Barriers to Reporting Clinical Errors in Operating Theatres and Intensive Care Units of a Teaching Hospital: A Phenomenological Study

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Abstract

Background: Clinical errors are one of the challenges of health care in countries; moreover, the obtaining of accurate statistics regarding clinical errors in most countries is a difficult process and varies from one study to another. The current study was conducted to identify impediments in the reporting of clinical errors in the operating theatre and the intensive care unit of a teaching hospital.

Methods This study was conducted qualitatively in the operating theatre and intensive care sections of a training hospital. Data collection was conducted through semi-structured with medical care staff and senior doctors and surgical assistants. Data analysis was carried out through listening to recorded interviews and developing tape scripts of the interviews. The meaning units were identified and codified based on the type of discussion. Furthermore, codes which had a common concept were categorized in one group and by using the designated groups, the main problems were derived. Finally, the codes and designated groups were analyzed, discussed and confirmed by a panel of four experts in qualitative content, and the existing main problems were identified and categorized.

Results: Barriers to reporting clinical errors were extracted in two themes: individual and organizational problems. Individual problems included 4 categories and 12 codes and organizational problems included 6 categories and 17 codes. The results showed that in the majority of cases, nurses indicated their desire to change current prevailing attitudes in the workplace while doctors expected reform policies dealing with clinical errors in teaching hospitals to be implemented at higher levels by officials.

Conclusion: in order to alleviate Barriers to reporting clinical errors, individual problems and organizational problems should be resolved. To reduce individual problems, it is recommended to train the nursing and medical team in the field of error recognition. In order to solve organizational problems in the nursing team, improve the process of reporting clinical errors and in the medical team, rectifying of legal loopholes should be considered.

Background

Hospital errors are among one of the key challenges of the health care service industry worldwide. In the United States of America, nearly one hundred thousand people lose their lives each year as a result of medical errors in as such that U.S statistics show medical errors as being the eighth leading cause of death among patients in the United States [1–3].Hospital errors also impose financial burdens on health care systems annually [4]; in as such that the National Health Service (NHS) spends for medication errors, five hundred million pounds annually for each additional day a patient spends in a hospital [5].

However, obtaining accurate statistics related to hospital errors is difficult in most countries and varies from one study to another. It is believed that only through the recognition of the rights of patients and an analysis of cases where these rights have been violated can such errors be identified [6]. Obtaining an overview of medical errors is more difficult in developing countries. This is not due to the fact that in

developing countries there are no medical errors, but because of improper reporting and a lack of an adequate records system which has been further intensified by a lack of research in this area [7].

In a study carried out in Tehran hospitals, The average medication error within 3 months for each nurse was 19/5 cases and the average medication error report in the same period was 1/3 of cases [8]. In Iran, the real frequency of hospital errors is not available, but experts suspect that, due to the large number of medical error claim cases referred to the Medical Council, the medical teams at hospitals might have a high rate of errors [9]. In addition, every year a considerable amount of money is imposed upon the Ministry of Health and Medical Education in Iran for the maintenance, care, and treatment of patients hospitalized as a result of medical errors which further verifies such a claim [10].

Reporting and disclosing errors is considered by the World Health Organization to be a useful learning strategy and the basis for the development of strategies to prevent future errors [11].Error reporting has a positive effect on patient safety and is a stimulus for change in the process of care. It contributes to the improvement of culture, knowledge, and attitudes towards voluntary anonymous incident reporting [12, 13]. It has also been considered as being one of the mechanisms required for the identification of reform in previous studies [14], however what actually occurs is that members of the medical team fail to report working errors [15]. In the literature of the study, the lack of reports related to medical errors raised concerns about the number of errors actually occurring and the need to study and identify the obstacles to reporting medical errors [6].In a separate study, the disclosure of hospital error occurrences were defined as the main cause for the reduction of such errors in health care organizations [9].

