukun), and tolerance (tepo seliro). These values are taken from a report from 1990, but we decided to use them because there is a lack of recent comparable literature, and the values remain valid. Javanese values affect the interactions of Javanese people within all aspects of their daily lives. The questions about cultural barriers based on these values were related to respecting senior staff, fear of punishment, shame, considering others, and preserving harmony.

The questions about the practice of reporting assessed whether the participant had ever reported an incident. Those who had reported an incident were asked one additional, qualitative, open-ended question about difficulties related to reporting the incident. The qualitative study used a semi-structured interview to ask about the practical and cultural barriers to reporting.

**Validity**

The survey questionnaire underwent a content validity assessment involving experts from the health services management field before being distributed to the hospital staff. To ensure credibility of the findings, we used cross-method triangulation to produce comprehensive data, improve understanding of the problem, and reinforce the research outcomes.

**Data Collection**

The survey was paper-based and self-administered. We distributed the questionnaires in each work unit in all sampled hospitals. The survey was open for approximately two months, and we visited the hospital every two weeks to collect the completed questionnaires and send reminders to the other staff to complete the questionnaire. For the qualitative assessment, the first author conducted the interviews with the participant’s consent. The interviews lasted 30 minutes to one hour and were conducted at the participants’ offices.

**Data Analysis**

In the quantitative analysis, descriptive statistics (frequency distributions and summary measures) were used to assess the distributions of variables. A chi-square analysis was performed to explore differences in demographic factors, barriers to reporting, and practices of reporting between health workers who had reported an incident and those who had witnessed an incident but had not reported it. A P value <0.05 was considered statistically significant.

The qualitative data analysis involved several steps. First, we identified relevant codes that we gathered based on keywords from the interview questions and from reviewing the interviewee answers. The first author was responsible for developing the coding list that was later reviewed by the second author. The codes were grouped into themes, and we applied a thematic analysis to identify, analyze, and report any similarities or discrepancies. NVivo 11 software was used to assist with the qualitative data analysis.

After completing both the quantitative and qualitative analyses, we applied a mixed methods analysis. Following the principles of convergent parallel design, both sets of data were individually analyzed and equally prioritized, and the results were merged during interpretation by identifying relationships or comparing results. Thus, this process can accommodate the diversity of both quantitative and qualitative questions. The summary of the methods used is presented in Table 1.

**Results**

**Quantitative Phase**

By the end of the survey period, 1121 participants had returned the questionnaires, corresponding to a 76.53% response rate. The participants were divided into three groups for the data analysis: those who had not witnessed an incident, those who had witnessed an incident but had not reported it (the non-reporting group), and those who had reported an incident (the reporting group) (please refer to Table 2). The subsequent analysis included only the non-reporting and reporting groups. The demographic factors of the non-reporting and reporting group participants are presented in Table 3. This study found significant differences in professions and work units and in participation in quality and safety training between those who reported incidents and those who witnessed incidents but did not report them.

The barriers to reporting incidents in each group are summarized in Table 4. The analysis of practical barriers showed significant differences between the groups that responded “did not know how to report,” “did not know where to report,” and “lack of feedback”. The only
A cultural barrier showing a significant difference was the response “did not want conflict.” The open-ended question about the difficulty in reporting incidents revealed that 39 participants from the reporting group (11.4% of participants) had experienced difficulties. Most difficulties were related to lack of knowledge about the reporting procedure (38.5%).

### Qualitative Phase

We interviewed 27 participants at the supervisory level from three public hospitals. Most of the interviews lasted between 30 minutes and one hour and were conducted in Indonesian language at an agreed place. All interviews were recorded with the participants’ permission. The interviews were transcribed verbatim and translated into English by a professional translator.

### Practical Barriers

Most of the interview participants reported lack of knowledge as the main practical barrier in reporting incidents. Some example comments on the lack of knowledge are shown below:

- The staff did not know which cases must be reported. (Secretary of the Hospital Patient Safety Team, Hospital C)
- The barriers are a lack of knowledge and the need for more evenly distributed training. (Vice-Director, Hospital A)
- We need to increase awareness of all employees in this hospital to be more aware that it [incident reporting] is something that needs attention. (Manager, Hospital B)

Additionally, organizational socialization, which indicates meetings or trainings that provide staff with general knowledge on a specific topic, was also lacking. Some Indonesian hospitals and other organizations have regularly held socialization or training for the patient safety program or incident reporting. However, several comments indicated a lack of socialization and training:

- The only barrier is the lack of socialization. If it is socialized and often discussed, they [health workers] will...
become more aware. (Secretary of the Hospital Patient Safety Team, Hospital A)

...one of the barriers was lack of socialization ... We have never specifically conducted socialization for all the heads of the units. (Manager, Hospital B)

... lack of socialization is the primary [barrier]. (Head of the Patient Safety Team, Hospital B)

Because socialization did not reach the bottom [lowest level of staff], perhaps only reaching the heads of the wards, many staff did not know where to report incidents. (Vice-Director, Hospital C)

