ORIGINAL ARTICLE

Views of faculty members in a medical school with regards to error disclosure and reporting to parents and/or higher authorities

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ABSTRACT

Background: Little is known about the views of faculty members who train medical students concerning open disclosure.

Objectives: The objectives of this study were to determine the views of faculty in a medical school on: 1 what constitutes a medical error and the severity of such an error in relation to medication use or diagnosis; 2 information giving following such an adverse event, based on severity; and 3 acknowledgement of responsibility, remedial action, compensation, disciplinary action, legal action, and reporting to a higher body in relation to such adverse event. Methods: We adapted and contextualized a questionnaire developed from a previous study. The questionnaire had 4 case vignettes that described 1 clear medication error with lifelong disability; 2 possible diagnostic error with lifelong disability; 3 possible diagnostic error without harm; and 4 clear medication error without harm. We invited all faculty members attached to the medical school at the International Medical University to participate in the study.

Results: Seventy faculty members took part. Faculty members viewed a medical error as having taken place depending on how clearly an error had occurred (94% and 73% versus 53% and 27%). They viewed cases as more severe based on the severity of complications (85% and 46% versus 5% and 10%). With increasing severity, they tended to attribute responsibility for the event and the duty to disclose towards more senior clinicians. They were also more agreeable with remedial action, compensation, disciplinary action, and reporting to a higher agency. There was no strong evidence of association between these areas and the demographics of faculty members.

Conclusions: Faculty members are more likely to perceive an error had occurred depending on the clarity of the circumstances. They viewed severity based on the presence of complications. Severity determined how they attributed responsibility, duty to disclose, and other areas related to open disclosure.

KEY WORDS:
Medical education; medical error; diagnosis; children; disclosure

INTRODUCTION

Open disclosure is the process of providing an open and consistent approach to communicating with the patient and their support person following an adverse incident. This includes health care professionals providing their patients with accurate information about the adverse event, immediate consequences, and the options to remedy the harm, and preventive measures to avoid future recurrence, provide support, and an expression of regret.[1]

Data is scarce on the perspectives of clinicians and faculty members in Malaysia regarding open disclosure, particularly the perspectives of faculty members who are involved in training medical students. This research provides insights into what faculty members in Malaysia perceive as medical error, its severity, and their perspectives on how it should be handled. Malaysia has over 30 medical schools, comprising 11 public schools and 19 private schools.[2] Malaysia has experienced a rapid increase in medical schools in the last few years and concerns have been expressed regarding the quality of doctors that are being produced as well as the availability of suitably qualified staff. Many medical schools have opted to recruit staff from overseas as a short term solution.[3] Therefore, the eventual ethical and professional approach towards medical practice and medical education would be determined by the cumulative approach of medical faculty in Malaysia. Research into perspectives on disclosure of medical errors from other Asian countries has shown differences in decisions to disclose errors. A study in Iran by Ghalandarpoorattar *et al.* showed that clinicians maintained a more paternalistic outlook and did not believe in positive outcomes from error disclosure.[4] A study on clinicians in Malaysia suggests that paternalism continues to exist.[5]

Data from Malaysia concerning near misses and adverse events demonstrate worrying trends. Letchuman *et al.* showed that approximately 70% of admissions to non-specialist hospitals and about half of admissions to government specialist hospitals had near misses – the majority of which were attributable to clinical management and medication. With regards to adverse events, 6.3% of admissions to non-specialist hospitals and 15.3% of admissions to specialist hospitals had one or more adverse events. The majority of these adverse events are attributable to errors in assessment,

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diagnosis and treatment. For these adverse events, at least one in five resulted in death and at least half resulted in some form of disability.[6] A recent study involving a review of medical records in twelve government primary care clinics in Malaysia showed that diagnostic errors were present in 3.6% of records and management errors in 53.2%. The authors concluded that 39.9% of these errors could have led to serious harm. [11] There are no published data on errors from the private sector.