In studies that have been carried out in this regards, factors such as regarding the person who made the error as incompetent among other members of the medical team, fear of compromising one' s position [16], lack of legal and financial support for medical personnel who commit errors [2],the time-consuming process for reporting an error[17] the reluctance of members of the healthcare team to report errors [9] lack of understanding of the severity of the error [6], chastisement by directors and supervisors [18] and the recording of the error committed in one's personnel file [16] have been identified as the most important obstacles in reporting clinical errors. In study of Heard et al, disciplinary action, rebuke and lack of support by colleagues and also the unwillingness to discuss about the errors in hospital meetings have also been identified as major obstacles in reporting clinical errors among medical groups [19].

The occurrence of clinical errors in different departments of a hospital varies. Statistics show that 50% of all adverse hospital errors occur in operating theatres, in addition it has been reported that up to 10% of the mortality rates occur after surgery that is about a million deaths worldwide after surgery [20,21].On the next level after operating theatres, medical errors in intensive care units are responsible for 15 to 21 percent of the maximum harm done to hospitalized patients; however, the average suffering of ward patients is 10 to 16 percent [22].In addition, in previous studies, the mortality rate among patients in intensive care units as a result of hospital errors is 41%higher than among all other hospitalized patients in various wards [23].

In operating theatres and intensive care units of training hospitals, due to the high concentration of delivered services to patients, the existence of patients hospitalized with specific conditions and the variety of treatment groups, the environment involves higher risks and increases probability of medical error incidence. Therefore, controlling medical errors needs to be set as priority in managerial and nursing action plans [9] In medical error control process, identifying and minimizing impediments of reporting clinical errors using others learned lessons plays a crucial roll in decreasing clinical errors occurrence odds [24]; thus the current study aimed at identifying obstacles in reporting clinical errors in the operating theatre and the intensive care unit of a teaching hospital.

Methods

This current research was a qualitative research with phenomenology approach which was conducted using content analysis.

Participants:

The population for the study was selected from the staff in the operating theatres and intensive care units of a teaching hospital, Ahvaz, Iran. Inclusion criteria included job relationship and willingness of individuals to participate in the study.

The study group consisted of the staff of a general surgery operating theatre and the staff in three specialist operating theatres related to cardiology, angiography and organ transplant; in addition the staff of a general intensive care unit and three specialized intensive care wards related to the heart, general surgery and neurosurgery departments participated in the study.
Participants' career experience range was from 5 years to 26 years.
Specialists and postgraduate medical students (residents and fellowship students) in the general surgery, anesthesia, neurosurgery, and vascular surgery voluntarily contributed to the study.
Thirty nurses and 15 doctors were selected by purposive sampling method and in the next steps, some of them who had more experience were asked to participate in focus group sessions to confirm the findings.

Data collection:

Data collection was carried out via semi-structured interviews. The researchers started the interviews after set an appointment with people who met the inclusion criteria. Interviewees were asked to answer two key questions: "What prevents you or your colleagues from reporting clinical errors?" And "What factors make you or your co-workers more motivated to report of clinical errors?". Each interview lasted 30 to 45 minutes. The Interviews were carried out until data saturation occurred. This procedure took 3 months.

All interviews With the consent of the participants were recorded then verbatim transcribed.

Data analysis:

The data were analyzed through Colaizzi's method. Data analysis was recorded by listening to interviews and producing tape scripts. In the next stage meaning units were identified and codified. Codes having the same meaning were then categorized under one heading and the main problems derived from the said groups.

Finally a panel consisting of four-member experts in qualitative content analysis reviewed and analyzed the codes, organized the groups and verified determined the main areas where the problems exist.
In addition to check the trustworthiness of the data Lincoln and Guba's four-criteria (credibility, dependability, confirmability, and transferability) was use[25].The validity of findings increased by means of Investigator Triangulation. Also, after grouping the collected data, they were presented in focus group meetings for final confirmation.
10 of the experienced participants (consisted of doctors, head nurses, supervisors and the nurses in the operation theatres and intensive care units) attended these meetings.
Themes, sub-themes and gategories of impediments hindering the reporting of medical errors based on the recorded interviews were developed and in order to create consistency, experienced nursing and medical staffs in each area were invited for focus group sessions, in addition to senior physicians and surgical assistants. In general, four meetings (two meetings for nurses' and 2 meetings for doctors' perspectives) were held. All meetings were led by 2 researchers.