Cultural Barriers

The cultural barriers reported by most of the interviewees included reluctance and fear to report. Some of the interviewees considered reluctance to report a normal human feeling or a cultural value for Indonesian people. Reporting on other people can make the reporter feel bad, particularly when reporting on senior staff or colleagues. One comment illustrates this point:

They feel reluctant to report friends, [they] protect each other because they are colleagues, especially medical colleagues; they always protect their colleagues. And they still feel reluctant to report their seniors. (Vice-Director, Hospital C)

Maybe it is a feeling of reluctance as being a human, but if it is possible to overcome [the incident], maybe we will not report, but if for example it might be serious, maybe we will report. (Head of Unit, Hospital B)

One interviewee cited respect for senior staff as a reason for reluctance to report:

Seniority was indeed the cause of the feeling of reluctance, so we should not adhere seniority. (Vice-Director, Hospital A)

Some participants also mentioned a fear of reporting and fear of punishment as factors that hindered them from reporting incidents. One head of the ward reported a fear of reporting because nobody wants to be blamed for mistakes or receive sanctions or punishment. However, at times, other colleagues raised the incident or the incident was the subject of a patient’s complaint. As one participant reported:

There is still concern that they will be blamed, both the reporter and the one who made a mistake. (Vice-Director, Hospital A)

A summary of the findings is presented in Table 5.

**Discussion**

This study resulted in four important findings. First, there were significant differences in professions and work units, and in participation in quality and safety training, between those who reported incidents and those who witnessed incidents but did not report them. Consistent with our
results, previous studies have found that nurses reported more incidents than other professions.\textsuperscript{18–21} Some researchers have argued that doctors, in particular, are often skeptical and have not fully accepted the incident reporting system as an opportunity for improving quality of care.\textsuperscript{19}

Our results from the work units where incidents were reported were also consistent with other studies that reported that incident reports were primarily made within a clinical setting.\textsuperscript{22} Furthermore, consistent with our finding about training, participation in monthly quality or safety conferences in US hospitals has increased the reporting rate of trainees from 27.6\% to 46.1\%.\textsuperscript{23}

Second, the quantitative and qualitative analyses both revealed that deficient knowledge was a major practical barrier to reporting incidents. This was consistent with a previous study noting that despite staff being aware of a reporting system in their hospital, they did not know how to access an incident form or what to do with it once it was completed.\textsuperscript{24} A lack of knowledge and skills related to incident reporting, such as about what should be reported and how to report it, was also highlighted in another study,\textsuperscript{25} and other studies in Indonesia have reported similar findings.\textsuperscript{9,26,27} A previous study highlighted three essential stages of reporting incidents: awareness and knowledge of the system, the ability to recognize reportable incidents, and the ability to overcome any barriers to reporting.\textsuperscript{13} Failure to complete the first of these stages, awareness and knowledge of the system, resulted in a general failure in reporting incidents.

Third, there was a discrepancy between the quantitative and qualitative findings related to practical barriers. The survey results showed that lack of feedback was a significant barrier; conversely, the participants who were interviewed were more concerned about the lack of organizational socialization of the incident reporting system. Because different participants completed the survey (staff) and interviews (managers and supervisors), this

| Statement                                    | Number (%)      | P (Chi-Square Test) |
|----------------------------------------------|-----------------|--------------------|
| Practical Barriers                           | Non-Reporting group (n = 325) | Reporting Group (n = 341) |
| Did not know how to report                   | 147 (45.2)      | 101 (29.6)         | <0.001* |
| Did not know where to report                 | 127 (39.1)      | 94 (27.6)          | 0.002  |
| Too busy                                     | 134 (41.2)      | 138 (40.5)         | 0.842  |
| Lack of feedback                             | 96 (29.5)       | 177 (51.9)         | <0.001* |
| Did not know whose responsibility it was to report | 80 (24.6)      | 67 (19.6)          | 0.122  |
| My colleagues would have been unsupportive   | 37 (11.4)       | 36 (10.6)          | 0.733  |
| Concern about my future career              | 54 (16.6)       | 67 (19.6)          | 0.310  |
| Concern about legal problems                | 77 (23.7)       | 74 (21.7)          | 0.540  |

Cultural Barriers

| Statement                                                   | Non-Reporting group (n = 325) | Reporting Group (n = 341) |
|-------------------------------------------------------------|------------------------------|---------------------------|
| Respect for senior staff                                     | 94 (28.9)                    | 103 (30.2)                | 0.717  |
| Afraid others would be punished                              | 68 (20.9)                    | 86 (25.2)                 | 0.189  |
| Afraid that I would be punished                              | 58 (17.8)                    | 69 (20.2)                 | 0.433  |
| Felt ashamed in front of my colleagues                      | 41 (12.6)                    | 45 (13.2)                 | 0.823  |
| Did not want conflict                                       | 224 (68.9)                   | 190 (55.7)                | <0.001* |
| Do not want to create problems                               | 159 (48.9)                   | 153 (44.9)                | 0.295  |
| I understood how it felt                                     | 53 (16.3)                    | 51 (15)                   | 0.631  |
| Concern about experiencing bad luck if I reported someone   | 14 (4.3)                     | 13 (3.8)                  | 0.746  |