The objectives of this study were to determine the views of faculty members in a medical school:
1. On their perception of what constitutes an adverse event and the severity of such an event – in relation to medication use or diagnosis
2. Regarding information giving following such an adverse event, based on severity
3. Regarding acknowledgement of responsibility, remedial action, compensation, disciplinary action, legal action, and reporting to a higher body in relation to such adverse event

We hypothesised that faculty members will agree with informing parents, guardians, or a higher body of the adverse event regardless of severity.

MATERIALS AND METHODS

Study design and setting

A cross-sectional survey was performed on all faculty members attached to the School of Medicine at the International Medical University (IMU) in both the Bukit Jalil campus in Kuala Lumpur and the Seremban campus in Negeri Sembilan. The study was also conducted as part of a student research project for medical students in their third year of study. The study design is shown in Figure 1. This study is the second part to a project that looked at open disclosure in Malaysia – this first part explored the preferences of parents; this latter study explores views of faculty members.

Study Instrument

We adapted the questionnaire developed by Hobgood et al. for use in this study.7 The questionnaire consisted of four case vignettes that portrayed a range of medical errors with varying severity. The case vignettes were about:
1. A medication error with a lifelong complication (renal failure needing dialysis following wrong doses of chemotherapy)
2. A diagnostic error with a lifelong complication (permanent hearing loss following an infection)
3. A diagnostic error without lifelong complication (an upper respiratory tract infection initially diagnosed as viral but later recovers after antibiotic treatment for a "strep" throat)
4. A medication error without lifelong complication (a double dose of diazepam given to treat seizures without any adverse event)

As part of this questionnaire, we also collected information on the following: nationality, age; gender; whether they were clinicians; duration of clinical experience; and whether the faculty members are still in active clinical practice.

The questionnaire asked faculty members on their perception on whether each case was a medical error, their perception of severity, and who they felt should inform the parents or guardians regarding the event. Each case is then followed by a series of questions that evaluated their views on information disclosure, acknowledgement of responsibility, remedial action, compensation, legal action, and action by a regulatory body.

The original questionnaire was designed to assess the view of parents or guardians. We adapted the questionnaire by contextualising the items to assess the views of faculty members. We assessed the content validity ratio of each item within the adapted questionnaire using Lawshe's method.[8] To achieve this, we invited 14 faculty members who were experienced in this area to pilot test and provide feedback regarding each questionnaire item. We obtained the final version of the questionnaire after further adaptations based on their feedback. We omitted these faculty members from the main study.

During the actual study, faculty members were offered assistance when completing the questionnaire. None of them requested such assistance.

Sample Size

We anticipated that around 50% of faculty members may decide each of the scenarios as a potential medical error. Given that the IMU has 150 faculty members attached to the School of Medicine, we calculated our sample size to be 109 with a confidence interval of 95%.[9] We also estimated a possible non-response of around 20%, hence we required a final sample size of 128.

Analysis

Similar with Hobgood *et al.*'s study,[7] we collapsed the responses to: "strongly agree/agree," "neutral," and "disagree/strongly disagree." We also analysed the faculty member's responses for any relationship with their demographic details using chi square tests. Due to the small sample sizes, we used Fisher's exact test to analyse the data.

RESULTS

Demographics of faculty members

Of the questionnaires received, only 70 were suitable for analysis (a response rate of 51.5%). Not all the details were complete as faculty members were not obliged to provide all demographic information that was requested. Table I demonstrates the demographics of all 70 faculty members deemed suitable for analysis.

Perception of error and severity of error and attribution of responsibility

Figure 2 shows a summary of the perception of faculty members on whether each case was a medical error. We excluded those faculty members who indicated that the case vignette was not a medical error from further analysis (Figure 1). The faculty members perceived the error was of greater severity when complications occurred. They also perceived a senior doctor (a consultant or specialist was the person with greater responsibility, especially as case severity increased (Table II).

