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The Effect of Teamwork Training through Multidisciplinary approaches Towards Safety Culture among Operation Theatre Staff of a Private Hospital

Azizah Harun¹, Annamma Kunjukunju^{2*}, Puziah Yusof³ and Aini Ahmad⁴

¹Undergraduate student, School of Nursing, KPJ Healthcare University College, Negeri Sembilan, Malaysia.

²*Research and Development Coordinator, School of Nursing, KPJ Healthcare University College, Negeri Sembilan, Malaysia.*

³Dean, School of Nursing, KPJ Healthcare University College, Negeri Sembilan, Malaysia

⁴Post Graduate Supervisor, School of Nursing, KPJ Healthcare University College, Negeri Sembilan, Malaysia.

*Correspondence:

Annamma Kunjukunju, KPJ Healthcare University College, Lot PT 17010, Persiaran Seriemas, 71, 800, Kota Seriemas, Nilai, Negeri Sembilan DarulKhusus, Malaysia, Tel: 606-7942131/2632, Fax: 606-7942662.

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ABSTRACT

Patient safety is currently a major concern for healthcare providers. A strong safety culture will be apparent, when healthcare providers feel responsible of patient safety in the workplace. Operation theatre is high-risk area with complex work processes. Working effectively as a team and collaboration with other surgical team members in OT will have a positive impact on safety culture. Multidisciplinary Approach Team Training in healthcare is a collaborative process where delivery of care becomes a shared responsibility. The study aims to determine the effect of teamwork training through Multidisciplinary Approaches (MDA) towards Safety Culture among operation theatre staff in a private hospital. The study has utilized quasi experimental of one group, pretest-posttest design and observation of team performance behavior. It was conducted using purposive sampling of 56 samples. The process of teamwork multidisciplinary training approach started with a pre-test. The post test is carried out one month after the training. An observation of the teamwork performance behavioural change is carried out after first and second three months of practice. The descriptive statistic results and the dependent t-test result showed the difference in pretest and post-test results of teamwork training. The result of the difference safety culture teamwork (SCT) practices in pre-test M = 315.41, SD = 25.92 and post-test M = 359.3, SD = 21.10, the dependent t-test revealed a significant difference of pre-test and post-test at t(102) = -10.68, p = .00.0. There is a noticeable difference seen in the pre and post teamwork multidisciplinary training. The safety culture teamwork performance behaviour changes in OT were observed for first three and second three months using Team Performance Observation checklist. There is an increase of team performance behaviour from the first three months, M=91.30 SD 16.3, to second three months M=97.75, SD 14.68. The T-test has showed the significant difference between Team Performance Behavior in first three months and second three months, t(107) = 2.3, p = .023. The findings had shown positive outcomes and showed significant impact of teamwork training through MDA towards safety culture among operation theatre staff.

Keywords

The effect, Safety culture, Nursing, Teamwork, Operation theatre, Multidisciplinary.

Introduction

Safety culture refers to attitude, beliefs, perceptions, shared values

and practices, shared by the health care providers in relation to safety in their workplace. It is a part of the hospital organization culture and demonstrated by the health professional in delivering their healthcare services to patients. Safety culture is understood as a factor of performance, training, and behavior of health professionals to see patient safety as one of their priorities [1]. The estimated percentage of surgical event occurs while the patient is in the operating room range from 35% to 66% [2]. Although there is development concerning patient safety in OT for the last ten years, the complications and the mortality rate remain extremely high with 3-22 % surgical procedures have significant complications and about 0.4% - 0.8 % the death rate [3]. Surgical safety should be a priority as surgical care is also associated with a considerable risk of complications and death, the majority of which are avoidable. The results of a systematic review showed the majority (58.4%) of adverse events in hospitals are associated with a surgical care provider [4]. The most prominent figure emerges in the operation room, comprising approximately 50% occurrence of all adverse events within a hospital [5].

The concept of patient safety is the prevention and reduction of various accidents and adverse events [6]. The process of providing healthcare safety requiring physicians, nurses, and allied health professionals from different specialties to work in teams [7]. Human factors were the causation of 65% of surgical adverse events, and it can be prevented through quality assurance of team training [8].

