Doi: 10.5152/TJAR.2020.477

Original Article
Other

Turkish Journal of Anaesthesiology & Reanimation

Knowledge and Attitudes about Helsinki Declaration on Patient Safety among Anaesthesiologists in Turkey: A Questionnaire Study

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Cite this article as: Çorman Dinçer P, Aykaç Z, Hancı V, Çolakoğlu S, Bakan N. Knowledge and Attitudes about Helsinki Declaration on Patient Safety among Anaesthesiologists in Turkey: A Questionnaire Study. Turk J Anaesthesiol Reanim 2020; 48(6): 497-501.

Abstract

Objective: The Helsinki Declaration on Patient Safety in Anaesthesiology is an important document for anaesthesiologists. This study aimed to evaluate the knowledge and experiences of anaesthesiologists in Turkey on the "Helsinki Declaration on Patient Safety."
Methods: After the ethics committee approval and participants' consent, electronic questionnaires were sent to anesthetists working in Turkey. The questionnaire included 48 questions.
Results: The mean age of the participants was 44.28±8.01 years, and 52.1% were women (n=142). The mean time spent in the field of anesthesiology was 12.83±7.76 years. The percentage of participants working in private hospitals was 13.4%. A total of 58.5% of the participants were educated on patient safety out of whom 57% said that their knowledge was sufficient, 37.3% said that it was limited, and 5.6% felt that it was insufficient. The knowledge of participants about the Helsinki Declaration was sufficient in 31.7%, limited in 39.4%, insufficient in 9.2%, and 19.7% had no knowledge. A total of 27% of participants believed that implementation of the Helsinki Declaration improved patient safety. It has been stated that the minimum patient monitoring standards recommended by the European Board of Anaesthesiology has been complied in operating rooms and recovery units (90.8% and 78.2%, respectively).
Conclusion: The findings of this survey might guide not only the individual anesthetists but also hospital administrators to develop strategies to improve patient safety and thus quality of care in the light of the recommendations listed in the Helsinki Declaration.
Keywords: Anaesthesiology standards, Helsinki Declaration on Patient Safety, patient safety, quality of healthcare standards

Introduction

Patient safety is one of the major concerns in anesthesiology. Lessons learned from errors committed plays an important role in correcting the system. The standards and measures that have to be followed throughout the perioperative period to prevent medical errors that can cause injuries or even death are being established and published by anesthesiology societies (https://www.esahq.org/guidelines/).

The national patient safety foundation was established in 1997. The Institute of Medicine published, "To Err Is Human," which states that more people died from medical errors than motor vehicle accidents, breast cancer or acquired immunodeficiency syndrome in November 1999. It is the most important report emphasizing the importance of patient safety (1). Errors can happen at every stage of patient care, that is, medication, diagnosis, perioperative period, infection, transfusion and transportation of the patient. These errors not only risk human life but also bare high financial costs. Numerous societies and foundations, such as the World Federation of Societies of Anesthesiologists, Joint Commission International, European Society of Anesthesiologists (ESA) and European Board of Anaesthesiology (EBA), published the targets in patient safety. The international standards for safe practice of anesthesia is updated and published on the official websites of these organizations according to the improvements in medicine and technology.

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Received: 18.03.2020
Accepted: 10.07.2020

The Helsinki Declaration on Patient Safety in Anaesthesiology was launched by the ESA and EBA on June 14, 2010 (2). It is one of the important milestones in patient safety in anesthesiology. The declaration that focuses on the anesthetist's role in the perioperative period is signed by countries outside Europe as well. The ESA Patient Safety and Quality Committee is dedicated to ameliorate the perioperative period discomfort through courses, master classes and keeping an updated open access website (https://www.esahq.org/patient-safety). A report assessing the implementation revealed that although several steps were taken, there were still issues that need continuous attention (3).

The Helsinki declaration recommends practical steps that can be successfully included in clinical practice. One of the duties of an anesthetist is to know the importance of these standards and implement them into their daily clinical practice.

In our study, we aimed to evaluate the knowledge and experiences of anaesthesiologists in Turkey on the "Helsinki Declaration on Patient Safety."

Methods

After obtaining Marmara University Ethics Committee approval (09.2018.564), we sent a request to 2,240 anesthetists employed in the Turkish healthcare system and whose e-mail addresses are known as they are members of the Turkish Society of Anesthesia and Reanimation (TARD) to answer an electronic questionnaire for this cross-sectional study. It was answered individually, and no personal identification was possible. Participation was voluntarily, and those who did not respond between the given dates were not included in the study. The questionnaire, including 48 questions, was sent 3 times at 10-day intervals and could be answered during work time as well. Repeated participation was checked. Section A included 6 questions regarding the participants' demographic data, Section B had 13 questions about the hospitals they were working at and Section C included 29 questions about their implementation of the Helsinki protocol in their practice. The questionnaire is given in Appendix A.

