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Surgical Teams' Attitudes and Views Concerning the Surgical Safety Checklist^{TR}

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ABSTRACT

Objective: This study was conducted to determine the surgical team members' views and attitudes concerning the Surgical Safety Checklist^{Turkey} (SSC^{TR}).

Methods: This descriptive-cross-sectional study was conducted in nine education and research hospitals in Istanbul with 561 surgical clinic and operating room nurses, surgeons, anesthetists, and anesthetic technicians. Data were collected using an information form to determine the demographic and professional characteristics of surgical team members, their attitudes and views concerning SSC^{TR}.

Results: According to the participants' responses, the use of SSC^{TR} was compulsory in the institution of 98% of the participants, 95.2% believed that this checklist should be used for each patient because it was effective in preventing complications, and 78.4% considered that it increased patient safety, but only 57.8% reported that SSC^{TR} was routinely used in daily practice. Although the participants who had received training on SSC^{TR} comprised 69% of the sample, 50.8% thought that training meetings were not beneficial. The rate of compliance was the lowest for SSC^{TR} item "Team members' introducing themselves" (32.7%) and the highest for "Confirmation of identity, surgery type, and surgical site of the patient" (95.3%).

Conclusion: The study findings showed that SSC^{TR} was not used regularly in half of the patients. It is recommended that regular trainings with the active participation of all team members to ensure the effective use of the checklist.

Keywords: Surgical safety checklist, patient safety, safe surgery.

1. INTRODUCTION

Safety errors can result in damage and injuries in patients during surgery and even lead to death (1). According to the Lancet Commission on Global Surgery, 313 million surgical procedures are performed globally every year, with at least 4.2 million people dying within 30 days of surgery, and approximately half of these deaths occur in low – and middle-income countries. It is also stated that post-operative deaths account for 7.7% of all deaths worldwide and rank third among all-cause mortality after ischemic heart disease and stroke (2). In industrialized countries, it is estimated that the rate of complications due to surgery is 3-17% (3,4), and the mortality rate is 0.4-0.8% (3-5). Therefore, safety errors due to surgery are seen as a global public health problem (6).

Studies have shown that the most common safety errors are wrong patient, site or surgery, anesthesia equipment problems, lack of necessary equipment, unpredictable blood loss, inadequately sterilized instruments, and retained surgical bodies (3,4,7). In addition to the negative effects of safety errors, it has been determined that they increase length of hospital stay and costs (3,8,9), approximately half of these errors can be prevented and the surgical team plays an important role in this process (3).

The "Safe Surgery Saves Lives" project initiated by World Health Organization (WHO) in 2008 is aimed at preventing adverse events related to surgical processes. This initiative prioritizes the administrative and managerial aspects of healthcare services, as well as the patient safety attitudes of the surgical team (1,10). The Surgical Safety Checklist (SSC) created within the scope of the project also aims to standardize practices to prevent possible surgical errors and improve teamwork and communication in the operating room in order to increase patient safety as a whole (1,11,12). The SSC consists of three sections with 19 items, and the pilot study conducted in eight different countries, four low-income and four high-income, showed significant reductions

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in the rate of mortality (from 1.5 to 0.8%) and complications (from 11 to 7%) (13). This provided that the list being widely used in many hospitals around the world (1,14,15). In 2009, the Turkish Ministry of Health included this list in the Health Quality Standards (16) by adding a fourth section called "Before patient leaves clinic", and since then, SSC[TR] has been utilized in hospitals throughout the country (17).

In previous studies about SSC usage, it has been shown to reduce surgical errors, postoperative complications (8,13,18-21) and mortality (19,20,22), improve the communication between surgical team members (3,8,22,23) and offers promising results in increasing patient safety (4,10,18,22). However, SSC usage is not sufficient alone to improve patient outcomes. Improvement in surgical outcomes depends on the adoption of SSC by surgical team and compliance with items (24). Despite the reported benefits, compliance with SSC is low (3,25,26). Although there are studies investigating compliance with the use of SSC in international literature (1,3,5,8,10,13,14,23,24,27), only limited research has been undertaken in Turkey (26,28-31). The current study aimed to determine the surgical team's views and attitudes concerning the use of SSC[TR].

2. METHODS

2.1. Study Design and Setting

This descriptive-cross-sectional study was carried out in the surgical clinics and operating rooms of nine training and research hospitals located in the Anatolian side of Istanbul between February-April 2019. Prior to the study, approval was obtained from the Marmara University Faculty of Medicine Clinical Research Ethics Committee (date: 03.11.2018, number: 09.2017.647) and institutional permissions (date: 15.02.2019, number: 16867222-604.01.01) were taken. Informed verbal and written consent of all participants was obtained.