Table I: Demographic details of faculty members (n=70)

Demographic detail	Demographic category	Total faculty members (percentage)
Ethnicity	South Asian/South East Asian*	67 (95.7)
	Others	3 (4.3)
Age	50 years old and below	21 (30.0)
	51 years old and above	49 (70.0)
Gender	Male	31 (44.3)
	Female	39 (55.8)
Campus	Involved in pre-clinical training	51 (72.8)
	Involved in clinical training	19 (27.1)
Clinicians (have at least a basic medical degree)	Yes	34 (48.6)
	No	36 (51.4)
	For the 34 clinicians:	
Currently practicing	Yes	24 (70.6)
	No	10 (29.4)
Nationality	Malaysian	20 (58.9)
	South Asian/South East Asian	13 (38.2)
	Others	1 (2.9)
Clinical experience	Less than 10 years	4 (11.8)
	More than 10 years	30 (88.2)

*Of this number, 41 were from Malaysia, 16 from India, 1 from Pakistan, 6 from Myanmar, 3 from Sri Lanka

Table II: Faculty member's perception on severity of error, and who/whom to learn from regarding the event

Case	Severity of Error			Preference of who/whom to learn from regarding event			Who was most responsible?		
	Minor (%)	Moderate (%)	Severe (%)	Consultant or Specialist (%)	Medical Officer or House Officer (%)	Nurse (%)	Consultant or Specialist (%)	Medical Officer or House Officer (%)	Nurse (%)
1	2 (3)	8 (12)	56 (85)	58 (88)	7 (11)	1 (2)	46 (70)	17 (26)	3 (5)
2	5 (14)	15 (41)	17 (46)	28 (76)	9 (24)	0 (0)	24 (65)	13 (35)	0 (0)
3	8 (42)	10 (53)	1 (5)	10 (53)	9 (47)	0 (0)	9 (47)	10 (53)	0 (0)
4	20 (39)	26 (51)	5 (10)	28 (56)	19 (38)	3 (6)	22 (43)	24 (47)	5 (10)

Table III: Faculty member's views on information giving, remedial action, and apologising

Case		Q4. "The parents/next of kin should be told about the event as soon as it was discovered." (%)	Q5. "The parents/next of kin should be told all the details of the event." (%)	Q6. "The parents/next of kin should know something had been done to prevent this from happening to another child." (%)	Q7. "An apology should be offered for the event." (%)
1	Strongly agree/agree	63 (95)	57 (86)	58 (88)	61 (92)
	Neutral	3 (5)	5 (8)	5 (8)	4 (6)
	Disagree/strongly disagree	0 (0)	4 (6)	3 (5)	1 (2)
	P-value	0.394	0.616	-	0.022
2	Strongly agree/agree	37 (100)	34 (92)	31 (84)	31 (84)
	Neutral	0 (0)	2 (5)	3 (8)	5 (14)
	Disagree/strongly disagree	0 (0)	1 (3)	3 (8)	1 (3)
	P-value	None	1	-	0.667
3	Strongly agree/agree	19 (100)	18 (95)	13 (68)	13 (68)
	Neutral	0 (0)	1 (5)	4 (21)	4 (21)
	Disagree/strongly disagree	0 (0)	0 (0)	2 (11)	2 (11)
	P-value	0.394	0.616	-	0.022
4	Strongly agree/agree	40 (78)	36 (71)	37 (73)	31 (61)
	Neutral	6 (12)	8 (16)	9 (18)	9 (18)
	Disagree/strongly disagree	5 (10)	7 (14)	5 (10)	11 (22)
	P-value	0.572	0.305	-	0.636

Table IV: Faculty member's views on compensation, punishment, and likelihood of legal action

