

## ARTICLE

# Anesthesiologist-Surgeon Conflicts at the Workplace: An Exploratory Single-Center Study from Egypt

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## Abstract

**Background:** Professional relationships, in particular between anesthesiologists and surgeons, have been identified as a major source of conflict at the work place. **Aims:** We explored some of the perceived causes of conflict between the surgeons and anesthesiologists in a single center in Egypt. **Method:** A cross-sectional study of 67 anesthesiologists and 50 surgeons at Mansoura University Hospital, Mansoura, Egypt was conducted between March and June 2011. A self-reported questionnaire explored 4 domains including 24 items covering causes of conflict. **Results:** There was a highly significant difference between the number of anesthesiologists and surgeons who considered the working relationships between them as disturbed (76.6% vs. 13.3%,  $p < 0.001$  respectively). The most powerful significant predictors of conflicts between surgeons and anesthesiologists were: patient pressure on surgeons, lack of regard to anesthesiologists' instructions, patients' unawareness of the role of anesthesiologists, poor information about

patients, decision about the urgency of operations, lack of departmental coordination regarding surgical priorities, lack of an out-patient anesthesia clinic and finally shortage of work facilities. **Conclusions:** We identified some causes that were perceived by participants to trigger conflicts between them. Attention to these issues may help bring about more harmony between surgeons and anesthesiologists at the work place.

**Key word:** Conflicts, Surgeon, Anesthesiologist, Exploration, Egyptian, Hospital.

## Introduction

Conflict in the healthcare environment is defined as any dispute, disagreement, or difference of opinion related to the management of a patient involving more than one individual and requiring some decision or action (1). Conflicts occur on a continuum ranging from minor disagreements and differences of opinion, to personality clashes and bla-

tant hostility including physical confrontations. In addition to the level of intensity, conflict can be categorized according to duration as acute, subacute, chronic and interminable. Several characteristics of the healthcare environment make it especially susceptible to frequent and potentially intense conflicts (2). Some studies suggested that conflicts between healthcare professionals repeatedly occurred during the management of about 50% to 78% of patients and 38% to 48% of these involved clinician-clinician conflicts (3,4). It was reported that at least 20% of physician executives' time was spent dealing with conflicts (2). Brainstorming groups at stress management seminars in the UK repeatedly identified 'professional relationships, in particular anesthesiologists with surgeons' as one of the stressors and a major source of conflict. Indeed one of the important workplace characteristics of anesthesiologists, which distinguishes them from most other medical specialists, is their close working liaison with surgeons that may initiate workplace conflicts between them (5). Conflicts are predictably common in complex, high-stakes, high-pressure work places such as operating rooms (ORs) (6). These are high-stress and volatile workplaces where the potential for interpersonal conflict is especially heightened (2). In these complex and stressful workplaces, interpersonal conflict can emerge from differences in information, values and beliefs, experience, roles, interests, and goals (7). In ORs, conflict can also emerge from a broad range of professionals that have overlapping and in many cases, poorly delineated areas of responsibility. Furthermore, the OR is the only location within a hospital where two coequal physicians regularly and simultaneously share responsibility for one patient (2). A smooth working relationship between the surgeon and the anesthesiologist is vital for efficient surgical procedures, lowering the degree of professional burn-out and high quality patient outcomes. The real causes of conflicts between anesthesiologists and surgeons have not been well explored to date to the best of our knowledge. The aim of this study was to explore some of the perceived causes that trigger conflict between surgeons and anesthesiologists, specifically conflict predictors as perceived by each group.

## **Subjects and methods**

### ***Settings***

The study was conducted in Mansoura University Hospital, Mansoura, Egypt between March and June 2011. Staff members of the departments of Anesthesia and Surgery were invited to participate. The total number of anesthesiologists and surgeons were 134 and 100 respectively; 67

anesthesiologists and 50 surgeons were selected by systematic random sampling. Response rates were 95.5% for anesthesiologists and 90% for surgeons; overall response rate was 93.2% (109/117). Non-participation was due to lack of interest, absence or incomplete questionnaires. The study was approved by the Institution Review Board and participants gave verbal informed consent. The questionnaires were completed by staff members who responded in their own time and in privacy.

