Turkish patient relatives' attitudes towards family-witnessed resuscitation and affecting sociodemographic factors

Gurkan Ersoy[a], Sedat Yanturali[a], Selim Suner[c], Nuriye Ergul Karakus[b], Ersin Aksay[a] and Ridvan Atilla[a]

Downloaded from http://journals.lww.com/euro-emergencymed by BhDMf5ePHKav1zEoum1tQfN4a+kJLhEZgbsIHo4XMi0hCywCX1AWnYQp/IlQrHD3i3D0OdRyi7TvSFl4Cf3VC4/OAVpDDa8K2+Ya6H515kE= on 07/31/2023

Background **Witnessed resuscitation is the process of resuscitation in the presence of family members.**

Study objective **Our goal was to determine the attitudes of relatives of the patients presenting to our emergency department regarding witnessed resuscitation and to elucidate the sociodemographic variables affecting their perspectives.**

Methods **Blood relatives and spouses of all adult patients presenting to our emergency department in Turkey between 7 January 2005 and 16 January 2005 were included in the study. Accompanying persons other than patients' relatives were excluded. Surveys were conducted using a structured face-to-face interview with the participants.**

Results **A total of 420 family members were surveyed. Most participants (66.4%) stated that they would like to be present during resuscitation. The most common reason for wanting to be present during cardiopulmonary resuscitation (CPR) was: 'providing support for the patient' and 'witnessing the intervention'. Male family members and family members of patients without health insurance were more likely to want to witness resuscitation. Although prior willingness to witness CPR did not affect the likelihood of wanting to witness CPR, those family members who had previously witnessed CPR ending in death had decreased likelihood of wanting to witness it again. The participants' age, level of education, marital status, presence of chronic illness, and the patients' presenting diagnosis did not significantly affect the rate of willingness to witness CPR.**

Conclusion **Our data locally revealed that most of the participants in this survey would like to witness CPR conducted on their family members who presented to our emergency department.** ***European Journal of Emergency Medicine*** **16:188–193 © 2009 Wolters Kluwer Health | Lippincott Williams & Wilkins.**

European Journal of Emergency Medicine 2009, **16**:188–193

Keywords: cardiopulmonary resuscitation, family presence, family-witnessed cardiopulmonary resuscitation, witnessed resuscitation

[a]Department of Emergency Medicine, University of Dokuz Eylul, [b]School of Medicine, Department of Public Health, Izmir, Turkey and [c]Department of Emergency Medicine and Surgery, Brown Medical School Rhode Island, Medical Simulation Center, Rhode Island, USA

Correspondence to Dr Gurkan Ersoy, Assistant professor, University of Dokuz Eylul, School of Medicine, Balcova, Izmir 35330, Turkey
Tel: +90 232 412 2703; fax: +90 232 279 1958;
e-mail: gurkan.ersoy@deu.edu.tr; gurkan_ersoy@yahoo.com

Received 17 October 2007 **Accepted** 9 July 2008

Introduction

Family-witnessed resuscitation (FWR) is defined as the process of active medical resuscitation in the presence of family members. The concept of 'family-witnessed resuscitation program' was first introduced at the Foote Hospital in 1987. It is stated that relatives have considered several benefits of being permitted to be present during a resuscitation attempt, including help in coming to terms with the reality of death and easing the bereavement process, and being able to communicate with, and touch, their loved ones in their final moments while they were still warm. Hearing is the last sense to cease, and many seemingly unconscious patients may have some awareness of their surroundings. Aware of his family's presence and hearing their encouraging, loving words, a patient may find the strength to survive or take great comfort if he is dying. Furthermore, although witnessing a failed resuscitation is a severely traumatic event for a family, seeing the extraordinary effort put forth by the code team gives real meaning to the words 'We did everything we could.' Being shut out of the resuscitation process can increase family members' feelings of helplessness, anxiety, panic, and guilt [1–14].