Case		Q8. "The parents/next of kin should be offered financial compensation for the medical expenses associated with the event." (%)	Q9. "The responsible party should be disciplined for the event." (%)	Q10. "After being informed of the event, I would expect the parents/next of kin to seek legal action." (%)	Q11. "If the parents/next of kin were not informed of the event by the person I chose in question 2, and he/she learned about it through different means, I would expect them to seek legal action." (%)
1	Strongly agree/agree	51 (77)	56 (85)	45 (68)	55 (83)
	Neutral	11 (17)	6 (9)	17 (26)	9 (14)
	Disagree/strongly disagree	4 (6)	4 (6)	4 (6)	2 (3)
2	Strongly agree/agree	22 (59)	24 (65)	20 (54)	29 (78)
	Neutral	12 (32)	9 (24)	12 (32)	5 (14)
	Disagree/strongly disagree	3 (8)	4 (11)	5 (14)	3 (8)
3	Strongly agree/agree	6 (32)	9 (47)	3 (16)	9 (47)
	Neutral	8 (42)	5 (26)	8 (42)	5 (26)
	Disagree/strongly disagree	5 (26)	5 (26)	8 (42)	5 (26)
4	Strongly agree/agree	8 (16)	29 (57)	10 (20)	14 (27)
	Neutral	12 (24)	8 (16)	15 (29)	15 (29)
	Disagree/strongly disagree	31 (61)	14 (27)	26 (51)	22 (43)

Table V: Faculty member's views on reporting to other agencies

Case		Q12. "The responsible party should be reported to an external agency that can monitor care quality." (%)	Q13. "The responsible party should be reported to an external agency that can punish them." (%)
1	Strongly agree/agree	42 (64)	20 (30)
	Neutral	14 (21)	23 (35)
	Disagree/strongly disagree	10 (15)	23 (35)
2	Strongly agree/agree	20 (54)	10 (27)
	Neutral	7 (19)	16 (43)
	Disagree/strongly disagree	10 (27)	11 (30)
3	Strongly agree/agree	6 (32)	4 (21)
	Neutral	7 (37)	7 (37)
	Disagree/strongly disagree	6 (32)	8 (42)
4	Strongly agree/agree	21 (41)	11 (22)
	Neutral	7 (14)	14 (27)
	Disagree/strongly disagree	23 (45)	26 (51)

Views on Information Giving, Remedial Action, and Apologising

As the severity of the case increased, a higher number of faculty members agreed that the parents or next of kin should be informed of the event. This same pattern was also concerning their views on remedial action and apologising to the parents (Table 3). We did not find significant evidence of a relationship between the demographic factors of faculty members and their views on disclosure and giving an apology. We did not find evidence of a significant relationship between their perception of case severity and the offering of an apology. (Table III) There was no significant difference when comparing faculty members who are clinicians with those who are non-clinicians.

Views on Compensation, Disciplinary Action, and Likelihood of Legal Action

The same pattern was also observed in the views of faculty members on the possibility of compensation being sought by parents or next of kin, the need for disciplinary action, and the likelihood of legal action, i.e. the greater the severity of the case, the higher the agreement in these areas (Table IV). We did not find significant evidence of a relationship between these areas and the demographic characteristics of faculty members. Fisher's tests showed a weak association between their perception of case severity and the corresponding expectation of legal action in cases 2 ($p = 0.03$) and 4 ($p = 0.046$). There was no significant difference when comparing faculty members who are clinicians with those who are non-clinicians.

Views on reporting to other agencies

We also found a similar pattern in the faculty member's views on reporting to an external agency, where the agreement to report was higher in the more severe cases. Their views on reporting with the objective of punishing the responsible party was less clear (Table V). We did not find significant evidence of a relationship between these areas and the demographic characteristics of faculty member's.