Main Points:

- The Helsinki declaration on Patient Safety in Anaesthesiology, which focuses on the anesthetist's role in the perioperative period, was launched by the European Society of Anesthesiologists and the European Board of Anaesthesiology on June 14, 2010. It is one of the most important milestones of patient safety in anesthesiology.
- Patient safety education was actively carried out in 58.5% of the hospitals surveyed.
- The Helsinki declaration was implemented by 46.5% of the participants.
- The scientific committee and working group studies, national and regional training, assistant school programs, seminars, and conferences on patient safety should be commenced and continued.

Statistical analysis

Data were analyzed with the Statistical Package for the Social Sciences (IBM SPSS Corp.; Armonk, NY, USA) version 22.0 program. The descriptive characteristics were expressed as frequencies and percentages in the categorical variables and as means, standard deviations and medians in numerical variables. A p value of <0.05 was considered statistically significant.

Results

A total of 142 anesthetists completed the questionnaire. The participants were mostly women (52.1%) with a mean age of 44.28±8.01 years. Most of them were working for more than 10 years (54.9%); the mean working time was 12.83±7.76 years. There was no statistical difference among the participants regarding sex, age and working years. They were employed by state hospitals (46.5%), university hospitals (40.1%) and private hospitals (13.4%).

Education about patient safety was received by 58.5% of the participants, which was provided by private (68.4%), university (64.9%) and state hospitals (68%). Training and research hospitals had the lowest ratio of participants receiving the education (39%, p=0.028). It is claimed that 59.9% of the institutions provide patient safety education; however, in 57% of them, issues regarding human factors associated with patient safety were not taught. Private hospitals had higher human factor education ratios (p=0.016). Majority of the professors (80%) and almost half of the associate professors, assistant professors and consultants (52%, 52.4% and 52.1%, respectively) stated that they had sufficient information regarding patient safety. Knowledge about the Helsinki declaration was described as sufficient by 64% of the professors, 36% of the associate professors, 38.1% of assistant professors and 16.9% of the consultants. State hospitals had the lowest ratio in knowledge about the Helsinki declaration (8%), and the difference among facilities was significant ($p<0.001$).

The knowledge about the Helsinki declaration was limited, whereas knowledge about patient safety was sufficient (Figures 1 and 2). A total of 69% of the participants could not define the Helsinki declaration correctly. The answer to questions, if TARD signed the declaration, if their facility implemented the declaration and if this ameliorated patient safety is given in Figure 3.

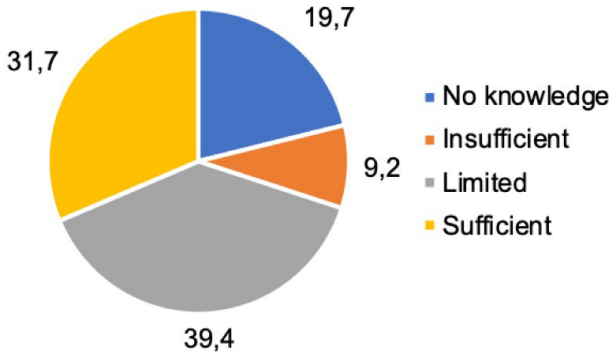

Figure 1. Knowledge about the Helsinki Declaration (%)

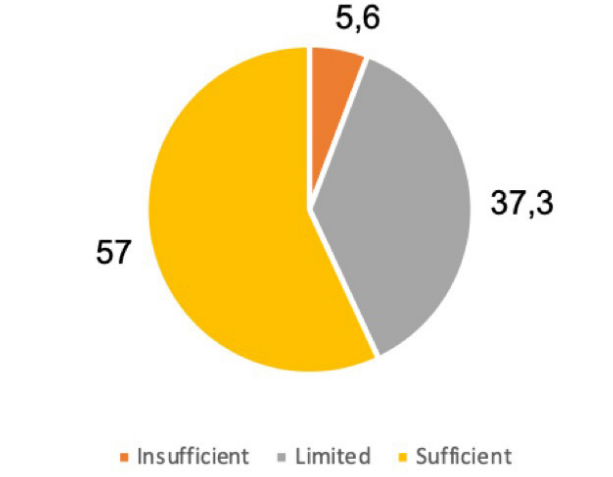

Figure 2. Knowledge about patient safety (%)