Ethical issues:

After receiving ethics code from the Research Ethics Committee of Ahvaz Jundishapur University of Medical Sciences (IR.AJUMS.REC.1396.182), researchers began conducting interviews.
The participants were informed about the aims of the study and confidentiality of their personal information.
In addition, before the beginning of the interview sessions, informed consent was taken from the participants to record interviews.
Experimental protocol was performed in accordance with the relevant guidelines and regulations.

Results

Twenty nine codes in 10 categories were extracted from interviews. These categories were classified in 2 themes as individual and organizational problems. Each of these two themes was showing the perspective of two involved groups, nurses and doctors. Individual problems from nurses' perspective included 7 codes and 2 categories and Organizational problems from their perspective consisted of 9 codes and 4 categories. Individual problems from doctors' perspective contained 5 codes in 2 categories and organizational problem from their perspective included 8 codes and 2 categories. Two categories, educational and attitudinal problems, were commonly extracted from interviews of both nurses and doctors' groups. However, these two categories were deducted from different cods, remarks and implications; therefore, we did not merge them to prevent losing some valuable remarks and perspectives.

Table 1 shows nurses' views on individual problems.

Table 1
Main Headings of "Individual Problems "Inhibiting the Reporting of Clinical Errors by a Healthcare Team

Themes	Categories	Codes	Semantic units
Individual problems	Problems associated with individual training	Lack of knowledge about types of error	1. Unawareness that the action is an error. 2. The Extensiveness of clinical errors
		Failure to provide continuous and in depth training of staff	1. Accepting numerous novice medical trainees in the education system, The need for on-going education 2. Forgetting some of less used clinical procedures may result in unawareness of a clinical error occurring 3. Failure to use different and modern training methods in order to motivate staff to actively participate in training programs
		Failure to cover all credit hour courses at university	1. Lack of sufficient scientific information related to the use of potentially hazardous drugs or required dosages and inability to recognize the occurrence of the error. 2.Lack of awareness regarding the benefits of reporting clinical errors
		Flaws in Hospital Training	1.All members of the nursing staff are not equally present during training sessions 2. Staff are not aware of the effects of clinical reporting and follow-up on the enhancing of patient well- being and the enhancing of the quality of care service provided
	Problems associated with Individual Attitude	Natural Inclination to cover-up an error	1. It is in the interest of most people to maintain the appearance and image of their occupation
		Complications as a result of reporting errors	1. Upon observing any drug interactions, the staff member must check the drug manufacturer's leaflet to identify which element of the drug causes the reaction which in most cases this action is beyond the scope of the medical team. 2. Aides and trainees believe that the reporting of clinical errors is the sole responsibility of the ward 3. A clinical error might be repeated numerous times by the staff yet since no reporting is done, the clinical error becomes repetitive and a trivial matter.
		Fear of jeopardizing job security	1. Sometimes a staff member's occupational errors or oversight are recorded as detriments in his or her personal file, which may have consequence for the person in the future.

Many of them considered educational problems as the most important obstacle to reporting errors. "I do not know exactly what errors need to be reported and followed up" (Participant 5). "At university, we were not well taught patient safety issues" (Participant 13). "I have just started my job in the hospital and I am not aware of the error reporting process" (Participant 24). Some nurses also reported attitude problems. "Reporting an error is very time consuming and I do not have enough time to do it" (Participant 8). "No one reports an error because they are afraid to be seen as a wrongdoer" (Participant 19).

Table 2 lists the categories and codes related to the theme of organizational problems from the perspective of nurses.

