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Evaluation of the disruptive behaviors among treatment teams and its reflection on the therapy process of patients in the operating room: The impact of personal conflicts

Maryam Maddineshat, Mitra Hashemi¹, Mahbubeh Tabatabaeichehr²

Abstract:

INTRODUCTION: Understanding the development and distribution of disruptive behaviour among members of a health-care team is critical to the safety and quality of patient care in high-risk environments such as operating rooms. The present study identified disruptive behaviour and its effect on the treatment of patients in the operating room environment.

SUBJECTS AND METHODS: This cross-sectional study used the convenience sampling method to select 144 operating room physicians and nurses (91 women and 53 men). The study was conducted in the operating rooms of four academic hospitals with different specialties in North Khorasan province in Iran from December 2013 to September 2014. The data were collected using a translated, modified, and validated questionnaire to investigate the prevalence and consequences of disruptive behaviour, the response of the health care system to the behaviour, factors affecting the creation of conflict and the spread of disruptive behaviour. Statistical analysis of the data was performed using SPSS 18.

RESULTS: Disruptive behaviour was reported by 82.95% physicians and nurses. On average, 39% of physicians and 21% of operating room nurses exhibited disruptive behaviour. Disruptive behaviour is associated with psychological and clinical consequences. Factors such as fear of retaliation (8%), lack of change (43.8%), lack of security (18.1%) and attitude of the organization (14.6%) are significant reasons for the failure to report these behaviours.

CONCLUSIONS: The findings suggest that disruptive behaviour occurs and affects treatment and workflow of treatment teams in the operating room. Interpersonal conflict contributes to the growth of such behaviour; thus, more research should focus on this subject in the future.

Keywords:

Conflict reflection, disruptive behaviour, operating room

Department of Nursing,
Nursing and Midwifery
Faculty, ¹Deputy of
Research and Technology,
²Department of Midwifery,
Nursing and Midwifery
Faculty, North Khorasan
University of Medical
sciences, Bojnurd, Iran

Address for correspondence:

Dr. Mahbubeh
Tabatabaeichehr,
Department of Midwifery,
Nursing and Midwifery
Faculty, North Khorasan
University of Medical
sciences, Bojnurd, Iran.
E-mail: chehr@nkums.ac.ir

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Introduction

Previous studies have sought to the importance of professional communications between physicians and nurses.^[1,2] However, disruptive behavior has not been specifically discussed. The operating room staff are generally under stress and stress is a source of conflict and the emergence of disruptive behaviour.^[3,4]

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The culture, profession, personality and social status of the staff members effect conflict and the emergence of disruptive behaviour, which can manifest in different ways among the various healthcare and hospital workers.^[5] The present study determined how disruptive behavior develops and its consequences to the care and treatment of patients in the operating room setting.

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Subjects and Methods

This was a cross-sectional study conducted using the convenience sampling method. The 144 physicians and nurses employed in the operating rooms (comprised 53 men [36.8%] and 91 [63.2%]) and included surgeons, anaesthesiologists, nurses, nurse anaesthetists, and surgical technologists. All were employed in the operating rooms of university teaching hospitals affiliated with North Khorasan University of Medical Sciences (Bentolhoda Women's Hospital Hospital, Imam Ali Hospital, Shirvan Hospital, and Social Security Hospital). The study was conducted from 22 December 2013 to 23 September 2014 after approval of the Ethics Committee (679/P/2013). Information was collected using a written questionnaire and by self-report. A total of 150 questionnaires were distributed to operating room physicians and nurses qualified to participate in the study and who had at least one year of work experience. 144 subjects responded to the questionnaire. The study had a naturalistic design. The exclusion criteria included unwillingness to participate in the study and complete the questionnaires. The four interviewers employed had been trained in this field and received instructions on how to complete the questionnaire. The interviewers arrived at the operating room wards at the beginning of each shift (morning, evening and night) and introduced themselves to the treatment team and explained the purpose of the study. They handed out questionnaires to those who agreed to participate. The participants were told not to write their names on the questionnaires and were assured of confidentiality throughout the statistical analysis. Disruptive behavior on the part of members of the treatment team was first defined and examples were offered in accordance with descriptions of the American Medical Association.^{16,71} The demographics of the participants were recorded anonymously. The relationship between physicians and nurses and the disruptive behaviour of the operating rooms physicians and nurses were examined. The first part of the questionnaire used a modified Farsi-language questionnaire (25 questions) on the relationship between physicians and nurses¹⁶¹ for which the validity and reliability were assured with a Cronbach's alpha coefficient of over 70%. The second part of the questionnaire was designed in five levels: prevalence of disruptive behaviour, attitude towards professional communication, consequences of disruptive behaviour, healthcare system response to such behaviour and factors affecting the development of disruptive behaviour. Some questions required yes and no responses, some were open-ended and some used a 5-point Likert scale (never, rarely, to some extent, often, always).