Background

This study has been conducted in one of the private hospitals in Kuala Lumpur, Malaysia. It has 230 beds capacity with specialties of orthopedic surgery, general surgery, cardiac surgery, neurosurgery, pediatric surgery, to name a few. Thirty surgeons are operating in the Operation Theatre (OT) which has five operating rooms. There is approximately an average of 500 surgeries per month.

There is a complex set of factors contributing to poor teamwork in the researcher's OT. The high increase of senior nurses' turnover rate has contributed to the shortage of experienced nurses and an increase of novice nurses. Nursing turnover negatively affects a facility's work environment, staff morale, and job satisfaction and increases errors, all of which may lead to further staff turnover [9].

In general, new nurses in OT are given six months to learn, and some still may not be competent at the end of the period. The adequate orientation in OT takes about six months, but it takes at least one full year to become competent enough to function independently [10]. Moreover, the researcher's hospital Orientation Program does not cover teamwork that inculcates safety behavior in healthcare practices. It is challenging to retain newly trained nurses to fill up the retiring nurses particularly in specialized stressful areas due to insufficient orientation, deficient in staff support and substantial patient acuity [9].

In OT, perioperative services consist of multiple areas where each area is a silo in their responsibility and accountability in their administration. The silo metaphor to denote organization dysfunction and fragmentation, refers to feelings of disconnection – the left hand not knowing what the other is doing, isolation and powerlessness, lack of trust, respect, collaboration, and collegiality [11]. It is typical for the surgical team working in operation theatre to experience communication failures and no cooperation which increase tension among team members and cause an interruption in daily work activities [12].

Teamwork is a cooperative process that allows ordinary people to achieve extraordinary results [13]. A team has a common goal or purpose where team members can develop effective, mutual relationships to achieve their goals. On the contrary, personal insight is seldom as broad and deep as a group when it takes on a problem. Individuals play the game, but teams win championships [14]. Psychological research suggested shared knowledge and understanding, in turn, facilitated team cooperation and coordination through team process [15]. For a team to function efficiently, its members should share a 'mental model' of the team's tasks, objectives, means and environment [16].

Multidisciplinary team approaches utilize the skills and experience of individuals from different healthcare professions thus provide more knowledge and experience than healthcare professionals operating in isolation [17]. The multidisciplinary approach requires a high degree of highly specialized knowledge in different disciplines of a multidisciplinary team, and these specializations must be intricately linked by mutual connection as problemsolving reaching out in this case, the operation theatre staff.

The training and the social aspect of teamwork in OT is a vital strategy to improve the cohesiveness of the medical professionals. Training in teamwork in OT can assist everyone to function, in the best of their ability in their roles, the team can perform better, and productivity will be increased with positive outcomes. Interprofessional team training interventions have been shown to have significant positive effects on OR processes, teamwork attitudes, and team processes towards safety [18,19]. Team training improves OR performance, but continued team training is required to provide sustained improved OR culture [20].

Therefore, this study aims to determine the effect of teamwork training through multidisciplinary approach towards safety culture among operation theatre staff at one of the private hospitals in Kuala Lumpur. The objectives are to determine the existing safety culture teamwork practices of staff working in OT pre teamwork multidisciplinary training, to determine the difference in safety culture teamwork practices pre and post multidisciplinary teamwork training and to determine the difference of safety culture teamwork performance behavior for the first three and second three months of practices in OT.

Methodology

This is a Quasi-experimental research design of one group pre-test and post-test approaches and observations of team performance behavior. The Pre-test post-test design covers the learning topics that make up the Safety Culture Teamwork Training (SCT). The process of teamwork multidisciplinary training approach started with a pre-test before the training commence. The multidisciplinary team carried out the safety culture teamwork training by teaching their specialty relevant to the job in OT. The participants then implemented the safety culture teamwork practices that they have learned in clinical OT premise. The post-test was carried out one month after the training. An observation of the teamwork performance behavioral change was carried out after the first three months of practice and second three months of practice. This quasi-experimental design interventional study was based on the real situation in the OT has an applied field's processes, problems and programs that can be examined to bring about understanding that in turn can affect and perhaps even improve practice.

Populations and Sampling

In this private hospital, there is a total of 70 staff working in Operation Theatre. In this study, the population consisted of the OT staff involved with patient care and affects patient safety. The selected staff who became the participants was 34 registered staff nurse, 5 State Enrolled Nurses, 4 Medical Assistants and 13 Operating Department Practitioners. All these 56 participants were working in the OT.