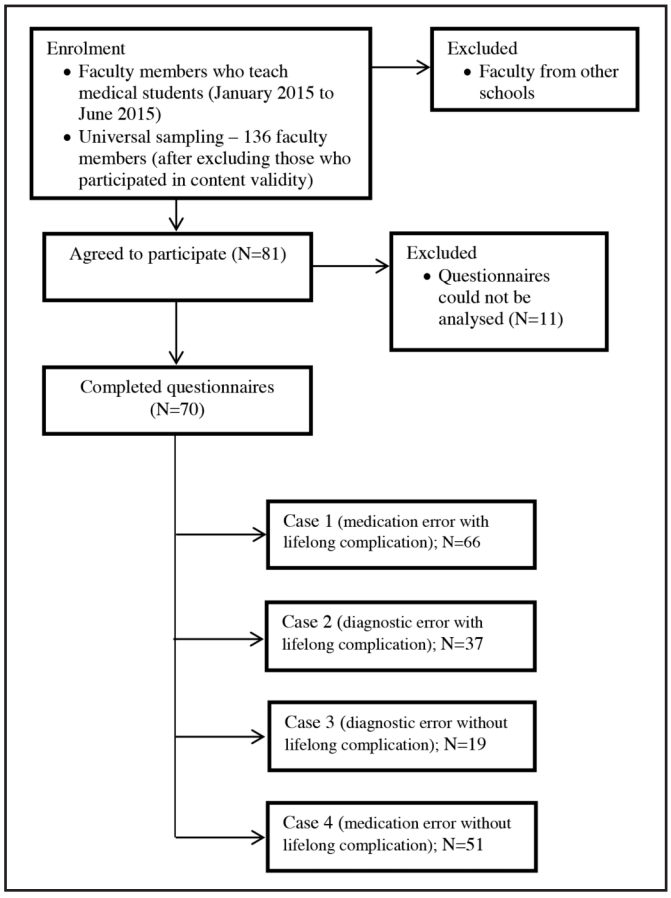

Fig. 1: Study Flow Chart.

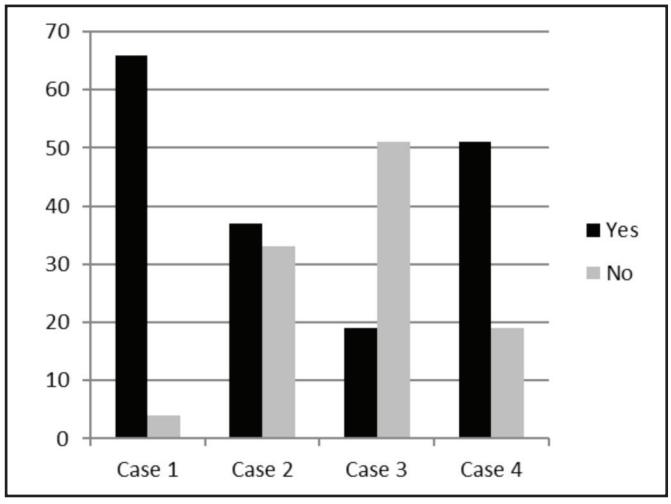

Fig. 2: Number of participants indicating case vignettes they perceived as medical errors.

There was no significant difference when comparing faculty members who are clinicians with those who are non-clinicians.

DISCUSSION

Our study shows that the faculty member's perception of error may not necessarily correlate with the complications arising from that case. Instead, it was probably dependent on how clearly an error had occurred. This may explain the higher numbers who perceived cases one and four as medical errors, whereas opinion was more divided in cases two and three, where the details within the case vignette were relatively more ambiguous. Patients, on the other hand, are more likely to perceive an error when complications ensue.[10] This highlights a key issue – patient's suspicions of a medical error may already be present when an adverse event has occurred, whereas faculty members may not take the same perspective, perceiving that patients should only be addressed when an error is clearly proven.