Tradionally, however, there is a practice of excluding relatives during cardiopulmonary resuscitation (CPR) efforts. This occasion is also valid for our own emergency department (ED) as relatives of patients are never invited or given a chance to witness the resuscitation of their loved ones. The most common reasons for doctors not allowing family members' presence during CPR are fear of distracting the CPR team and psychological trauma to family members who witness the resuscitation. [1,2,8–11,14–20]. No guidelines or studies, however, have been established yet advocating that family members should not be present during resuscitation [15]. In the event of an out-of-hospital arrest, the relatives may already be present and possibly performing basic life

0969-9546 © 2009 Wolters Kluwer Health | Lippincott Williams & Wilkins DOI: 10.1097/MEJ.0b013e328311a8dc

Copyright © Lippincott Williams & Wilkins. Unauthorized reproduction of this article is prohibited.

Downloaded from http://journals.lww.com/euro-emergencymed by BhDMf5ePHKav1zEoum1tQfN4a+kJLhEZgbsIHo4XMi0hCywCX1AWnYQp/IlQrHD3i3D0OdRyi7TvSFl4Cf3VC4/OAVpDDa8K2+Ya6H515kE= on 07/31/2023

support, and during the 'basic life support courses' the people who attend this course are trained to do CPR when needed. So why are medical staff still against FWR?

Although more than 20 years has passed since the first study supporting FWR, there is no consensus among doctors, nurses, and relatives of the patient on the topic yet; while a majority of the doctors do not favor FWR, the nurses have a reverse way of thinking [1,2,4,9–13,15–17]. However, a majority of patients' family members have a strong desire to witness CPR [5,7,12–14]. Of course, this way of thinking is easily influenced by individual, international, and local cultural, legal, traditional, religious, social, and economic factors [4]. We believe that the disagreement among the groups must reach a conclusion soon but on behalf of the patients' preferences, as we hypothesized, the majority of people do want to witness CPR.

Here in this study, our main goal was to ascertain the views of family members of patients presenting to our ED concerning FWR (if they would like to witness it or not) and to determine sociodemographic factors affecting their perspectives.

Materials and methods

Study population

This cross-sectional study was conducted at the University of Dokuz Eylul, School of Medicine, Department of Emergency Medicine, which has a yearly adult patient census of 40 000 and serves a population of 2.5 million on the western coast of Turkey and the metropolitan Izmir area. The study was approved by the institutional review board. Power analysis, before data collection, revealed a target of 384 patients to achieve a 95% confidence interval. The study was conducted continuously (24 h a day) during a period of 9 consecutive days from 7 January 2005 to 16 January 2005. All blood relatives and spouses of patients presenting to our ED during the study period were included in the study if they were physically present in the ED. Family members of patients who actually received CPR were excluded from the study. All interviews were conducted after the patients were stabilized. If there was more than one family member, a separate interview was conducted with each.

Content of the survey

Surveys were conducted using a structured face-to-face interview with the participant. The interview consisted of two sections. In the first section, the objectives of the interview were explained to the participant. The definition of CPR was relayed to the participant in layman's terms. Each component of CPR (chest compressions, endotracheal intubation, and defibrillation) was explained in detail. Simulated intubation, defibrillation, and chest compressions were depicted in three different photographs to enhance the definition (Figs. 1–3).

In the second section of the survey, participants' demographic information was obtained. The answers were dichotomous responses. Their relationship with the patient was established and the health and insurance

Fig. 1



Endotracheal intubation.

Fig. 2



Chest compressions.

Copyright © Lippincott Williams & Wilkins. Unauthorized reproduction of this article is prohibited.

Downloaded from http://journals.lww.com/euro-emergencymed by BhDMf5ePHKav1zEoum1tQfN4a+kJLhEZgbsIHo4XMi0hCywCX1AWnYQp/IlQrHD3i3D0OdRyi7TvSFl4Cf3VC4/OAVpDDa8K2+Ya6H515kE= on 07/31/2023

Fig. 3



Defibrillation.

statuses of patients were recorded. The participants' prior experience with CPR was queried, as well as their willingness to be present in the room while the patient was receiving CPR. In addition, the interviewer asked the participants the reasons for their preference concerning FWR.

Survey administration

All interviews were conducted by teams of two 6th year medical students (a total of three students participated as interviewers) who received specific training in conducting the survey interview. The interviewer recorded the answers after each question on a standardized survey form.