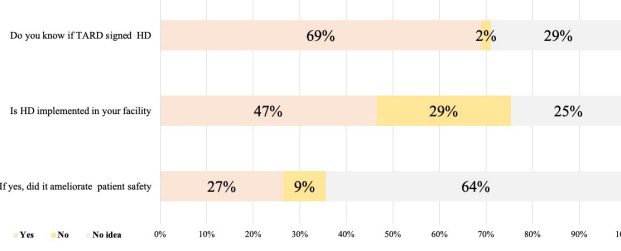

Figure 3. Questions regarding Helsinki Declaration on patient safety (HD)

It was stated by 25.4% of the participants that safe practice standards in sedation applications were not followed, and 45.8% of them stated that annual report of results for patient safety was made. Compliance of minimum patient monitoring standards recommended by the EBA was done in 90.8% of the operating rooms and 78.2% of the recovery units. Safe surgical checklist usage and labeling of high-risk drugs in the operating room was high (96.5% and 88%, respectively). For patient safety, 61.3% of the participants stated that hospitals provided financial resources.

Discussion

The Helsinki Declaration on Patient Safety was signed in 2010 by TARD representatives, translated into Turkish, and put on the website of the association, and the patient safety scientific committee-TARD was founded. Since then, our association has addressed issues related to patient safety and the Helsinki declaration at all scientific meetings. In Europe, there is a high level of adoption of its principles, but there is still reluctance in its uptake and influence in practice. To understand and overcome the setback, several studies have been undertaken (3, 4). Most of the studies on the culture of patient safety are performed in developed countries and in large general hospitals (5). There are reports providing beneficial information about the perception of doctors and nurses working in Turkey and their knowledge and attitudes on patient safety (6, 7). Our study is the first to assess patient safety and the Helsinki declaration among anaesthesiologists.

The response to our survey was (8%) less than we anticipated, and this could be owing to the high number of questions. The response rate to a survey by Wu et al. (8), which was about the role of the Helsinki declaration in promoting and maintaining patient safety among European anaesthesiologists and it assessed the role of the Helsinki declaration on patient safety, was 33.4%. In a cross-sectional survey from China that included healthcare workers (doctors, nurses and so on), the response rate was 74%, and most of the respondents were nurses (5).

In our study, nearly half of the participants were women (52.1%) with a mean age of 44.28±8.01 years. In a study by Jiang et al. (5), majority of the participants were women (75.6%) in the 25–45 years age group. In that study, approximately one-third of the participants had been working for 1–5 years, and the ratio of working over 10 years in anesthesia was 36.7%, whereas it was 54.9% in our study. The vast difference in response rate might be because of several factors, other than the length of the survey. Survey participation might be higher in the young and relatively new at work groups.

A total of 13.4% of the participants were working in private practice in our study, which was 11% in the study by Wu et al. (8), which led us to assume that majority of the participants in both the studies worked in government hospitals.

Patient safety education was actively carried out in 58.5% of the hospitals, majority of them were private and state hospitals (68.4% and 68%, respectively). Despite all the education, only 31.7% of the participants stated that they had sufficient knowledge of the Helsinki declaration and 46.5% of them applied the Helsinki declaration routinely. Hospital status played an important role in implementation of the declara-

tion (p<0.001). Respondents' perceptions about the culture of patient safety dimensions did not correlate with the number of years of experience, and married participants had better perceptions than unmarried ones (5).

With good teamwork and work climate, patient safety can be achieved more easily, but errors could be covered up as well. Improvement of the work environment plays a paramount role in increasing the safety and quality in hospital care, as shown in a study in Europe and the United States (9). Hospital managements and legislations play a vital role in lowering hospital costs by providing necessary tools and education (4).

In a recently published editorial, it was revealed that safe practice standards in sedation applications and annual reports of the results of regulations are the issues to be improved upon (10). A quarter of the responders did not follow the standards during sedation, and there was a significant difference between facilities (p=0.012), where private hospitals had the lowest percentage (2.8%), and annual report of results for patient safety was done by 45.8% of them. To increase these rates, we believe that it would be more effective if the Ministry of Health, which is the official authority in our country, and TARD collaborate to make the necessary arrangements. We also suggest that the checklist of items highlighted in the Helsinki declaration be routinely implemented, such as the "safe surgical checklist, Helsinki."