Table 2
Main Headings of "Organizational Problems" Inhibiting the Reporting of Clinical Errors by a Healthcare Team

Themes	Categories	Codes	Semantic units
Organizational problems	Motivational problems related to reporting clinical errors in a system	Failure to obtain expected results	1. Staff members do not obtain the expected outcomes from reporting clinical errors. 2. Inspiring people who have no direct connection with the recording and reporting of clinical errors. 3. Failure to take corrective measures taken after reporting clinical errors 4. Failure to provide financial incentives for reporting clinical errors 5. Concessions should be proportional to the type of clinical error reported
		Suspicion of colleagues and all members of the healthcare team	1. Person at fault is ostracized by colleagues 2. Person at fault feels that other colleagues are talking about the clinical error arising from his/her negligence
		Censure by Nurse Supervisor	1. Person at fault severely criticized by Ward Supervisor 2. Lack of cooperation with person at fault such as granting leave requests 3. Though the error might be minimal it will have long-term consequences and repercussions.
		Fear of Physicians Managerial Role or positions	1. Clinical errors are not reported to Physicians belonging to the University or Board of Directors of the hospital. 2. Failure to report a clinical error due to a Physician's negligence 3. Fear of censure by the attending physician once the clinical error is reported
	The procedural problems of the system	Medical staff workload	1. Lack of sufficient time to record and report errors due to the shortage of ward staff 2. An increase in patients seeking treatment at Training hospitals especially after the health reform Act and the inequality of the ratio of patient to medical care staff even after more than three periods of nursing and medical care staff employment. 3. Failure to have a skilled staff member in patient

Themes	Categories	Codes	Semantic units
		Problems with Reporting Clinical errors	1. Current forms are extensive and complicated for the recording of clinical errors 2. The majority of the medical staff are unaware about the procedure for reporting clinical errors 3. Unavailability of clinical error Report forms during all the hospital shifts. 4. The defective and lengthy process for recording the clinical error through the clinical error database
	Structural problems	Failure to have a HSE Manager at the hospital	1. An HSE officer in addition to a supervisor should be assigned to each shift.
		Failure to provide a psychologist in high-risk wards	1. Failure to provide a trained psychologist in high risk wards whom would be responsible to predict possible clinical errors in the ward and to mentally prepare the staff for dealing with potential clinical errors.
	Managerial problems	Indifference of Top Management in dealing with clinical errors	1. Failure to control the procedure and method of reporting of clinical errors on the ward by ward supervisors and Head of shifts. 2. Failure to create an HSE culture 3. Ward staff are at minimum and therefore there is a heavy work load in teaching hospitals ,as a result administrative staff have lower expectations from the health care staff to focus on the patients well -being and to report and follow-up clinical errors. By the same token the personnel fail to give enough attention to the aforementioned issues. 4. lack of transparency about the use of recorded clinical errors (especially when used for the improving of quality of service) 5. Administrative staff applies subjective discretion when a clinical error occurs.

Some nurses mentioned motivational problems to be effective in lack of reporting errors. "If they report an error, no one encourages them and the head nurse may even treat them badly" (Participant 14). Some nurses considered procedural problems to be very important. "We are facing a shortage of nursing staff in the hospital, which leads to negligence in the workplace and failure to identify or even report clinical errors" (Participant 26). A number of nurses reported structural problems. "There is no one in the hospital who can act as a patient safety manager and guide us" (Participant 11). Management problems were also among the problems mentioned by nurses. "The issue of reporting clinical errors is not important to

some nurses because top management officials do not take any specific action to control these errors" (Participant 6).

Table 3 shows the barriers to reporting clinical errors (individual problems) from doctors' perspectives.

Table 3
Main Headings of "Individual Problems" Inhibiting the Reporting of Clinical Errors by doctors and medicine students

Themes	Categories	Codes	Semantic units
Individual problems	Educational problems	Lack of emphasis on ethics	1. Weakness in training how to identify clinical errors and the type of action required upon the occurring of such errors 2. Not accepting some clinical errors as uncontrollable events 3. Failure to apply suggested solutions in valid Medical books such as the holding of regular self-expression meetings where one's clinical errors are viewed and communal experience is shared
		Preference to a Practical rather than a theoretical approach to research	1. Due to the high volume of work, trainees find little time to study and most of the academic training done is carried out during bedside visits, thus little research activity occurs
	Attitude problems	Unwillingness to disclose errors	1. Even In cases where the lack of equipment or failure of a device cause clinical errors, physicians fail to report the error.
		Report clinical errors is within the Nurse's scope of duties	1. Most physicians consider recording and reporting clinical errors as being related solely to a nurse's scope of duty.
		Financial interests	1. Physicians fear the loss of clientele after reporting clinical errors.