Data analysis

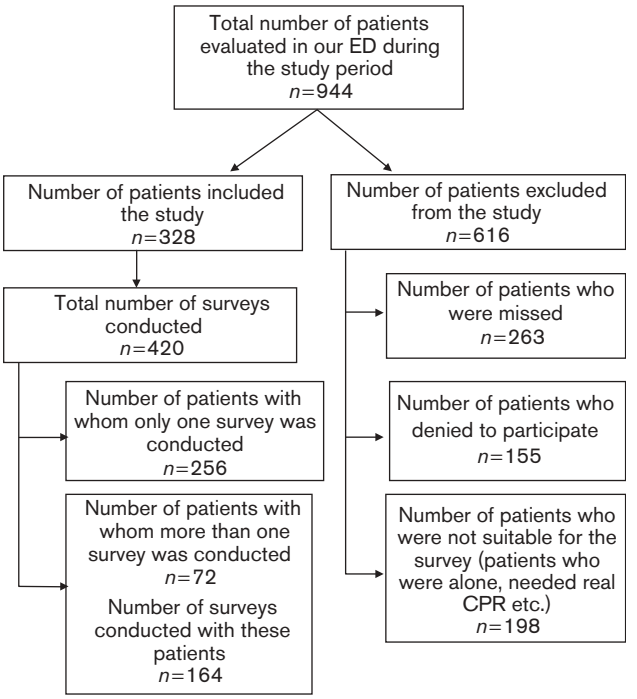
χ^2 Fischer Exact and McNemar χ^2 were used for single variable statistics. SPSS 11.0 (SPSS Inc., Chicago, Illinois) and EPI INFO 2000 (Atlanta, Georgia) software programs were used in data analysis.

Results

Participants' characteristics

During the study period, a total of 944 patients were evaluated in the ED. One hundred and ninety-eight patients were excluded either because they received CPR or because they had no family members present in the ED. As a result, 420 family members of 328 patients completed the survey (Fig. 4). The participants were 53% male with a mean age of 41 years (range 18–79; standard deviation: 13.4). Eighty-six (20.5%) participants reported that they had previously observed CPR in progress. Characteristics of the survey participants are summarized in Table 1.

Fig. 4



Documentation (distribution) of the patients included and excluded from the study. ED, emergency department.

Table 1 Characteristics of survey participants

	% (Number)[a]
Age (years)	
18–34	33.1 (139)
35–49	36.9 (155)
50–64	23.6 (99)
≥ 65	6.4 (27)
Sex	
Male	53.1 (223)
Female	46.9 (197)
Marital status	
Single	21.4 (90)
Married	75.7 (318)
Other	2.9 (12)
Level of education	
Illiterate	1.4 (6)
Below 8th grade	26.9 (113)
8th grade and higher	71.7 (301)
Prior observation of CPR	
Yes	20.5 (86)
No	79.5 (334)

[a]Owing to missing data, the numbers may not add up to 100%.
CPR, cardiopulmonary resuscitation.

Participants' willingness to witness cardiopulmonary resuscitation

Most of the participants (66.4%) stated that they would wish to observe CPR performed on their family members. Many reasons are found for the participants' preferences regarding FWR (Table 2). Family members of patients without health insurance were more likely to want to

Copyright © Lippincott Williams & Wilkins. Unauthorized reproduction of this article is prohibited.

witness CPR with 13 of the 14 (92.9%) asked stating that they would want to be present during CPR ($P = 0.041$). Factors affecting the willingness of participants to want to witness CPR are displayed in Table 3.

Sociodemographic factors affecting participants' views

The participants' age, level of education, or marital status did not influence their willingness to witness their family members' resuscitation. Male participants were more likely to want to witness resuscitation ($P = 0.004$). Although prior experience of observing CPR did not affect the rate of willingness to witness resuscitation, those participants who had previously witnessed CPR that resulted in death were less likely to want to witness resuscitation ($P = 0.011$). Participants were more likely to want to witness the resuscitation of their own family member ($P = 0.002$). The presence of a chronic disease in either the participant or the patient, and the patients' presenting complaint (dichotomized into trauma vs. nontrauma) did not influence the participants' willingness to witness resuscitation.