### ***Study Tool***

An anonymous self-administered questionnaire was used for data collection. The survey instrument was developed from the literature and informal discussions with physicians. It was pre-tested in a pilot sample and modified accordingly. The questionnaire consisted of two separate parts: demographic and working relationship characteristics of the respondents (Section 1) and causes of conflicts between surgeons and anesthesiologists (Section 2). For section 2, open-ended questions were asked and respondents indicated causes they thought could trigger conflicts between anesthesiologists and surgeons. The responses were coded using the response variables to determine the coding guide. The open-ended questions were later coded and quantified. Responses were categorized into 4 domains of potential leading causes of conflicts: 6 items representing personal factors, 2 items representing patient-related factors, 11 representing work-activity factors and 5 items representing hospital policy-related issues.

### ***Data analysis***

The content validity was determined by consulting two literature experts. The questionnaire was pre-tested among doctors who were not study participants and Cronbach alpha coefficient of internal consistency was 0.85. Data were analyzed using SPSS (Statistical Package for Social Sciences) version 11. Chi square test was used to determine whether differences in responses between surgeons and anesthesiologists were significant (T-test was used to compare the mean age of both groups). P value < 0.05 was considered statistically significant. For comparison in order to evaluate the agreement among surgeons and anesthesiologists on the leading causes of conflicts between them, items with multiple response levels were collapsed into binomial variables of "agree" and "disagree". Multivariate regression model of the dependent variable on the predictors were run and multivariate p-values were calculated.

**Results**

**Demographic Characteristics**

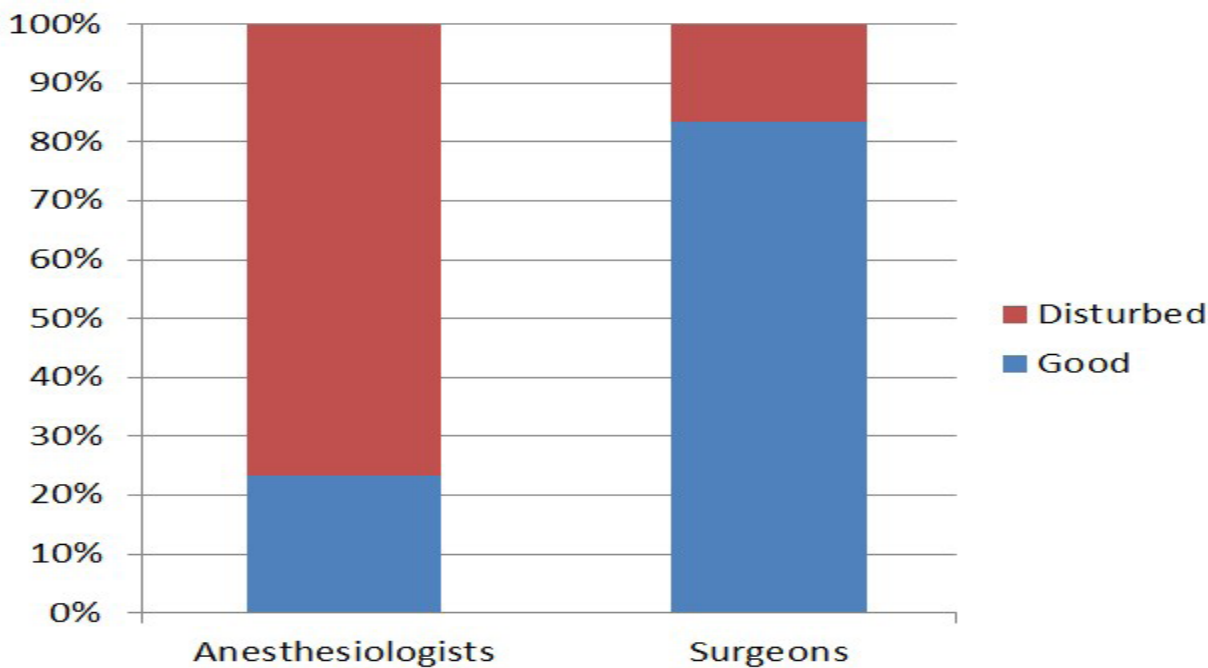
Anesthesiologists were on average marginally (but not significantly) older than surgeons (Table 1). All surgeons were men whereas 25% of the anesthesiologists were women. Most respondents (80%) were married. There was a highly significant difference between anesthesiologists and sur-