Some doctors cited two codes as educational problems associated with lack of reporting errors: first, the Lack of emphasis on ethics, and second, prefering of practical approach to theoretical onesin research. "Some nurses are not able to communicate with the patient and his family, which leads to the refusal to disclose the error" (Participant 4). "A complete definition of clinical errors has not been provided to the nursing staff" (Participant 10). Some doctors also expressed attitude problems. "doctors have to cover up their mistake to maintain their reputation if they make a mistake" (Participant 12). "Registration and reporting of clinical errors is within the scope of nurses' work and does not concern us [doctors]" (Participant 7). Financial benefits were also important to some doctors. "If doctors expose clinical errors, they may lose their patients" (Participant 1).

Table 4 shows the barriers to reporting clinical errors (organizational problems) from the perspective of doctors.

Table 4
Main Headings of "Organizational Problems "Inhibiting the Reporting of Clinical Errors by doctors and medicine students

Themes	Categories	Codes	Semantic units
Organizational problems	Problems in the Hospital	Severe Chastisement by Senior physicians	1. The tendency to severely chastise trainees has resulted in the lack of reporting of clinical errors unless catastrophic. 2. In most cases, Senior residents on the ward fear being chastised by their professors and are therefore unduly harsh with trainees.
		Unconventional Punishment	1.Even a minor clinical error will have sever repercussions and will earn the distrust of Professors and other physicians
		Lack of close monitoring in high risk cases	1. In the case of an emergency or during the night shift, Professors rely solely on reports provided by aides.
		Long shifts and high work loads	1. Trainees may sometimes work consecutive shifts over several days causing fatigue which minimizes their ability to report clinical errors
		Lack of standard forms for reporting clinical errors	1.There are no preset forms for recording and reporting clinical errors as to date.
	Problems related to External factors	Legal Loopholes	1. Failure to obtain informed consent from patients for therapeutic intervention and its associated risks at training hospitals. 2. The majority of patients visit training hospitals are underprivileged financially
		Lack of compatibility between legal sentences and Standards	1. Lack of devices and facilities for the performing of medical procedures at training hospitals or the faulty operation of existing devices results in an essential medical procedure being carried out with and in the case of a clinical error occurring, the law imposes penalties on the level of developed countries where standard equipment and devices exist.
		Subjective view	1. The Physician is considered by law as the sole perpetuator and condemned as such.

Some of the identified problems were at the hospital level and some at higher levels of the hospital. Problems that raised by doctors at the hospital level were: "Due to the severe treatment with surgical assistants by professors, we report clinical errors only in very catastrophic cases and usually do not report minor errors" (Participant 2). "There is no preset forms for recording and reporting clinical errors, which will lead to disregard for error reporting" (Participant 7). "We receive unreasonable penalties from professors for very minor errors" (Participant 14). Some doctors pointed to problems related to higher

levels of the hospital. "The educational system has been established with the aim of training students thus a trainee is likely to commit errors during such a period; however no error in a training hospital is accepted by law." (Participant 8).

Figure 1 shows the overall results of the factors limiting the reporting of hospital errors by Nurses and Physicians.

Discussion

In the current study the reasons for and the manner in which clinical errors occur and are identified in a teaching hospital were elicited through the interviewing of Medical and nursing groups. Among the nursing staff, the most significant obstacle impeding the reporting of clinical errors was that related to hospital systems which in the study was categorized as Organizational problems, while among Physicians this was identified as external problems related to the governing of the health care system and there beyond the confines of the hospital itself.

In most cases, nurses sought to change the prevailing attitude and practices. However, the doctors expected a modification in the policies related to the dealing with clinical errors in teaching hospitals on a governmental level. All the interviewees also requested a method for resolving the dealing with individual attitudes and concurrent training in the identifying of clinical errors and methods of self-reporting.