In a subgroup of five healthcare workers who participated in the survey, all stated that they would not want to witness the resuscitation and that they would not wish their family members to be present if they were receiving CPR.

Discussion

We showed that 66.4% of family members of patients presenting to our ED expressed a desire to witness the resuscitation of their family member. On the basis of surveys conducted in different countries with different cultures, the majority of the family members also expressed a strong desire to be present, or at least to be offered the opportunity to be present during their loved one's resuscitation.

Most of the earlier studies on this topic were conducted retrospectively using a cohort of family members of patients who had actually had CPR performed on them.

Table 2 Participants' reasons supporting their views

	%
Reasons for wanting to observe	
I will support the patient	36.2
I will observe the interventions	34.8
I will learn how CPR is performed	18.0
I will be with my loved one during his last moments	10.6
I will assure that an intervention is performed	7.5
Other	11.8
Reasons for not wanting to observe	
I cannot bear to watch the interventions	68.6
I will obstruct the health care teams efforts	24.3
I would not want to observe the patient if he dies	9.3
My presence will not be helpful	5.0
The patient would not have wanted me to observe	2.1
Other	2.9

CPR, cardiopulmonary resuscitation.

Table 3 Analysis of participants' perspectives

	Participants who want to observe CPR (%)	*P* value	Odds ratio (95% CI)
Age			
<65	65.3	0.158	1.80
≤ 65	77.3		(0.82–4.04)
Sex			
Male	73.1	0.004	1.87
Female	59.2		(1.22–2.89)
Level of education			
Less than 8th grade	63.0	0.390	1.25
8th grade and above	68.0		(0.78–1.99)
Marital status			
Married	67.8	0.409	0.80
Other	62.7		(0.49–1.31)
Prior observation of CPR			
None	66.7	0.951	0.98
≥ 1	66.3		(0.58–1.67)
Prior experience with FWR			
No prior observation of CPR resulting in death	84.8	0.011	4.44
Prior observation of CPR resulting in death	55.8		(1.34–15.57)
Known chronic disease of participant			
Present	72.9	0.115	1.50
Absent	64.2		(0.91–2.47)
Relationship with patient			
*Family members	69.4	0.002	2.54
**Other family members	47.2		(1.36–4.74)
Occupation			
Healthcare provider	70.6	0.883	1.07
Other	69.1		(0.33–3.65)
Chronic diease in patient			
Present	64.3	0.278	0.77
Absent	70.0		(050–1.21)
Patients' health insurance			
Active	65.6	0.041	0.15
None	92.9		(0.01–2.36)
Presenting condition			
Trauma	64.1	0.867	1.13
Other	66.8		(0.5–2.36)

[a]Family: mother, father, spouse, children, or sibling.
[b]Other family members: all blood relatives other than the above.
CI, confidence interval; CPR, cardiopulmonary resuscitation; FWR, family-witnessed resuscitation.

Furthermore, in these studies, the total participant number and survey return rates were low (<60 participants and $<50\%$ survey return rate). The rate of participants willing to observe CPR varied between 47 and 100% [5,6,12–14]. In our study, we targeted family members of ED patients who were not receiving CPR and thus we were able to prospectively enroll a large cohort.

In the different studies conducted on this topic, all the authors advised implementing a structured program to allow family members' presence during resuscitation efforts [3,4,7,9,11,17,19].

In this study, the most common reason given by the participants for desiring to witness resuscitation of their family member was 'being a source of support for the patient' and 'observing the interventions performed'. In surveys conducted on family members after resuscitation of the patient, most participants reported that their

Downloaded from http://journals.lww.com/euro-emergencymed by BhDMf5ePHKav1zEoum1tQfN4a+kJLhEZgbsIHo4XMi0hCywCX1AWnYQp/IlQrHD3i3D0OdRyi7TvSFl4Cf3VC4/OAVpDDa8K2+Ya6H515kE= on 07/31/2023

Copyright © Lippincott Williams & Wilkins. Unauthorized reproduction of this article is prohibited.

Downloaded from http://journals.lww.com/euro-emergencymed by BhDMf5ePHKav1zEoum1tQfN4a+kJLhEZgbsIHo4XMi0hCywCX1AWnYQp/IlQrHD3i3D0OdRyi7TvSFl4Cf3VC4/OAVpDDa8K2+Ya6H515kE= on 07/31/2023

presence helped and supported their loved ones' resuscitation [7,9,12,13,17].