Additionally, the less clear cut response in case 4, where relatively less faculty members felt it was necessary to disclose the error in the absence of a harmful outcome, is consistent with other studies.[11,12] Gallagher *et al.*'s study demonstrated that clinicians tend to disclose errors only when harm has taken place. On the other hand, patients have mixed expectations in the event of near misses – some studies demonstrating that patients desired to know about even minor errors whilst others choosing not to know.[7,11,12] Faculty members may feel it is unnecessary to disclose near misses to patients for fear of creating unnecessary anxiety for the patients. There may also be a fear that disclosure may invite criticism, or even litigation – admitting an error does put one in a vulnerable position. However, not disclosing an error can also lead to harmful consequences the clinician involved, including emotional guilt and anxiety.[13,14] Conversely, some clinicians may see it more positively as an opportunity to be honest with the patient and create a stronger therapeutic alliance.[11]

We also found it interesting that as case severity increased, faculty members tended to attribute responsibility for the events towards more experienced clinicians, i.e. consultants and specialists. They also viewed experienced clinicians as more suitable to inform parents or next-of-kin of medical errors where the severity of complications increased. Faculty members also viewed that disclosure by experienced clinicians would decrease the likelihood of litigation (Table IV). In Malaysia, this is probably not unexpected as seniority and experience is often thought to lend credibility. We would argue that the presence of a senior figure, particularly for more serious cases, may give added assurance to a patient that his or her medical error is taken seriously. Existing studies show that patients do have differing expectations: Hammami *et al.*, in a study in Saudi Arabia, showed that most patients preferred the at-fault clinician to be the person disclosing the error.[15] Patients expectations are different in Japan, where the presence of a senior healthcare provider increases formality, credibility, and trustworthiness.[16] A qualitative survey in Australia by Iedema et al. demonstrated that patient's may want to be involved in deciding on who should be present at the time of disclosure.[17] We can conclude that differences do exist as to who should disclose the error and who should be present at the time of that disclosure. This is possibly influenced by local culture and expectations, and clinicians and health care providers need to consider these factors in their approach to disclosure. This may pose a significant challenge in Malaysia.

It is also important to note that evidence to demonstrate a reduction in litigation following open disclosure is sparse in this region. There have been reports of a reduction in litigation in Singapore, but the rest of the evidence comes from abroad, most notably the from the United States and Australia.[18] The authors for the various studies reported significant evidence of financial savings related to open disclosure, but reports on the wider implications of open disclosure, such as policy changes, cultural change, and the impact on staff workload remain unexplored.[19,20] In Malaysia, the need for open disclosure is an ethical imperative and required by the Malaysian Medical Council,[21] but there remains much uncertainty regarding the legal position on this issue, particularly from the point of view of liability. Currently, there is little understanding on the expectations of the public. Furthermore, little is understood regarding the readiness of the local healthcare institutions to embrace such change and the impact of such changes, issues that were highlighted from studies abroad.[19,20] Currently, there is ongoing concern regarding the preparedness of doctors in Malaysia for shared decision-making.[22] This deficiency, combined with the paternalistic outlook mentioned earlier, adds to the difficulty in preventing and handling medical errors.

This study possesses several limitations worth noting. Firstly, this study was limited to faculty members within the IMU and it may not represent the perception of faculty from other public and private universities. We hope that this initial study would open the door for a broader sampling strategy that will allow differences between various groups, such as clinical experience, specialisation and other characteristics to be better appreciated. Secondly, this study used hypothetical scenarios. Such hypothetical scenarios may not broadly represent the variety of clinical scenarios that faculty members may have encountered. However, there is potential to increase the validity of each case vignette as a measurement of quality of healthcare – case vignettes have been demonstrated to be a valid tool for this purpose.[23]

CONCLUSION

Faculty members are more likely to perceive an error had occurred depending on the clarity of the circumstances. The presence of complications is a significant factor in how faculty members viewed case severity. Case severity also determined how they attributed responsibility, duty to disclose, and other areas related to open disclosure. This first study on the perspective of faculty members towards open disclosure is important due to the unique position they hold in educating the next generation of doctors. The findings may have implications for those involved in medical education.

ETHICAL & INSTITUTIONAL APPROVAL

The study received ethical approval from the International Medical University's Joint Research and Ethics Committee (CSc/Sem6(31)2014).

PERMISSIONS

Permission has been obtained from the publishers to use the questionnaire by Hobgood *et al.*[7] for the purpose of this study.

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