Although it is stated that in a workplace where everyone is familiar with each other, the staff would not want to talk through the operation, our survey showed that the usage of safe surgical checklist and labeling of high-risk drugs in the operating room were high (96.5% and 88%, respectively) (10).

In addition, as stated by Jiang et al. (5), to improve the quality of care and develop a strong patient safety culture, there is a need for medical institutions.

Our findings may not be perfectly representative as the response rate to our study was lower than estimated, but it can be the baseline data for further studies. As we did not assess the working conditions and work climate, we cannot make any conclusions about their influence on patient safety implementations.

Further studies involving other healthcare workers, such as nurses, medical technicians and managers, are needed to fully assess and improve patient safety culture in hospital settings.

Conclusion

The Helsinki declaration is not only an important document but also a milestone in enhancing patient safety in anesthesiology. As weak patient safety culture is a common contributing factor in failures in healthcare, several studies have been performed in Turkey before and after the Helsinki declaration was launched to enhance patient safety in anesthesiology. Unfortunately, the level of awareness and interest is still not very high. The findings of this survey might guide the patient safety scientific committee and TARD in planning the next steps. After the World Health Organization-World Federation of Societies of Anesthesiologists published the International Standards for a safe practice of anesthesia, meetings and studies were carried out to increase awareness about the topic (11). Besides the scientific committee and working group studies, national and regional training, assistant school programs, seminars and conferences on patient safety should be commenced and continued constantly. The findings of this survey might help not only individual anesthetists but also the hospital administrators to develop strategies to improve patient safety and thus the quality of care per the recommendations of the Helsinki declaration.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Marmara University (Date: 13.07.2018; Approval number: 09.2018.564).

Informed Consent: Participation was voluntarily and the ones who answered the questionary was accepted to have given consent.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – Z.A., V.H.; Design – V.H., Z.A., S.C., N.B.; Supervision – Z.A., N.B., S.C.; Materials – V.H., Z.A., S.C., N.B., P.C.D.; Data Collection – V.H., Z.A., S.C., N.B., P.C.D., Patient Safety Questionnaire Study Group; Data Processing – V.H., P.C.D.; Analysis and/or Interpretation – V.H., P.C.D., Z.A., N.B., S.C.; Literature Search – V.H., Z.A., S.C., N.B., P.C.D.; Writing Manuscript – P.C.D., Z.A., V.H.; Critical Review – V.H., Z.A., S.C., N.B.

Acknowledgements: Patient Safety Questionnaire Study Group: Aysegul Ozgok, Hilal Ayoglu, Yetkin Ozer, Omur Ercelen, Ayse Gulbin Arici, Unase Buyukkocak, Bunyamin Kir, Tuba Berra Saritas

Conflict of Interest: The authors have no conflicts of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

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Appendix A: The Questionnaire

A1 Age

A2 Gender

A3 Years of work as an anaesthesiologist

A4 Title

A) Specialist B) Assistant professor

C) Associate professor D) Professor

A5 Please indicate if you are the chair of an Anaesthesiology and Reanimation Department

A) Yes, I am B) No, I do not have such a duty

A6 Please indicate if you are the chair of education and or administrative officer of an Anaesthesiology and Reanimation Clinic

A) Yes, I am B) No, I do not have such a duty

B1 Working place

A) University hospital B) Training and research hospital

C) State hospital D) Private hospital

B2 The hospital you are working at is in which city?

B3 Number of beds the hospital you are working at has:

B4 Number of operating rooms the hospital you are working at has:

B5 Number of operations done in the hospital you are working at:

B6: Number of ICU beds with mechanical ventilator in the hospital you are working at has:

B7 Number of ICU beds that are run by anaesthesiologists in the hospital you are working at:

B8 The annual percentage (%) of general anaesthesia application done in your hospital

B9 Do you have a chronic pain department in your hospital?

A) Yes b) No

B10 Do you have an Algology Clinic run by anaesthesiologists in your hospital?

B11 Number of anaesthesia technicians/nurse in your hospital

B12 Number of anaesthesia residents in your hospital

B13 Total number of in anaesthesiology and reanimation beds in your hospital

C1 Do you have any knowledge about patient safety concept?

A) No, I do not

B) Yes, I think I have sufficient knowledge

C) Yes, but I have limited knowledge

D) Yes, but I have insufficient knowledge

C2 Did you have any training about patient safety?

A) Yes, I did B) No, I did not

C3 Does your hospital provide training about patient safety to the anaesthesia team?

A) Yes B) No

C4 Does your government social health insurance provide sufficient sources to you to provide perioperative care safely?