The two main categories of individual and organizational problems were determined as being the main problems identified in the interviews carried out among all members of the treatment group. The medical staff of operating theatres and nursing staff had the highest rate of individual problems especially regarding a lack of information about various errors due to the extensiveness of clinical errors and defects in concurrent training carried out at hospitals.

Acording to a study in Iran, 73% of lack of reporting clinical errors was due to the lack of awareness of the error itself [26]. Nurses lack of awareness of the definition of hospital errors is mentioned as the main cause for the lack of reporting clinical errors [27]. Also in other studies, one of the main barrier to reporting and disclosing errors was: lack of a unified and standard definition regarding the seriousness of errors and their eligibility for reporting and disclosing[28,29]Some studies have shown that the number of clinical errors reports filed by the staff is far less than those reported after the staff has received training on how to identify hospital errors [1, 26]. Alijanzadeh et al and Beiranvand et al has recommended training of hospital staff in identifying common clinical errors in hospitals [17,30]. The training of medical staff during their undergraduate period and during concurrent training courses in hospitals in the area of common and life threatening clinical errors and methods for dealing and informing patients of the error and efficiently reporting the clinical error will aid in the development of a culture of self- reporting clinical errors and will ultimately result into a diminishing of such errors in the hospital.

In the nursing team, the significant codes categorized under one's personal perspective regarding the obstacles hindering the reporting of clinical errors were the fear of losing one's job, concern regarding the consequences of reporting errors, the inherent tendency to conceal one's errors and the striving to maintain one's social status all elements which have been discussed in previous studies. Heidari states that 38% of the not reporting clinical errors are due to the person's fear of losing his/her job [26]. In another study performed in teaching hospitals in Iran, 46% of the lack of reporting of clinical errors occurred as a result of one's fear of jeopardizing his/her job [2]. In addition, Nurses reported that disclosing and reporting practice errors could damage patients' trust in nurses' competencies and might lead to litigation [31].Based on the aforementioned reasons, one may conclude that in order to minimize the personal perspective of the staff in medical and treatment centers regarding clinical errors, a systematic approach must be instigated in order the increase the reporting of clinical errors in such centers.

The interviews carried out on the issue of organizational problems indicated that this category has a number of major issues among which the motivational factors for reporting clinical errors; organizational problems and managerial problems were all considered as subcategorizes. Most of the interviewees indicated that their speech and comprehension of what is required from them as being a type of organizational problem and they considered this aspect as being one of the main reasons for the occurrence of clinical errors.

Nurses stated that the lack of any sort of feedback after reporting a clinical error is another reason for the lack of reporting clinical errors in hospitals. This issue was categorized under motivational problems in reporting clinical errors. In a study carried out in Southern Australia by Evans it was seen that the lack of sort of feedback after the disclosure of a clinical error resulted in further reporting of clinical errors [32]. Some nurses believed that positive feedback could be initiated in the form of a financial reward; others mentioned receiving incentives such as complimentary leave, yet others indicated the implementing of change in order to minimize clinical errors as a sign of suitable feedback.In a study carried out by Elder it has been observed that receiving financial rewards motivates the reporting of clinical errors [14].With due regards to the fact that reporting clinical errors in the health system is an effective means for the identifying of clinical errors and the resolving of them in the hospital, it is believed that by creating the necessary motivational factors for nurses to report clinical errors or whom offer solutions to reduce or eliminate clinical errors the necessary environment for reporting such errors will develop and will affect the development of a systematic approach in health and treatment centers.

Wagner et al. noticed several barriers in reporting and disclosing practice errors including negative reactions and feedbacks by nurse leaders, encouragement of selective reporting of incidents, ignoring nurses' clinical reasoning and judgment in handling error reports, anonymity and confidentiality issues, concerns over being sued and reprimanded by administrators at the workplace, and endangering nurses' professional reputation [28]. nurse leaders are responsible for encouraging error disclosure through policy making, creation of a supportive culture, and encouraging nurses to consider ethical values via provision

of care, education, and mentorship [33]. It should be noted that by converting negative feedback into positive feedback, it is possible to provide the basis for voluntary error reporting by medical care staff.