2.2. Participants

The study population consisted of 561 healthcare professionals (clinic and operating room nurses, surgeons, anesthetists and technicians) working in surgical units of hospitals. The inclusion criteria were having been regularly working in a surgical unit and/or operating room for at least six months and providing consent to participate in the study. The exclusion criteria were being on leave of absence (maternity, annual or bereavement leave) and not attending work for other reasons during the specified period. Further excluded were individuals that did not fully respond to the items included in the information form.

2.3. Data Collection

Data were obtained by interviewing healthcare professionals in hospital and using an information form consisting of three sections, prepared based on the literature (29,30,32,33). The first section contained questions related to the demographic and professional characteristics of the participants, the second section aimed to elicit the participants' views on SSC[TR], and the third section inquired about the participants' attitudes concerning the use of SSC[TR]. In the third section of the form, all the items in SSC[TR] were presented to the participants in a five-point Likert type (never, rarely, sometimes, often, and always). The items in the "Before patient leaves clinic" section of SSC[TR] were completed by clinical nurses, and those in the following three sections by operating room nurses, surgeons, and anesthetists/anesthetic technicians.

2.4. Data Analysis

Data were analyzed by using SAS (Statistical Analysis Software, North Carolina State University, SAS Institute, North Carolina, USA) package program. The participants' demographic and professional characteristics, views, and attitudes concerning SSC[TR] were presented with descriptive statistical methods (number, percentage, mean, standard deviation [SD], minimum and maximum values). Normal distribution of data were tested by Shapiro-Wilk and Chi-square test was used to compare categorical variables with normal distribution. Statistical significance was accepted as $p<0.05$.

3. RESULTS

Of the participants, 233 were clinic nurses, 187 were operating room nurses, 81 were anesthetic technicians, 34 were surgeons, and 26 were anesthetists. The mean time for practicing the profession was 7.3 (SD = 7.0) (range, 1-35) years and the mean time working in the current unit was 3.8 (SD = 4.7) (range, 1-25) years. The mean age of the participants was 29.8 (SD = 6.8) (range, 19-54) years. Of all the participants, 80.4% were women, 49% were working shifts (08-16/16-08/day), and 60.4% worked 40-49 hours a week.

Ninety-seven percent of the participants stated that they knew about SSC[TR], but only 69% had received training on SSC[TR]. While 98% of the participants stated that it was mandatory to use SSC[TR] in their institutions, 57.8% stated that SSC[TR] was used regularly in every patient. Of all the participants, 78.4% thought that the use of the checklist increased patient safety, and 92.2% of them stated that they would like SSC[TR] to be used if they were to undergo surgery themselves. The participants' views on the use of SSC[TR] are presented in Table 1.

Table 1. *Participants' views on the use of SSC[TR] (n = 561)*

Variables	n (%)
Knowledge of SSC[TR]	
Present	544 (97)
Absent	17 (3)
History of SSC[TR] training	
Present	387 (69)
Absent	174 (31)
Source of SSC[TR] training*	
In-service training	363 (64.7)
Scientific gatherings, such as congresses and symposiums	49 (8.7)
Courses	18 (3.2)
SSC[TR] training meeting in the unit	
Not organized	273 (48.7)