The obtained information calculated using SPSS 18 and analyzed by researcher.

Results

In this study, the number of men and women participants was 53 (36.8%) and 91 (63.2%). Of the total number of respondents, 111 were married and 33 were single (22.9%). Participants were 21 to 50 years of age with work experience of 1 to 30 years. The majority of respondents had BS degrees (51.4%) or associate degrees (38/2%). By profession, there were 73 operating nurses (50.7%), 49 nurse anaesthetists (34%), 4 nurses (2.8%), 1 surgeon (0.07%) and 17 anaesthesiologists (11.8%). The results have been organized into the following categories. Where a 1 to 10 rating response was required, "1" denoted the lowest score and "10" the highest score.

Disruptive behaviour of physicians and nurses in the operating room environment

Profession of those exhibiting disruptive behaviour

Disruptive behaviour by physicians toward nurses were cited by 95/8% of team respondents.

Disruptive behaviour by nurses towards physicians were reported by 70/1% of team respondents. On average, 82.95% of physicians and nurses reported disruptive behaviour by the other.

Prevalence of disruptive behaviour

The response to the question, "In your opinion, what percentage of physicians and operating room nurses exhibited disruptive behaviour?" on average, 39% of physicians and 21% of operating room nurses were reported as exhibiting disruptive behaviour.

Places with high rates of disruptive behaviour

Of the team respondents, 89.6% reported disruptive behaviour occurred most often in the operating rooms and 5.6% in the recovery ward.

Disruptive behaviour by surgical specialty

Team members cited the following specialties as most frequently exhibiting disruptive behaviour: orthopaedic surgeons (25.7%); female surgeons (15%); general surgeons (13%).

Frequency of disruptive behaviour

Weekly (41.7%), monthly (25%) and yearly (9.7%). A total of 35.4% of respondents reported monthly disruptive behaviour by nurses and 29.9% reported yearly occurrences.

Willingness of team to communicate in the operating room

A total of 72.4% of team respondents rated the importance of this relationship as eight or above.

Organization reaction to disruptive behaviour

Response of authorities to disruptive behaviour

Question 10 was, "How seriously was the disruptive behaviour of physicians taken by officials?". Question 11 was "How seriously was the disruptive behaviour of nurses taken by officials?" The scores for disruptive behaviours of physicians and nurses on a scale of 1 to 10 was 4.7 ± 5.21 and 9.8 ± 8 , respectively. It is evident that the disruptive behaviour of physicians was not taken as seriously by the authorities as that of nurses.

Disciplinary processes of organization

In response to the question, "How do you rate the legal response by authorities on decreasing disruptive behaviour by physicians and nurses?", team respondents responded 6.1 ± 3.35 for physicians and 7.4 ± 2.8 for nurses.

Effect of disruptive behaviour

Clinical and psychological consequences

Team respondents believed that there is a relationship between the incidence of disruptive behaviour and clinical, psychological consequences. Figures 1 and 2, respectively, show the clinical and psychological consequences of disruptive behaviour.

Adverse consequences

A total of 77.8% of respondents reported that they were aware of the adverse consequences of disruptive behaviour.

Threatening patient safety

A total of 27% of respondents felt that disruptive behaviour can threaten patient safety and 16.6% felt

that the disruptive behaviour can cause death of patients.

