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CLINICAL ARTICLE

Understanding and attitudes towards patient safety concepts in obstetrics

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Abstract

Objectives: To measure attitudes of health personnel towards patient safety, and to determine how the concept of patient safety varies between maternal health centers and types of health care personnel. *Methods:* A cross-sectional descriptive study included 35 primary heath centers in three governorates in Egypt. The subjects comprised all managers, physicians, nurses, pharmacists, and technicians. *Results:* The overall mean for all questions and respondents was 3.89±0.59 (scale 1–5). The safety climate mean was 3.64±0.67. The percentage of respondents viewing the safety climate as positive was 36%. Only 7% of respondents had received feedback after referral of a case of severe pre-eclampsia. *Conclusion:* The concept of patient safety in the centers studied is not as strong as desirable for the provision of reliable health care. The culture is one of a penalizing nature with suppressed error reporting, lack of proper communication, and feedback failure.

1. Introduction

Since the emergence of the concept of patient safety and the understanding that "to err is human" [1], evaluation and promotion of quality of care has been of great concern to those working in obstetrics to [2,3].

Efforts to promote health services for many vulnerable groups, particularly pregnant women, should be a dynamic process [4]. This includes understanding that many pregnant women are not given proper care, and some may suffer an adverse iatrogenic event when seeking medical attention. Treatments that are below standard or do not adhere to accepted guidelines may also be experienced. This must be viewed as a system failure rather than an individual failure [5,6].

It is imperative that health care centers identify dysfunctional systems and correct them [7]. In addition to the organization of work, systems also include knowledge of, and attitudes towards, the concept of patient safety. This is sometimes referred to as the "safety climate" or the "culture of safety". The culture is the set of distinctive intellectual features, and it encompasses value systems and beliefs [8,9].

The degree to which patient safety is considered a planned priority may reflect the opinions of leadership towards the concept of patient safety [10], especially when dealing with

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vulnerable groups such as pregnant women, and high risk pregnancies such as those affected by pre-eclampsia. However, it may not reflect the culture within the health center.

Most effort to promote safety in health care is usually initiated in response to an error or an adverse event: in other words, a reactive response. Preemptive efforts to identify and eliminate potential hazards are the optimal situation [6,11]. Patient safety in maternal health care centers must be viewed as a priority.

Preemptive techniques to improve safety within maternal health centers include error reporting by caregivers, using systems for error reporting, understanding why errors occur, learning from errors, encouraging and practicing teamwork, detecting probable risks and failures in the system, and encouraging workers to promote safety practices [10,12,13].

Despite the importance of patient safety in maternal health care, few maternal health facilities in Egypt have studied the status of safety in obstetric care, whether safety is considered as a planned priority, and the extent to which the culture supports the practice of safe obstetrics.

The objective of the study was to investigate safety in maternal health centers in Egypt in order to improve the quality of care. The specific objectives were to measure attitudes of health personnel towards patient safety, and to determine how the concept of patient safety varied among maternal health centers, and between types of personnel.

2. Methods

A descriptive study based on a cross-sectional approach was used to determine the safety climate in primary health centers in Egypt.

Three governorates were randomly selected: Cairo, Ismaillia, and Fayoum. Randomization was done by picking from sealed envelopes. The sample included all primary health centers (PHCs) in Ismaillia ($n=10$), Fayoum ($n=10$), plus 15 random PHCs in Cairo. The subjects comprised all PHC managers, physicians, nurses, pharmacists, and technicians.

The preparatory phase (8 weeks) of the study included choosing and modifying a suitable questionnaire, selecting and training data collectors, and conducting a pilot study. The questionnaire underwent peer-review before being used in the pilot study. Subjects were questioned on topics important to the concept of safety in health care, demographic information, and adherence to management guidelines for pre-eclampsia. The data collector verified key points pertinent to the credibility of the health providers' adherence to guidelines.

The first part of the questionnaire consisted of the safety climate survey [14] which was used to evaluate perceptions of a PHCs commitment to patient safety. It also investigated error reporting and understanding of systems as the cause of errors. The questionnaire had 19 items and used a 5-point Likert scale. This scale has been tested and found to be a sufficiently reliable tool in previous studies [15].

The second part of the questionnaire was used to collect data regarding adherence to management guidelines for pre-eclampsia.

The main outcome measures were the overall mean, safety climate mean, safety climate score, percentage of respondents reporting a positive safety climate, and percentage of adherence to guidelines in the management of pre-eclampsia.

Data collectors were selected after careful consideration of their basic qualifications and previous experience. A suitable training program was organized in order to ensure accuracy of data collection.

A pilot study was carried out in Cairo to provide an example for the centers finally selected in the study.

The data collection phase lasted 12 weeks. Informed consent was obtained from those participating in the study before data were collected. In order to ensure the quality and accuracy of the collected data, the following measures were implemented: the work of the data collectors was observed and checked by field supervisors, the data collected were subjected to double-checking to ensure accuracy and uniformity, and some forms were repeated by different data collectors to see whether the same data were obtained.

The data management phase (16 weeks) was to ensure accuracy, facilitate proper coding, enter data, analyze statistics, and tabulate data. Review of the research questionnaire was done immediately on receipt to correct obviously incorrect data, and to detect and exclude suspiciously false data. Coding of the research questionnaire was done for proper extraction of data.

The data were statistically analyzed using descriptive statistics. Tabulation and graphic presentation were performed using the safety climate calculation (version 28) [16]. Tests of significance were performed using the statistical software SPSS version 12.0 (SPSS, Chicago, IL, USA).

3. Results

The study was carried out between December 2004 and September 2005. The study included 35 primary heath centers in three governorates in Egypt. The number of questionnaires distributed was 650. The number of responses received was 600. The number of surveys entered as data was 600. The response rate was 92%.

The attitude of health personnel towards patient safety was determined using the safety climate survey scoring system developed by the Institute for Health Improvement [16].

Measurements of the attitude of health personnel towards patient safety were the overall mean for all questions and respondents, the safety climate mean, and the percentage of respondents that viewed the safety climate as positive.

The overall mean for all questions and respondents was 3.89 ± 0.59. The safety climate mean was 3.64 ± 0.67. The percentage of respondents that viewed the safety climate as positive was 36%. Results showed that 30.5% of health care providers working in the health facility reported that they would not feel safe being treated in their own facility as patients.

The results were further analyzed according to the respondent's job description, experience in the position, experience in the specialty, experience in the facility, and age. Variation in the concept of patient safety among types of personnel was also determined.

Physicians had the lowest positive safety score percentage (24.9%) compared to managers of the facilities who had the highest score (56.8%). In terms of experience, the highest positive safety score was reported from those who had been in the position for less than 6 months. For experience in the specialty, the highest positive safety score was reported from those who had less than 6 months experience