Organized once before the adoption of the checklist	187 (33.3)
Regularly organized both before and after the adoption of the checklist	101 (18)
Are SSC[TR] training meetings held in the unit beneficial?	
Yes	276 (49.2)
No	285 (50.8)
Is the use of SSC[TR] mandatory in the unit?	
Yes	550 (98)
No	11 (2)
Is SSC[TR] used regularly in every patient?	
Yes	324 (57.8)
No	237 (42.2)
Reasons for not using SSC[TR] regularly*	
Not believing it is important	129 (23)
Hierarchical structure of the unit	56 (10)
Unfamiliarity	75 (13.4)
Lack of motivation during day	69 (12.3)
Lack of time due to workload	167 (29.8)
No one assigned to provide leadership	41 (7.3)
Time-consuming	77 (13.7)
No support from hospital management	25 (4.5)
Responsibilities not distributed across surgical team members	76 (13.5)
Benefits of using SSC[TR] regularly in every patient*	
Increased team communication	283 (50.4)
Increased procedural awareness (right patient/procedure/site surgery)	412 (73.4)
Identification/increased awareness of patient risks	394 (70.2)
Increased patient-centered information	302 (53.8)
Increased compliance with patient safety precautions	386 (68.8)
Increased patient safety	440 (78.4)
Reduced adverse events/errors due to surgery	412 (73.4)
Should SSC[TR] be used in every patient?	
Yes	534 (95.2)
No	27 (4.8)
Would you like SSC[TR] to be used if you were undergoing surgery?	
Yes	517 (92.2)
No	44 (7.8)
Availability of a coordinator for the implementation of SSC[TR] in the unit	
Available	248 (44.2)
Not available	313 (55.8)
Profession of the coordinator, if available*	
Surgeon	68 (12.1)
Operating room nurse	205 (36.5)
Anesthetist/anesthetic technicians	116 (20.7)
Recommendation for the use of SSC[TR]*	
Regular training meetings	131 (63.6)
Leadership for the effective use of *SSC[TR]*	218 (38.3)
Ensuring the active participation of all employees in the implementation of *SSC[TR]*	390 (69.5)
Real-time feedback	289 (51.5)
Motivating all employees for the use of SSC[TR]	292 (52)

**Participants were allowed to select more than one option.*

SSC[TR]: Surgical Safety Checklist(Turkey)

The rate of compliance was the highest for SSC[TR] item "Confirmation of identity, surgery type, and surgical site of the patient" (95.3%) and the lowest for "Team members' introducing themselves" (32.7%). The rates of following the items included in SSC[TR] ranged from 75.1 to 95.3% (mean, 90.3%) for the section "Before patient leaves clinic", 66.8 to 85.1% (mean, 79.3%) for "Before induction of anesthesia", 54.9 to 87.5% (mean, 71.1%) for "Before skin incision", and 78 to 91.2% (mean, 84.8%) for "Before patient leaves operating room". It was determined that 54.9 to 95.3% (mean, 81.1%) of the participants had a general attitude toward the regular use of SSC[TR] (Table 2).

When the attitudes of the surgical team members toward the use of SSC[TR] are examined according to their professions, in the "Before patient leaves clinic" section of SSC[TR], the clinic nurses mostly (95.3%) complied with the item related to the confirmation of the patient identity, type of procedure, and surgery site, while they least complied with the item concerning the confirmation of whether the surgery site has been shaved. In relation to the "Before induction anesthesia" section of SSC[TR], the highest rates of compliance were observed in the confirmation of patient identity, type of procedure, surgery site, and patient consent for the surgeons (91.2%) and operating room nurses (86.1%) and checking whether the patient had any allergy for the anesthetists/technicians (88.8%). In the same section, the lowest rates of compliance were observed in the operating room nurses and anesthesiologists/technicians confirming the marking of surgery site (71.7% and 54.2%, respectively), and surgeons (70.6%) confirming the availability of necessary imaging devices. In the "Before skin incision" section, the item that was most confirmed was the adequacy of the sterility of materials (always confirmed by 93% of the operating room nurses, 82.4 of the surgeons, and 79.4% of the anesthesiologists/anesthetic technicians) while the least confirmed item was the confirmation of whether all team members have introduced themselves (66.8, 58.8 and 32.7%, respectively). In the "Before patient leaves operating room" section, the highest and lowest complied items were determined as always confirming the labeling of all samples taken from the patient (94.7% for the operating room nurses) and completion of instrument, sponge and needle counts (87.9% for the anesthetists/anesthetic technicians and 85.3% for surgeons). For the same section, the least confirmed item was postoperative critical requirements (79.7 and 76.5% for the nurses and surgeons, respectively) and confirmation of patient identity, type of surgery, and surgery site for the anesthetists/anesthetic technicians (72%) (Table 2).

The highest compliance with the SSC[TR] items was observed among clinical nurses at a rate of 75.1-95.3% (mean, 90.3%), followed by the operating room nurses at 68.8-94.7% (mean, 79.6%), surgeons at 58.8-91.2% (mean, 75.3%), and anesthetists/anesthetic technicians at 32.7-88.8% (mean, 72.7%) (Table 2). The participants' views and attitudes concerning the use of SSC[TR] did not significantly differ according to their individual and professional characteristics ($p>0.05$).