A) Yes B) No

C5 Does your hospital provide human factors in patient safety education to anaesthesia team?

A) Yes B) No

C6 Do you have any knowledge about Helsinki Declaration for Patient Safety?

A) No, I do not

B) Yes, I think I have sufficient knowledge

C) Yes, but I have limited knowledge

D) Yes, but I have insufficient knowledge

Can you define Helsinki Declaration briefly?

C7 Is Turkish Anaesthesiology and Reanimation Society among the societies who signed Helsinki Declaration for Patient Safety?

A) Yes B) No C) I don't know

C8 Does your current workplace implement Helsinki Declaration for Patient Safety? If yes when did it begun?

C9 If your current workplace has implemented Helsinki Declaration for Patient Safety did it improve patient safety?

A) Yes B) No C) I don't know

C10 Which of the following monitors are used routinely in peroperative patient care in your hospital?

A) Pulse oximetry B) Capnography

C) ECG D) Blood pressure

E) Other...

C11 Do your operating rooms in your hospital apply Minimum Patient monitoring standards recommended by European Board of Anaesthesiology (EBA)?

A) Yes B) No

C12 What is the percentage of operating rooms in your hospital that have implemented the Minimum Patient monitoring standards recommended by European Board of Anaesthesiology (EBA)?

C13 What is the percentage of patients (%) who are admitted to a postanaesthetic care unit (PACU, recovery room, high dependency unit, etc.) after surgery?

C14 Do recovery rooms in your hospital implement Minimum Patient monitoring standards recommended by EBA?

A) Yes B) No

C15 What is the percentage of areas in the recovery units that have implemented Minimum Patient Monitoring standards recommended by EBA?

C16 Are all patients informed about anaesthesia and all the procedures and consent is absolutely taken?

A) Yes, always B) Yes, time to time C) No

C17 Do you use "Safe Surgery Checklist" in operating rooms prepared by World Health Organization?

A) Yes, always B) Yes, time to time C) No

C18 What is the percentage of the usage of Safe Surgery Checklist" in operating rooms prepared by World Health Organization?

C19 In order to enhance the safety of high-risk drugs is labelling of the high-risk drugs in the operating rooms done?

A) Yes, labelling is done B) No, it is not done.

C20 Are recommended rules of the Infection Control Committee absolutely followed in pre-per and postoperative periods?

A) Yes B) No

C21 Do you have a national and/or regional Reporting/ Event notification system for the unwanted case/s or critical events?

A) Yes B) No C) I don't know

C22-a Do you have in your present workplace written approved protocols to manage the below mentioned situations?

	Yes, we have written, approved and used protocols	**No, we don't have written, approved and used protocols**
Preoperative evaluation and preparation		
Equipment and Drug control		
Labelling of the syringes		
Difficult/Failed intubation		
Malign Hyperthermia		
Anaphylaxis		
Local anaesthetic toxicity		
Massive haemorrhage		
Infection control		
Postoperative care (including postoperative analgesia)		

C22-b Do you have in your present workplace medical equipment to manage the below mentioned situations?

	Yes, we have medical equipment/ rooms	**No, we don't medical equipment/ rooms**
Preoperative evaluation and preparations		
Equipment and Drug control		
labelling of the syringes		
Difficult/Failed intubation		
Malign Hyperthermia		
Anaphylaxis		
Local anaesthetic toxicity		
Massive haemorrhage		
Infection control		
Postoperative care (including postoperative analgesia)		

C23 Does your hospital implement the Safe Practice Standards in Sedation Practices defined by anaesthesiology associations (ESA, ASA etc.) for anaesthesiologists and non-anaesthetists?

a) Yes, we comply the standards formed by the hospital

b) Yes, we comply the regional standards

c) Yes, we comply the national standards

d) Yes, we comply the international standards

e) No

C24 The anaesthesia department you currently work at prepare annual reports on results and the precautions taken in improving patient safety?

A) Yes B) No

C25 Does your hospital collect all the morbidity and mortality data required to produce an annual report on patients and generate annual morbidity and mortality reports?

A) Yes B) No

C26 Does your current hospital contribute to national supervision of safe practices in anaesthesia?

A) Yes B) No C) I have no idea

C27 Does your hospital provide the necessary resources to achieve and implement the patient safety aspects mentioned above?

A) Yes B) No

C28 Please list the three most important patient safety initiatives taken in your institution in the last 12 months.

C29 What are the three most important security hazards / risks in your organization that need attention?