Decrease in quality of care

A total of 36.8% of respondents felt that disruptive behaviour can compromise the quality of patient care.

Reasons for failing to report disruptive behaviour

Reasons cited for failing to report and ignoring the disruptive behaviour included fear of retaliation (8%), lack of hope for change (43.8%), lack of security (18.1%), unfavourable attitude of organization (14.6%).

Discussion

The findings show that 82.9% of the operating room respondents have witnessed or been exposed to disruptive behaviour, confirming that such behaviour does occur in an operating room. The results were later compared with those of two studies conducted in and out of the operating room. A study conducted on 1600 executive physicians by the American Medical Association in 2004 showed that disruptive behaviour is a known problem among physicians, attendants, nurses, physician assistants and other health-care workers. More than 95% of respondents said they had been regularly faced with disruptive behaviour over the previous five years. An extension of the same study on 2100 physicians in 2009 showed that 98% of physicians and nurses have witnessed disruptive behaviour.^[7] Rosenstein and O'Daniel showed that 75% of attending surgeons, 64% of anaesthesiologists, 59% of nurses, 30%

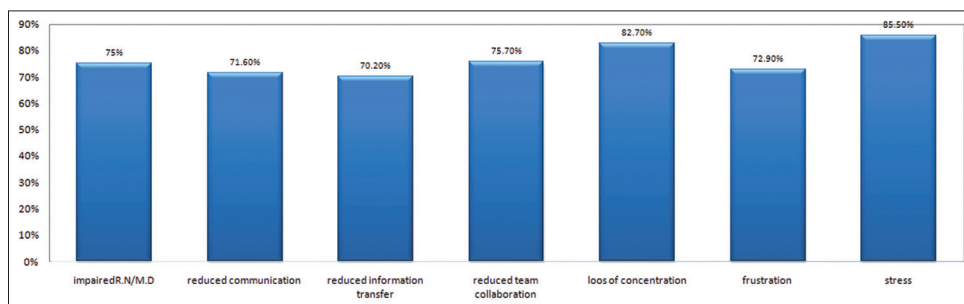


Figure 1: Clinical outcome of disruptive behaviors

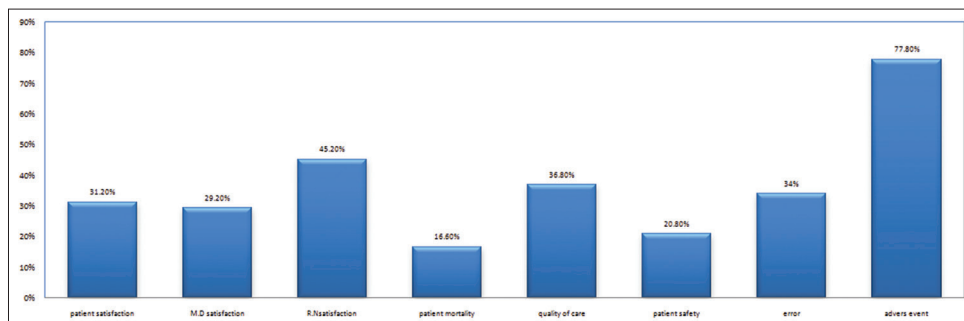


Figure 2: Psychological outcome of disruptive behaviors

of nurses anaesthetists and 30% of surgical technicians had witnessed disruptive behaviour in the operating room.^[8] A study of head nurses of a maternity hospital in the states of Washington and California in the US and in Uruguay showed that a total of 60/7% of respondents stated that disruptive behaviour occurs.^[9] Stecker *et al.* showed that disruptive behaviour is a large problem and was observed in 82% of health institutions. About 74% of 617 physicians and nurses have reported that they have witnessed disruptive behaviour and 5% have personally experienced them.^[10] Wachs *et al.* surveyed interns in Boston and found that 93% of 394 interns had experienced disruptive behaviour. About 54% reported that they have experienced it at least once a month. These respondents reported that nurses were most likely to cause disruptive behaviour.^[11] In a qualitative study of 19 staff members of an operating room in Chicago, Cochran and Elder found that participants reported disruptive behaviour by surgeons; verbal abuse and throwing or hitting objects were the most common.^[12] In a study of 2821 nurses in Florida, Small *et al.* found that disruptive behaviour occurred in verbal, physical and electronic forms and that every person had experienced this at least once in the previous 6 months. Researchers found that the vast majority of the previous studies evaluate disruptive behaviour in American health-care providers; no valid study was found for other countries on this topic in the databases.^[13] Another finding of the present study is about the awareness of the treatment team of disruptive behaviour in the operating room. From their perspective, professional communication in the operating room team is very important and defects in this connection have adverse clinical, physical and mental consequences. In addition, the quality of care and patient safety are compromised. The findings of this study are consistent with results those by Rosenstein and O'Daniel, Katz, Cochran and Elder, de Vries *et al.*, Rogers *et al.*, Stella, Patel *et al.*, and Wachs *et al.* All of these emphasized that disruptive behaviour negatively affects the partnerships and communication in the operating room and disrupts teamwork by the operating room staff. Disruptive behaviour in the operating is the main cause of error, which can have devastating consequences for patients, families, caregivers and the institute.^[8,11,12,14-18] Hu *et al.* reported that disruptive behaviour frequently occurs during complex surgeries in the operating room and has been observed as frequently as every 8 min. A total of 88.7% of such behaviour effects workflow and security in the operating room, which can result in ineffectiveness in 79% of personnel. Errors, delays and stress are other consequences in the operating room environment.^[19] The results of that study are in line with the findings of the present study. They found that most nurses had reported repeated disruptive behaviour in the operating room and that orthopaedic surgeons were the most disruptive. In line with these findings, other