Table 2. *Participants' attitudes toward the SSC[TR] items*

SSC[TR] Items	Never	Rarely	Sometimes	Often	Always
	n (%)	n (%)	n (%)	n (%)	n (%)
Before Patient Leaves Clinic (n = 233)*					
Confirming the accuracy of patient identity, procedure, and surgery site and whether the surgery site has been marked	1 (0.4)	-	2 (0.9)	8 (3.4)	222 (95.3)
Confirming that the patient provided consent for the surgery	-	4 (1.7)	-	9 (3.9)	220 (94.4)
Checking whether the patient fasted	2 (0.9)	1 (0.4)	3 (1.3)	6 (2.6)	221 (94.8)
Checking whether the surgery site has been shaved	13 (5.6)	6 (2.6)	19 (8.2)	20 (8.6)	175 (75.1)
Checking whether there is any foreign substance on the patient's body (make-up, nail polish, prosthesis, etc.)	3 (1.3)	3 (1.3)	1 (0.4)	10 (4.3)	216 (92.7)
Confirming that all clothing has been removed and the surgical gown and bonnet have been put on the patient	3 (1.3)	-	3 (1.3)	7 (3)	220 (94.4)
Confirming the necessity of a special procedure requirement (enema, compression stockings, bladder catheterization, special treatment protocol, etc.) before surgery	5 (2.1)	5 (2.1)	3 (1.3)	11 (4.1)	209 (89.7)
Checking the preparation of required material, implant, blood or blood product	2 (0.9)	1 (0.4)	10 (4.3)	15 (6.4)	205 (88)
Checking the availability of the results of all examination findings (laboratory, radiological, etc.)	4 (1.7)	3 (1.3)	3 (1.3)	17 (7.3)	206 (88.4)
Before Induction of Anesthesia (n = 328)*					
Confirming patient identity, procedure, surgery site, and patient consent	6 (1.8)	5 (1.5)	8 (2.4)	30 (9.1)	279 (85.1)
Check whether the surgery site has been marked	14 (4.3)	15 (4.6)	28 (8.5)	52 (15)	219 (66.8)
Confirming that the Anesthesia Safety Checklist (anesthesia equipment and drugs) has been completed	5 (1.5)	4 (1.2)	15 (4.6)	37(11.3)	267 (81.4)
Confirming that the pulse oximeter is on the patient and functional	8 (2.4)	7 (2.1)	17 (5.2)	34 (10.4)	262 (79.9)
Checking whether the patient has any allergy	3 (0.9)	2 (0.6)	8 (2.4)	34 (10.4)	281 (85.7)
Checking the availability of necessary imaging devices	4 (1.2)	7 (2.1)	18 (5.5)	41 (12.5)	258 (78.7)
Checking the requirement of blood transfusion	5 (1.5)	4 (1.2)	20 (6.1)	44 (13.4)	255 (77.7)
Before Skin Incision (n = 328)*					
Confirming that all team members have introduced themselves by name and roles	32 (9.8)	31 (9.5)	42 (12.8)	43 (13.1)	180 (54.9)
One team member verbally confirming patient identity, type of surgery, and surgery site	20 (6.1)	27 (8.2)	29 (8.8)	55 (16.8)	197 (60.1)
Review of critical events (estimated operative time, expected blood loss, unexpected events during surgery, possible anesthesia risks, and patient position)	9 (2.7)	6 (1.8)	19 (5.8)	58 (17.7)	236 (72)
Confirming that antibiotic prophylaxis has been given within the last 60 minutes	14 (4.3)	14 (4.3)	18 (5.5)	56 (17.1)	226 (68.9)
Checking the preparation of materials to be used	3 (0.9)	3 (0.9)	5 (1.5)	44 (13.4)	273 (83.2)
Confirming the adequacy of the sterility of materials to be used	3 (0.9)	3 (0.9)	6 (1.8)	29 (8.8)	287 (87.5)
Checking the necessity of blood sugar monitoring throughout surgery	8 (2.4)	11 (3.4)	21 (6.4)	52 (15)	236 (72)
Checking the necessity of anticoagulant use	10 (3)	11 (3.4)	18 (5.5)	51 (15.5)	238 (72.6)
Checking the necessity of deep vein thrombosis prophylaxis	13 (4)	12 (3.7)	31 (9.5)	47 (14.3)	225 (68.6)
Before Patient Leaves Operating Room (n = 328)*					
Confirming patient, type of surgery, and surgery site	9 (2.7)	7 (2.1)	18 (5.5)	32 (9.8)	262 (79.9)
Completion of instrument, sponge/compress and needle counts	4 (1.2)	3 (0.9)	5 (1.5)	17 (5.2)	299 (91.2)
Labelling of all surgical specimens	4 (1.2)	4 (1.2)	5 (1.5)	22 (6.7)	293 (89.3)
Review of the patient's critical post-operative requirements by the surgeon and anesthetist	6 (1.8)	4 (1.2)	13 (4)	49 (14.9)	256 (78)
Confirming the hospital unit to which the patient will be transferred	2 (0.6)	3 (0.9)	7 (2.1)	35 (10.7)	281 (85.7)