geons who considered the surgeon-anesthesiologist working relationship as disturbed (Figure 1).

**Perceptions of Surgeons and Anesthesiologists:**

The three main domains of potential causes of conflicts were different between anesthesiologists and surgeons. Anesthesiologists were more likely to cite personal, work

<b>Table 1.</b> Socio-demographic and working relationship characteristics of the studied surgeons and anesthesiologists.			
	<b>Anesthesiologists N = 64 (%)</b>	<b>Surgeons N = 45 (%)</b>	<b>P-value</b>
<b>Age (years):</b> (Mean ± SD)	34.7 ± 7.32	33.9 ± 6.82	NS
<b>Gender:</b>			
Male	48 (75.0)	45 (100.0)	0.000
Female	16 (25.0)	0 (0.0)	
<b>Marital status:</b>			
Married	50 (78.1)	36 (80.0)	NS
Unmarried	14 (21.9)	9 (20.0)	
NS = not significant			



**Figure 1.** The contrasting perceptions of surgeons and anesthesiologists of the relationship between them as good (blue) or disturbed (red); differences between them are highly significant (P<0.001).

**Table 2.** Personal and patient related factors perceived by the studied surgeons and anesthesiologists as one of the causes for conflicts between them.

Causes of Conflicts*	Anesthesiologists N = 64 (%)	Surgeons N = 45(%)	P-value
<b>Personal-related factors:</b>			
1. Inadequate inter-personal skills	64 (100.0)	45 (100.0)	----
2. Social interaction outside work	61 (95.3)	26 (57.8)	0.000
3. Lack of appreciation	64 (100.0)	14 (31.1)	0.000
4. Personality traits	45 (70.3)	26 (57.8)	0.18
5. Difference in values and beliefs	32 (50.0)	22 (48.9)	0.91
6. Communication gap	40 (62.5)	25 (55.6)	0.47
<b>Patient-related Factors:</b>			
1. Patient pressure on the surgeon	0 (0.0)	45 (100.0)	0.000
2. Patients' unawareness of the anesthesiologists' role	60 (93.8)	1 (2.2)	0.000
*Categories are not mutually exclusive.			

activity and hospital categories as conflicts (Tables 2-4). Anesthesiologists thought lack of appreciation from the surgeons, patients' unawareness regarding their role and poor social interaction outside work were leading causes for conflict with the surgeons (Table 2). However surgeons, but not anesthesiologists, reported that patient pressure to perform surgery was a trigger to conflicts.

Both groups agreed that staff shortage and overwork with involvement in multiple duties were major causes for poor staff relationships (Table 3). Other work-related factors identified were inadequate work facilities, diffusion of responsibilities, lack of time management, decision about urgency of operation, poor information about the patient, uncooperative attitude at work and non-respect to anesthesiologists instructions were significant determinants for conflicts from the view of anesthesiologists. On the other hand, surgeons were more likely to complain that postponement

or even cancellation of operation and non-prompt response of anesthesiologist to call duty were significant causes for conflicts (Table 3). Anesthesiologists felt more than surgeons that poor departmental coordination about surgical priorities and lack of an out-patients anesthesia clinic were significant triggers for conflicts (Table 4). All respondents voted that lack of clear hospital policy to control staff-staff relationships or staff-patient relationships, fear of litigation and hospital pressure on the surgeon to clear more beds were causes for conflicts and their poor working relationships (Table 4).