In our study, the most common reasons why the participants did not want to observe CPR were 'I can not bear to watch resuscitation' and 'I will be in the way and adversely effect the resuscitation'. The participants' views regarding obstructing the resuscitation effort are incongruous with healthcare workers views. In our earlier study, and in most of the studies that investigated the views of healthcare providers regarding FWR, the reasons given by healthcare providers for not wanting family members to be present during resuscitation were 'increases the level of stress in the resuscitation team' and 'fear of causing physiological trauma to family members' [2,8,10,11,15,18]. Family members, however, are willing to observe resuscitation and even believe that they have the right to do so [2,6,8,18]. In four recent studies, 'fear of causing psychological trauma to the family members' was reported by 89, 79, and 86% of participants, respectively [2,8,18].

For the first time, an analysis of the factors contributing to the willingness of participants to witness their family members' CPR was conducted in our study. We showed that male participants were more likely to want to observe CPR, and that those participants with prior experience of witnessing unsuccessful resuscitation were less willing to be present during resuscitation of their family member. There is a perception in the lay community that there are higher survival rates in patients who receive CPR, mostly because of the high success rates portrayed in movies and television shows [20]. The observation of a real resuscitation that results in death may shatter this perception and lead to the decreased willingness to observe CPR that we observe in this study.

According to our results we perceived that the participants of this study preferred observing CPR performed on their family members compared with acquaintances. These results could provide guidance to healthcare providers in choosing which visitor to bring into the resuscitation room.

An unanticipated result of this study was the increased rate of willingness to observe CPR among family members of patients without health insurance. Sixty-two percent of family members without health insurance stated that the reasons they wanted to observe CPR were 'I want to observe the interventions performed on the patient' and 'I want to make sure that all that can be done is performed'. The same reasons were reported by only 43% of all participants.

Although FWR is supported by different organizations and observed haphazardly, clear procedures for implementation are lacking [2,4,7,9,13,19]. In the year 2005, representatives from 18 national organizations [19] were convened for a conference to develop recommendations regarding family presence during pediatric procedures and CPR. Clearly, trying to meet all the needs of everyone involved in a resuscitation attempt would be difficult at best. We must prioritize those needs and the patient's needs come first [13].

Conclusion

Our data locally revealed that most of the participants in this survey would like to witness CPR conducted on their family members who presented to our ED. Factors such as the sex of the observer and absence of health insurance of the patient affected the rate of willingness to observe CPR, but further research is needed to demonstrate whether FWR is actually of benefit to relatives and to the patient himself.

Acknowledgements

The authors acknowledge the significant contributions of Prof Dr Gazanfer Aksakoglu, the director of the Public Health Program at Dokuz Eylul University, for assistance in the methodological design of this study. The authors also extend their thanks to Int. Dr Ozgur Altinbas, Int. Dr Mulayim ACARBAS, and Int. Dr Muzaffer Yilmazturk for their assistance in completing the surveys. This study was presented as an oral presentation at III. Mediterranean Emergency Medicine Congress in Nice, France in September 2005. This study was conducted at University of Dokuz Eylul, School of Medicine, Department of Emergency Medicine, Izmir, Turkey.

Limitations

The photographs used to describe CPR to the participants were those of simulated CPR. The institutional review board did not allow the use of pictures of a real CPR procedure. The photographs of simulated CPR may not reflect the true environment during actual CPR and may bias the views of the participants towards a higher rate of willingness to observe CPR.

This study was conducted in just one center in Turkey. The results may not be generalized to other countries or even to the general population of Turkey.

The study was conducted in an academic university hospital with a low rate of uninsured patients. Other studies investigating the views of healthcare workers regarding FWR showed regional differences [5,15]. It is possible that there are similar regional differences in the views of family members with regard to viewing CPR, related to cultural and social variables, which were not reflected in these data.

Copyright © Lippincott Williams & Wilkins. Unauthorized reproduction of this article is prohibited.