Another influential factor in the lack of reporting of clinical errors was the lack of an HSE manager on hand in the hospital in order to supervise the implementing of the necessary scope of services related to the safety and well-being of the patient, and to initiate training in the reporting of clinical errors in addition to the following up of such reports. These were categorized as structural problems during the analysis carried out by the panel and which have not been discussed in most studies. In recent years and based on the evaluation standards implemented in hospitals throughout the country it has been advised that an HSE department be established; however due to staffing problems, the majority of hospitals have not been able to establish such a department. Seidi in a study on nurses' perspectives regarding impediments in the reporting of clinical errors states that most of the participants reported that forgetting to report the clinical error was the main reason for the error not being reported. This in itself is related to the lack of an official responsible for the supervising of such reports and recording of the number of reports in hospitals [34].

The lack of a standard reporting procedure for reporting clinical errors was another important obstacle mentioned by the health care staffs hindering adequate reporting of clinical errors in our study. Unclear process for reporting clinical errors is maintained in other studies in Iran [17 ,34]. In addition, lack of knowledge of existing reporting process and not trusting in current digital systems for reporting has identified as other barriers to error reporting [28,29]. It seems, through new accreditation system platform, that is proceeding in last decade by ministry of health, establishing a unified effective process for reporting medical errors will not be far from reach. By creating a standard system to record and track clinical errors by senior physicians, there will be a reduction in the type of reporting carried out on the basis of personal taste by other medical professionals and the health care system which in itself will reduce clinical errors. Moreover, it will aid in the identifying of high-risk areas that most surgical assistants cause a clinical error to occur and thus create the necessary foundation for their future training.

In 2004, to mark the fifth anniversary of the establishment of The Institute for Reporting Medical Errors in the United States the Five Principles of Patient Safety were reviewed and amended, among which the most important was the amending of the second principal related to the method for systematically reporting clinical errors [35].Such an action in itself indicates the importance of error reporting systems in reducing clinical errors. Shams al-Din has proposed that the establishing of effective systems for the recording and reporting of errors is a practical means to effectively reduce such errors [36]. In other studies the creating of a rapid response system for reporting clinical errors has been advocated [14].

Managerial problems such as a hospital's managerial level's lack of active participation in the controlling of errors and also the self –centered perspective afforded by most of the aforementioned officials to clinical errors has also been considered as an obstacle to the reporting of errors in the past and are categorized under the heading administrative problems. The lack of active participation on part of the

hospital's administrative staff regarding the controlling of clinical errors was not evaluated in prior investigations ,while these investigations did emphasis the self-centered perspective of managers [2, 27].Furthermore, the lack of a suitable reaction on part of the existing administrative structure when clinical errors were reported, as has been indicated to throughout this study and other previous studies, is has been associated to the inactive participation of high level managers in controlling clinical errors.

In an interview conducted with surgical assistants' clinical errors were regarded as a major problems in the healthcare system, and other obstacles such as the lack of emphasis on ethics, the inability to communicate effectively with patients and the lack of a precise definition for the probable types of errors manifest in surgical residency training were categorized as "training problems " which in themselves are a sub-category of "individual problems."

Kuhpayehzadeh investigated the perspective of medical residents at Tehran University of Medical Sciences regarding the self-reporting of clinical errors and found that % 91 the medical residents preferred to learn how to identify and report clinical errors [37]. Senior physicians believe that training and the holding of self- expression sessions with the purpose of creating an atmosphere of reporting clinical errors in addition to the sharing of one's personal experiences, and the teaching of professional ethics will aid medical assistants after graduation towards a reporting and rectifying of clinical errors in the workplace. In the same category, the using of Specialist consultants has been recommended in critical conditions [37].

The brusque treatment of patients by Senior physicians is among the other codes specified at the level of the hospital. Prior studies show that % 68 percent of residents fear conflict with senior physicians and do not therefore report clinical errors [37].However, Most senior physicians in training hospitals believe that the lack of reporting of clinical errors is due to the lack of support by high-ranking officials in the education systems and the existing legal loopholes with is in contrast to the educational mission of training hospitals where surgical assistant should be taught what to do at the bedside of a patient. It is believed that policy-makers on the upper echelons of the health care system must alleviate the fear of reporting clinical errors in order to enhance the patient's well-being and rectify the legal short comings and modify the existing laws accordingly.