According to the multivariate regression models, the most powerful significant predictors of conflicts and disturbed working relationship in both surgeons and anesthesiologists were ranked as patient pressure on the surgeon, non-respect to anesthesiologists instructions followed by lack of patient awareness with the role of anesthesiologists, poor

**Table 3.** Work activity factors perceived by the studied surgeons and anesthesiologists as one of the causes for conflicts between them.

Causes of Conflicts*	Anesthesiologists N = 64 (%)	Surgeons N = 45 (%)	P-value
Cancellation of scheduled operation	10 (15.6)	41 (91.1)	0.000
Staff shortage	64 (100.0)	45 (100.0)	----
Inadequate work facilities	59 (92.2)	5 (11.1)	0.000
Overwork and multiple duties	64 (100.0)	45 (100.0)	----
Diffusion of responsibilities	60 (93.9)	6 (13.6)	0.000
Lack of time management	58 (90.6)	7 (15.7)	0.000
Decision about urgency of operation	61 (95.3)	5 (11.1)	0.000
Information provided about patients	60 (93.8)	2 (4.4)	0.000
Response to call duty	10 (15.6)	40 (88.9)	0.000
Uncooperative attitude at work	62 (96.9)	12 (26.7)	0.000
Non-respect to anesthesiologists instructions	63 (98.4)	0 (0.0)	0.000

\*Categories are not mutually exclusive.

information about the patient, urgency of operation, lack of departmental coordination about surgical priorities, lack of an outpatients anesthesia clinic and finally the shortage in work facilities (Table 5).

### Discussion

In the current healthcare environment, it is important for all stakeholders within a facility to work as a team for optimal efficiency. No relationship is more crucial than that of a surgeon and an anesthesiologist. It is disturbing to note that the majority of anesthesiologists (about 77%) in this study

considered the working relationships with the surgeons to be troubled, thus conflicts remain. It was reported that in the opinion of many anesthesiologists, conflicts constitute the most challenging and stressful aspects of their job. Conflict in the operating room can hinder safe and effective anesthetic care, yet on the other hand, successful conflict resolution is an important component of teamwork and necessary for good patient care (2). Therefore, it is worth the effort to explore the leading causes of conflicts between the two professions that can disturb their working relationships. Females represented only 14.7% of the respondents

**Table 4.** Hospital policy and management-related factors perceived by surgeons and anesthesiologists as one of the causes for conflicts between them.

Causes of Conflicts*	Anesthesiologists N = 64 (%)	Surgeons N = 45 (%)	P-value
Poor departmental coordination about surgical priorities	57 (89.1)	2 (4.4)	0.000**
Lack of out-patients anesthesia clinic	60 (93.8)	5 (11.1)	0.000**
Hospital pressure on the surgeon to clear more beds	64 (100.0)	45 (100.0)	-----
Lack of clear hospital policy to control relationships	64 (100.0)	45 (100.0)	-----
Fear of litigation	64 (100.0)	45 (100.0)	-----
*Categories are not mutually exclusive.			