References

1 Ersoy G, Yanturali S. Family witness resuscitation. Allow or deny? Which is true? *Int J Nurs Stud* 2006; **43**:653–654.
2 Yanturali S, Ersoy G, Yuruktumen A, Aksay E, Suner S, Sonmez Y, *et al*. A national survey of Turkish emergency physicians' perspectives regarding family witnessed cardiopulmonary resuscitation. *Int J Clin Prac* 2005; **59**:441–446.
3 American Heart Association. Guidelines 2000 for cardiopulmonary resuscitation: part 2. Ethical aspect of CPR and ECC. *Circulation* 2000; **102**:112–121.
4 Baskett PJF, Steen PA, Bossaert L. European Resuscitation Council Guidelines for Resuscitation 2005. Section eight. The ethics of resuscitation and end-of-life decisions. *Resuscitation* 2005; **67**: S171–S180.
5 Benjamin M, Holger JS, Carr M. Personal preferences regarding family member presence during resuscitation. *Acad Emerg Med* 2004; **11**:750–753.
6 Robinson SM, Mackenzie-Ross S, Campbell Hewson GL, Egleston CV, Prevost AT. Psychological effect of witnessed resuscitation on bereaved relatives. *Lancet* 1998; **22**:614–617.
7 Kopelman MB, Ubel PA, Engel KG. Changing times, changing opinions: history informing the family presence debate. *Acad Emerg Med* 2005; **12**:999–1002.
8 McClenathan BM, Torrington KG, Uyehara CF. Family member presence during cardiopulmonary resuscitation: a survey of US and international critical care professionals. *Chest* 2002; **122**:2204–2211.
9 Halm MA. Family presence during resuscitation: a critical review of the literature. *Am J Crit Care* 2005; **14**:494–511.
10 Scott C, Alexander M, Mark G, Jaswinder S, Robert D, Robert S. Emergency medical service providers' experience with family presence during cardiopulmonary resuscitation. *Resuscitation* 2006; **70**:223–228.
11 Badir A, Sepit D. Family presence during CPR: a study of the experiences and opinions of Turkish critical care nurses. *Int J Nurs Stud* 2007; **44**:83–92.
12 Booth MG, Woolrich L, Kinsella J. Family witnessed resuscitation in UK emergency departments: a survey of practice. *Eur J Anaesthesiol* 2004; **21**:725–728.
13 Marrone L, Fogg C. Family presence during resuscitation. *Nursing* 2005; **35**:21–22.
14 Doyle CJ, Post H, Burney RE, Doyle CJ, Post H, Burney RE, *et al*. Family participation during resuscitation: an option. *Ann Emerg Med* 1987; **16**:673–675.
15 Marita W, Tore N, Anita L, Bengt F. Narratives about resuscitation–Family members differ about presence. *Eur J Cardiovasc Nurs* 2006; **5**:68–74.
16 Grice AS, Picton P, Deakin CD. Study examining attitudes of staff, patients and relatives to witnessed resuscitation in adult intensive care units. *Br J Anaesth* 2003; **91**:820–824.
17 Boyd R, White S. Does witnessed cardiopulmonary resuscitation alter perceived stress in accident and emergency staff? *Eur J Emerg Med* 2000; **7**:51–53.
18 Ong ME, Chan YH, Srither DE, Lim YH. Asian medical staff attitudes towards witnessed resuscitation. *Resuscitation* 2004; **60**:45–50.
19 Henderson, Deborah Parkman. Report of the national consensus conference on family presence during pediatric cardiopulmonary resuscitation and procedures. *Pediatr Emerg Care* 2005; **21**: 787–791.
20 Diem SJ, Lantos JD, Tulsky JA. Cardiopulmonary resuscitation on television. Miracles and misinformation. *N Engl J Med* 1996; **13**:1578–1582.

Downloaded from http://journals.lww.com/euro-emergencymed by BhDMf5ePHKav1zEoum1tQfN4a+kJLhEZgbsIHo4XMi0hCywCX1AWnYQp/IlQrHD3i3D0OdRyi7TvSFl4Cf3VC4/OAVpDDa8K2+Ya6H515kE= on 07/31/2023

Copyright © Lippincott Williams & Wilkins. Unauthorized reproduction of this article is prohibited.