studies indicate that surgeons show more disruptive behaviour than other personnel in the operating room. Disruptive behaviour is a source of interpersonal conflict and stress, particularly for nurses, and can be associated with reduced job satisfaction, stress, work absenteeism and sick leave.^[7] In a study of two surgical clinics in Germany, Antoniadis *et al.* found that there is a high level of distraction and interruption among operating room personnel that interferes with the work of the surgical team. Moreover, these events can negatively affect team performance and the outcome of the surgery. Defective equipment and strained relationships in the operating room are the most common causes of disruptive behaviour.^[20] Other findings cited ignorance and failure to report disruptive behaviour in the operating rooms. In other words, tolerance of and failure to report disruptive behaviour increased its frequency. In a study on the disruptive behaviour of surgeons in the operating room, Cochran and Elder reported that such behaviour is repeated periodically. Verbal abuse, being hit by or throwing objects are the most commonly-reported disruptive behaviours by surgeons. Such surgeons more likely to employ timid operating room personnel who tolerate disruptive behaviour because the surgeons enjoy unchecked authority and increase the profitability of the institute. Surgeons also exhibit more disruptive behaviour toward staff that have less authority in the operating room.^[12] In two studies, Rogers *et al.* reported that a high level of team conflict exists in the operating room environment and suggest the following solutions for conflict management in the operating room: proper training of procedures, defective equipment control, improving communication skills and problem-solving and strengthening the operating room team leader.^[16,21] The present study had several limitations, the most important of which was that it was conducted for a specific period of time; therefore, the study quality may be affect by the sample size. Another limitation was that the study was carried out in the operating rooms of academic institutions and, thus, the results cannot be generalized to other institutions. The use of the quantitative methods is another limitation. It may be necessary to use qualitative methods because of the complexity of disruptive behaviour to establishing neutrality when reporting such behaviour. It is recommended that future studies be carried out with larger sample sizes using mixed methods among all members of the operating room.

Conclusion

The results of the research indicate that disruptive behaviour occurs in the operating room among members of the treatment team and affects treatment by and workflow of operating room nurses and physicians. Conflict is a factor for the growth of disruptive behaviour

can be a direct cause of errors, threats to patient safety and job satisfaction. Although much has been written in this regard, no research has assessed disruptive behaviours in the treatment team in different countries. Factors such as culture, institutional policy, moral issues and personal conflict effect the spread of such behaviour. Further study is necessary to identify these behaviours.

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Conflicts of interest

There are no conflicts of interest.

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