**Table 5.** Summary of logistic regression analysis for variables predicting the conflict between surgeons and anesthesiologists

Predictor	B	SE	WALD	df	Sig.	EXP(B)
Patient pressure on the surgeon	4.001	0.438	83.442	1	0.000	4.339
Non-respect to anesthesiologists instructions	4.739	0.532	79.535	1	0.000	2.885
Lack of patient awareness with the role of anesthesiologists	5.217	0.623	70.123	1	0.000	5.51
Poor information about the patient	3.579	0.441	65.863	1	0.000	1.359
Urgency of operation	2.661	0.358	55.249	1	0.000	3.773
Lack of departmental coordination about surgical priorities	2.833	0.404	41.456	1	0.000	4.632
Lack of anesthesia clinic	3.438	1.058	10.55	1	0.001	3.692
Shortage in work facilities	1.243	0.429	8.395	1	0.004	1.771
constant	2.11	.31	46.32	1	0.000	2.524

and all of them were anesthesiologists compared to none of the surgeons. This is a strange finding in Egypt, particularly in Mansoura, due to some considerations related to culture and beliefs that hinder staffing women in certain specialties. A more balanced gender distribution could perhaps reduce gender-role perception-based conflicts between the two professions.

Personal factors such as poor communication, personality traits, difference in values and beliefs were more commonly reported by anesthesiologists than by surgeons as having an effect on working relationships. Poor social interaction outside work and lack of appreciation by surgeons were found the most significant causes for conflict (Table 2). Personality traits that are commonly found among surgeons and anesthesiologists, such as perfectionism and compulsiveness, could make it more difficult for such physicians to acknowledge expertise of others and to relinquish control (9). Surgeons have often been perceived by other physicians in various terms with negative connotations such as dominating, cold, impersonal, impatient, aggressive, authoritarian, arrogant, prestige-driven and egotistical (5) and these could fuel conflict. However, others emphasized that poor communication was among the most common key factors leading to conflict among staff members (1).

In the present study, surgeons and anesthesiologists had completely different views about some matters. For instance, the majority of surgeons compared to none of the anesthesiologists significantly perceived patients' pressure to have surgery as a major issue. On the other hand, most of our anesthesiologists compared to only a single surgeon felt that lack of patients' appreciation for the anesthesiologist's role in his/her medical care was a cause of concern. When patients attribute to their surgeons more concern for their overall safety, ignoring the role of the anesthesiologist in their medical wellbeing and perioperative safety, often leads to frustration. Unfortunately many, if not all anesthesiologists have struggled at some point with issues relating to the status and image of their specialty; need for educating the individual patient and the public at large is necessary (10). Most patients don't realize the value of the anesthesiologist and the preoperative assessment geared specifically to detect and reduce anesthetic and surgical risk.

In this study, factors related to work activity such as staff shortages and overwork, were identified by all participants as major causes for conflict and poor staff relationships. Perennial staff shortage is common in health care institutions

in developing countries, including Egypt, due to decades of economic depression. The situation may have worsened in recent times by the migration of health care workers from developing to developed countries (11).

Similar conflicts have been described between other professional groups (e.g., between nurses and doctors in Nigeria) where staff shortage was identified as being an important determinant of poor working relationships (8). This factor plays an important role in patients' outcome (12, 13). Shortage of staff and overwork may lead to sleep deprivation and this, coupled with work pressure in an already stressful and volatile work environment may trigger interpersonal conflicts at a very low threshold, especially in the operating room. Furthermore, it was previously reported that inadequate staff leads to inefficient health care delivery, perceptions of uncooperative work attitude between health care professionals and further inefficiencies in health care delivery. This may increase the risk of disruptive behavior, which sets off a feedback mechanism where staffing shortage increases tension in the working environment, leading to a further exodus of health care workers (14). Uncooperative attitude at work and non-adherence to anesthesiologist instructions were the most frequently reported causes of conflicts among anesthesiologists whereas postponement of operation and non-prompt response to call duty were the most irritating causes for surgeons. Our results could be explained by the personality traits of surgeons, frequently described as dominating and centralized in decision making. Also, even when physicians have access to the same data about the patient, different individuals may have different perceptions of the significance based on their professional experience and role expectations. For example, evaluations of abnormal clotting factors can elicit differing opinions of the appropriate course of action between surgeons and anesthesiologists (2). It was reported that conflicts arising from role expectations are especially prevalent in intensive care areas of the hospital such as operating rooms. In most units of a health care facility there is a well-established pattern of hierarchical decision making, with the attending physician at the apex of the hierarchy. However, this hierarchy is blurred in operating rooms where clinical decisions are particularly complex and each of the team members may act as the final authority at various times and in various circumstances (15). Many anesthesiologists think that surgeons do care about their patients, but they also think surgeons can be fairly goal-oriented and single-minded about operating, proceeding when sometimes an operation should be delayed in favor of managing pressing medical issues