Note: *Indicated a significant difference between the reporting and non-reporting group.

| Quantitative Study | Qualitative Study |
|--------------------|-------------------|
| Participants       | Health workers (reporting and non-reporting group) | Supervisory level |
| Practical barriers | Did not know how to report | Lack of knowledge |
|                    | Lack of feedback   | Lack of socialization |
| Cultural barriers  | Did not want conflict | Reluctance to report |
|                    | Fear of reporting  | |

Table 5 Summary of Significant Quantitative and Qualitative Findings
finding suggests that staff, as potential reporters of incidents, had greater concern about the lack of feedback. In fact, lack of feedback was reported by nearly 52% of the participants in the reporter group. A lack of feedback can undoubtedly explain poor incident reporting because feedback provides people with information about their activities. A lack of feedback has been previously acknowledged as a weakness in incident reporting.\textsuperscript{24,25,28} Conversely, properly conducted feedback results in specific improvements that are necessary to enhance incident reporting.\textsuperscript{29} Most of the supervisory and managerial level staff interviewed highlighted a lack of knowledge and lack of socialization as barriers; they must urgently be made aware of this discrepancy between their perspectives of barriers and the need for feedback reported by staff. Focusing on providing socialization, training, and workshops will not in itself overcome these barriers, particularly if hospitals omit implementing a feedback process that closes the loop in incident analysis management. If no action is taken regarding the submitted reports and no measurable change by management occurs as a result, the staff may have reluctance in reporting further incidents.\textsuperscript{25} Furthermore, by using the organizational learning framework, hospital management must also establish collaboration, cast no blame for human error, enact accountability for performance, and engage in situational mindfulness instead of focusing merely on lack of knowledge and socialization as the barriers for underreporting.\textsuperscript{30}

Fourth, there were conflicting findings about cultural barriers between the health workers surveyed and the supervisors and managers interviewed. The main cultural barrier identified by the survey participants was conflict avoidance, whereas fear was the barrier most cited by the interviewees. Health workers often chose not to report because reporting an incident brings the risk of conflict involving the reporter or other colleagues. Previous research has revealed that the Javanese prefer to avoid conflict to maintain stable and predictable conditions.\textsuperscript{31} Conflict among healthcare providers has been found to be the third most common type of conflict. In a general setting, reluctance to report and fear of being blamed or punished have also been reported as primary cultural barriers.\textsuperscript{21,32} Again, it is crucial for supervisors or managers to understand the perspective of staff and to clarify how incident reporting will be handled without causing further conflict within teams, units, or hospitals.

These findings highlight the differences in the perceptions of what are considered barriers to reporting between health workers and hospital level managers or supervisors. These differences likely exist because of the disparity of perceptions; therefore, open communication between managers or supervisors and health workers must be developed. Managers should encourage health workers to raise and discuss their concerns and use the concern as the starting point for improving incident reporting. Building an effective connection between communication and staff will assist in overcoming cultural barriers.

Strengths and Limitations
To the best of our knowledge, this was the first mixed methods study to examine practical and cultural barriers in Indonesian public hospitals. This study is the first to consider Javanese values as a basis for investigating cultural barriers. Additionally, the use of a mixed methods approach provided an in-depth understanding of the perspectives of health workers at staff, supervisor, and managerial levels. However, this study has some limitations. First, the included hospitals were not randomly selected; thus, the results may not be generalizable to other populations. Second, because the hospitals were located in Java and the Javanese are the largest ethnic group in Indonesia, we assumed that most of the health workers were Javanese. Therefore, we used the Javanese value framework to identify cultural barriers.

Conclusion
In conclusion, the findings of this study provide insights into practical and cultural barriers to reporting incidents in Indonesian public hospitals. These findings highlight the differences in the perception of what is considered a barrier to reporting between health workers and hospital level managers or supervisors. To improve incident reporting, these barriers must be discussed and resolved by health workers and their managers or supervisors. Managers must create open communication, build positive connections, and improve communication skills among health workers and health managers or supervisors. Future research is necessary to focus on possible ways of addressing the barriers to reporting.

Ethics and Consent Statement
This study was granted ethical approval by the Faculty of Health Sciences Human Research Ethics Committee La Trobe University (approval number FHEC13/197). We also had obtained the permission to conduct the study from each participating hospital in Indonesia. In this study, participation in the survey was taken as
demonstrating consent while written consent was obtained from the interview participants.

Author Contributions
All authors made substantial contributions to the conception and design, acquisition of data, or analysis and interpretation of data; took part in drafting the article or revising it critically for important intellectual content; gave final approval of the version to be published; and agree to be accountable for all aspects of the work.

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The authors report no conflicts of interest in this work.

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