**Marked by surgical clinic nurses*

***Marked by operating room nurses, surgeons, anesthetists and anesthetic technicians*

SSC[TR]: Surgical Safety Checklist(Turkey)

4. DISCUSSION

In Turkey, concerning the safety of surgical care in healthcare services, the national regulation (34) and safe surgical practice guidelines have been published (17). These practices contribute to the awareness of the surgical team and teamwork with higher participation in order to prevent possible surgery-related errors (1). In addition, studies have reported that the use of SSC[TR] is considered as a tool that can improve teamwork and patient safety (28,30,35).

This study findings showed that almost all the healthcare professionals working in surgical units knew about SSC[TR]. Although this result is consistent with the findings of previous studies (30,31,33,36,37), there are also researchers reporting otherwise. For example, 81.3% of 96 healthcare professionals in a study by Karayurt et al. (26) and 23.6% of 208 healthcare professionals in a study by Keskin et al. (28) reported that they did not have knowledge of SSC[TR] (26,28). In studies conducted with surgeons and anesthetists, the rate of SSC knowledge was very low (38,39). These results may be due to the SSC usage not being mandatory in the institutions where the studies were conducted and the employees not having received any training about SSC. In contrast, in the current study, almost all the participants stated that the use of SSC[TR] was mandatory in their units, and more than half had received training on the use of SSC[TR]. However, a very low rate of participants reported that regular training meetings were held before and after SSC[TR] was introduced. This can also be the reason why most of the participants did not find the training useful. Contradicting this finding, it has been shown that regular training organized for the surgical team for the use of SSC lead to significant changes in their awareness, attitudes, and behaviors and significantly increase their compliance with SSC usage (3,23,35,40). In addition, it has been reported that in addition to regular informative meetings (39,41,42), SSC usage improves team communication, information sharing, planning and decision-making processes (3,24). In this context, unit managers are required to hold continuous training meetings at regular intervals with the support of senior management to increase the compliance of the surgical team with SSC[TR].

A striking finding of our study is that almost all the participants stated that the use of SSC[TR] in their units was mandatory and it must be used in every patient, but approximately half of them stated that this checklist was not regularly applied to every patient. Similar to our findings, previous studies shows that SSC is not routinely used with every patient (26,28,41). Although it is recommended by many professional organizations to use of SSC, this internationally accepted checklist is not followed in every patient. This may be due to a number of reasons, including the unwillingness of healthcare professionals to change, the need for comprehension and their lack of awareness of the positive effects of SSC (43). In order to ensure the use of SSC[TR] in every patient, it is a priority to inform all the surgical team members about both the existence of it and the reasons for and importance of its implementation.

In the literature, it has been reported that the most common obstacle to the use of SSC is its inappropriate use; i.e., item duplication from existing checks (19). In a multicenter study, the participants considered the completion of SSC as time-consuming due to their intense workload, did not fully understand its importance, and marked some of the items on SSC without any evaluation just to comply with hospital directives due to lack of time (14). These findings were confirmed by the study of Vogts et al. (44). Levy et al. (45), on the other hand, stated that although there was 100% compliance in terms of including SSC in the medical records of patients, some of the items on SSC were not completed. Sivathasan et al. (43) also reported that only some of the items on SSC were used while others were overlooked due to time constraints in some operating rooms. Similar to the findings of previous studies (10,19,24,28-30,46,47), in this study, the most important reasons for not using SSC[TR] regularly in every patient were lack of time due to heavy workload, not believing in the importance, and perceiving its use as time consuming. However, it is known that the implementation of SSC is not a time-consuming process (38,47) since it only takes approximately two minutes to complete (32).