first. If/when anesthesiologists recommend to delay surgery until the patient's condition is optimized or corrected, surgeons may become angry and upset because they want to help the patient by getting the main job done, e.g., excision of a tumor or hernia repair. Many studies assessing the problem of operating room cancellations reported that the incidence related to anesthesia represented 2-14% of cases but could reach 21.8% in a tertiary care referral centre: the most common cause being patient safety, e.g., poorly controlled systemic diseases (16-18). Surgery related cancellations may reach up to 18.2%, mainly due to unplanned procedures and over-booking of surgical slots (17).

Other major factors influencing surgeon-anesthesiologist working relationships in this study were related to hospital policy and administration. All responders complained about fear of litigation, hospital pressure to clear more beds and lack of clear hospital policy to regulate physician-patient relationships. These results could be explained by the era of economic depression affecting developing countries, including Egypt, that place a great burden on governmental hospitals. Furthermore, the study revealed an absence of clear hospital policy to regulate physician-patient or physician-physician relationships and to protect doctors from any malpractice claim, which could explain the high fear of litigation. This fear of litigation could push the physicians to perform an act not for the benefit of the patient but solely to provide a good legal defense against any claim. In their efforts to protect themselves from lawsuits, physicians often shift their focus from the patient to the data. The desire for certainty in making a diagnosis is understandable, however, there is a point at which the danger and cost of additional tests outweigh the benefits. Additional tests may waste time and delay the start of operations, which consequently push the patient and hospital to put more pressure on the surgeon, thus the anesthesiologist-surgeon conflicts appear.

Lack of an anesthesia clinic was identified as a common anesthesiologist cause of conflict. Preoperative anesthesia clinics are known to help optimize medical conditions of patients before surgery (19), improve patient safety (17) and satisfaction (18), reduce the used resources in terms of preoperative medical consultation, laboratory investigations (20) and length of hospital stay (21). In addition, the preoperative visits to an anesthesia clinic for patient assessment have shown to decrease operating room cancellations (22).

In contrast, our surgeons focused more on the general poor inter-departmental coordination of surgical priorities as a source of conflict with anesthesiologists. This could be explained by the lack of a surgical committee to coordinate and prioritize cases admitted to operating rooms in our institution at the time of the study.

One limitation of this study is that only a single-center was involved which limits generalization of the results. Due to the cross-sectional nature of our study (based on self-reported information provided by physicians), potential for reporting bias may have occurred depending on the respondents' interpretation of the questions or desire to report their problems. Additional studies are needed to confirm these findings and further develop them using established psychological methodology such as semi-structured interviews.

In conclusion, the present study identified numerous causes that are perceived to contribute significantly to conflicts and disturbed working relationship between surgeons and anesthesiologists. Some of these causes were the same for participants in both groups, such as inadequate interpersonal skills, staff shortage and overwork. Conflicts and poor surgeon-anesthesiologist working relationships are seen world-wide and may affect physicians' productivity and attitude. Therefore, addressing these causes should help improve quality of healthcare and enhance harmony in the work environment. Healthcare management should work to develop more clear job descriptions and well defined roles based on mutual respect and relevant competencies of each specialty. Clearer hospital policies will reduce the fear of liability and litigation. A key feature for maintaining an effective anesthesiologist-surgeon relationship is optimal inter-departmental coordination.

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