Limitations

One of the limitations of this study was that it was conducted in only one hospital; hence it needs to be cautious to generalize the results. Participants' inadequate time for interviews was another limitation of this study.

Conclusion

The results obtained from the study show that in order to alleviate the obstacles hindering the reporting of clinical errors, the two categories of individual problems and organizational problems should be resolved. It is proposed that in order to alleviate individual problems, the hospitals must train the nursing

and medical staff to be able to identify clinical errors; to have the capability to self- report errors, and to apply various methods to deal and inform a patient when a clinical error occurs; moreover, the enhancing of the quality of reporting clinical errors and the reinforcement of methods for the systematic dealing with clinical errors have been also been suggested. In order to alleviate the problem of reporting clinical errors among Physicians, the developing of a system for the recording and follow up of clinical errors and the rectifying of legal loopholes related to the reporting of clinical errors have also been proposed.

Declarations

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Authors' contributions

F.F and S.Gh contributed to the concept and design of the study. S.Gh and B.D contributed to the data collection. All authors contributed to the data analysis and writing of the manuscript. All authors have read and approved the final manuscript.

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Availability of data and materials

Data sharing is not applicable to this article as no datasets were generated or analysed during the current study.

Ethics approval and consent to participate

This study was approved by ethic committee of Ahvaz Jundishapur University of Medical Sciences (IR.AJUMS.REC.1396.182). Also before the beginning of the sessions, informed consent was taken from the participants.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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Figures

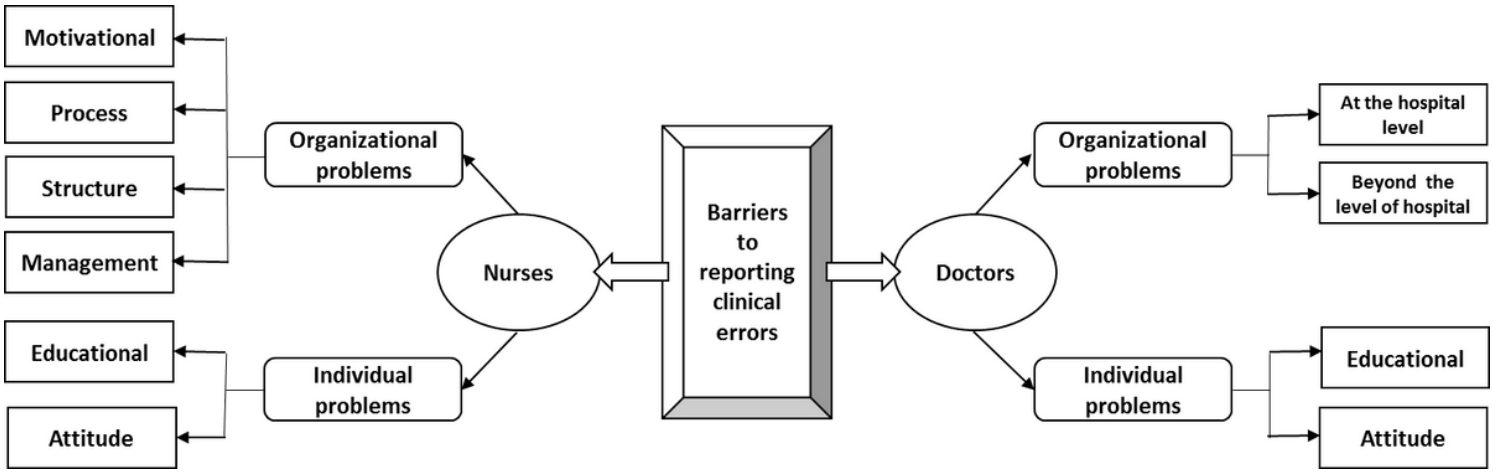

Figure 1

Impediments to reporting errors from the perspective of Nurses and Physicians