For the successful implementation of SSC[TR], training should be organized to provide convincing explanations for healthcare professionals concerning why and how SSC[TR] will be used in order to contribute to the understanding of its importance. In addition, the heavy workload of surgical units and the shortage of staff, as well as the lack of a trained coordinator responsible for ensuring the use of SSC[TR] can be considered as important obstacles to a successful implementation. Supporting this, both previous research conducted in Turkey (28,31) and our study revealed that a coordinator responsible for the implementation of SSC[TR] was not present in most institutions. However, WHO and the Turkish Ministry of Health underline the importance of assigning one person from the surgical team as a coordinator for the implementation of SSC to achieve complete and error-free surgical procedures (17,48). Previous studies have reported that the responsibility for the implementation of the checklist is generally undertaken by operating room nurses, which is in agreement with the results of our study (30,31,33,37,42). Considering various factors, such as assigning the responsibility of checklist implementation to surgical nurses in addition to their existing duties and the time that should be allocated to the necessary preparations for the next surgery to be performed in the same operating room, it is important for institutions to determine a coordinator for using SSC at all stages for an effective implementation. In this context, a nurse may be appointed as checklist-coordinator, as also recommended by WHO because our data showed that nurses had the highest compliance with the items of SSC[TR] and previous studies (4,29,31,35,43,49) also suggested that compared to the other members of the surgical team, nurses have higher awareness of the benefits of checklist, exhibit a more positive attitude toward its use, and tend to take more responsibilities.

Consistent with previous studies (3,24,27,30,32), we observed the highest compliance with SSC[TR] in relation to the item concerning the confirmation of patient identity, surgery site, and surgical procedure while the item with the lowest compliance was the team members introducing themselves. It is important to confirm the identity of the patient, surgery site, and type of procedure to prevent wrong patient, side and surgery; therefore, the high compliance with this item is a favorable finding. On the other hand, the low compliance in surgical team members introducing themselves by name and roles may be the result of the participants considered this item to be unimportant or unnecessary because they already know each other. However, there are also studies reporting that compliance with this item is very high (41,46,50).

Varying results are reported in the literature regarding the adaptation of surgical team members to the sections of SSC. For example, the highest compliance with SSC[TR] was seen in the "Before skin incision" section (mean, 91%) in one systematic review (25) while it was observed in "Before induction of anesthesia" (mean, 99%) in another systematic review (19). McGinley et al. (24) also determined that the most completed section of SSC was "Before induction of anesthesia" and the least completed section was "Before patient leaves operating room". Consistent with a similar study conducted in Turkey (35), our findings revealed that the highest compliance with SSC[TR] was for the "Before patient leaves clinic" section (mean, 90%) while the least completed section of the checklist was "Before skin incision" (mean, 71%), in contrast to the literature (24,25,35). Differences in results can be due to various reasons, including human, cultural and institutional factors, as well as the health systems of countries.

In our study, the general compliance with SSC[TR] varied between 54.9 and 95.3% (mean, 81.1%). Although this rate was higher than reported in the study of Borchard et al. (25) (mean, 75%), it does not indicate full compliance. In a systematic review, it was reported that adherence to the use of SSC was not 100% in any of the 22 studies examined (3). As the demand for medical resources increases worldwide, any security error can lead to more serious consequences and increased costs for both the healthcare institution and patient, adversely affecting the healthcare process. For example, increased length of hospital stay due to complications has a cascading effect, such as delayed discharge, prolonged waiting lists, and delays in other individuals' access to healthcare (43). Therefore, to achieve the effective implementation, there is a clear need to organize regular training sessions for healthcare professionals, ensure the active participation of surgical team members concerning the use of SSC[TR], and assigning a coordinator to lead all these processes with a multidisciplinary approach. In addition, in order to improve the use of SSC[TR], real-time feedback or group meetings should be offered, the team members' sense of belonging should be promoted by distributing the responsibilities across the team, checklist should be integrated into surgical culture, and the support of management should be sought (3,4,19,23).

The limitations of this study may be that data were obtained using a self-reported form over a certain period of time.

5. CONCLUSION

Study findings showed that although SSC[TR] was known by almost all of the surgical team, it was not used regularly and there was not sufficient training for its use. Despite each healthcare professional's compliance with the items related to their own profession, the surgical team did not have full compliance with SSC[TR]. Training, effective leadership, and communication are essential for the successful implementation of SSC[TR]. Considering the findings of the study, the following recommendations are made: Regular training and informative meetings should be held by hospital/unit managements to improve the use of SSC[TR], coordinators should be assigned and trained to supervise the implementation of SSC[TR], responsibilities should be allocated to surgical team members to ensure that all items are followed, real-time feedback or group meetings should be provided at the end of each case, and regular inspections should be undertaken.

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