This study used a non probability purposive sampling technique. Purposive sampling was chosen because this study was concerning mainly on safety issues in OT. The participants were the staff working from zero years of experience to more than three years of experience in OT. The OT Unit Manager, OT Coordinator and OT staff who had not been working for more than one month and those who did not attend the scheduled teamwork multidisciplinary training are excluded in the training.

Study Instruments

The researcher has used the AHRQ Team STEPPS; Team Assessment Questionnaires adapted with modifications. The domains of the instruments consisted of Team Structure, Communication, Leadership, Situation Monitoring and Mutual Support. Each domain of the SCT had questions related to knowledge, skills, and attitude. Three sets of questionnaires were utilized for measuring the effectiveness of the training program.

Both pre-test and post-test were from the same questionnaires using the five-point Likert scale of : don't know (1), strongly disagree (2), disagree (3), agree (4), and strongly agree (5). The participants answered the pre-test before the commencement of multidisciplinary teamwork training. The pre-test results data obtained are to determine the existing safety culture teamwork practices of staff working in OT. The participants were expected to answer the entire question based on their previous knowledge and experiences to predict their rational answer.

The participants answered the post-test questionnaires after onemonth completion of the training. One month during the clinical practices in enabling their understanding of working together as a team for accomplishing the safety culture teamwork. The post-test results data are to determine whether there were any differences in safety culture teamwork after the multidisciplinary training. The respondent's team performance behavior changes in the five domains were observed in their safety culture teamwork practices in OT. The data for team performance behavior changes were gathered in the first and second three months during their OT practices to find any difference.

Data Collection Process

The data collection process was divided into three sections which consisted of pre-intervention, intervention, and post-intervention.

The pre-intervention section was a development process of real training to be conducted. In this initial preparation, the type of training for safety practices were identified. The researcher held a meeting with OT staff, multidisciplinary training team who is also the Head of Services, hospital clinical survey officer, surgeons, anesthetist and leaders' of the nursing team to discuss the OT safety practices by the staff. In the meeting, the safety problems were identified, the related safety topics to their work were mutually agreed to be added, and their safety issues in OT could be solved by teamwork safety culture training.

In the intervention section, there were two sessions within one month. The first intervention session was held two days a week in the classroom, and the second intervention session was done in OT every Saturday morning of each week. A pre-test was carried out before the commencement of the training. The training topics given in the classroom were about the fundamental principles and concept of five teamwork domains in Team Structure, Communication, Leadership, Situation Monitoring and Mutual Support integration with knowledge, skills, and attitude. The multidisciplinary team follow up on their role in sharing their relevant topic suited to their job designation. Appropriate teaching methods, activities, and interactive discussion with the OT staff on their OT clinical safety practices were used. The handouts of each module were provided. The second intervention session was conducted by the clinical leaders in OT premise in an interactive sharing session, familiarity, partnership as well as understanding each other's problems and difficulties. It was also a platform for the OT staff to know their leaders and colleagues better. Besides training, clinical leaders discussed their work activities, expectations and ways that can solve safety issues together. The engagement of staff and the clinical leaders were vital for the cohesiveness of teamwork and further strengthened the safety culture in OT.

In the post-intervention section, the participants implemented their learning practices of Safety Culture Teamwork in their daily practices in OT. The post-test was carried out after one month of training during the clinical practice. The first three months and the second three months of practices were for the OT participants to apply the safety behaviors that they have learned. During this time, the OT staff worked together effectively as team members as they had possessed the knowledge, skills and attitudes needed for safety culture teamwork. The clinical leaders continue to reinforce, motivate, and encourage the safety culture team performance behavior to work together effectively. The Clinical Survey Officer (CSO) takes the role in observing the practices of team performance behavior in this research study. CSO is the hospital clinical surveyor, and her job is to check on hospital staff compliance with the quality standard of practice. CSO observed the SCT performance behavior changes in OT at the end of the first three months and end of the second three months of practice using Team Performance Observation checklist.

Data Analysis

The assessment of the organization's existing safety culture is the first stage of progressing into safety culture. It permits healthcare organizations to examine patient safety aspects that require urgent attention. The assessment will also help in identifying the strengths and weaknesses of their safety culture will assist the institution in determining their existing patient safety problems and will be able to benchmark their scores [21]. The pre-test result provides data for the existing teamwork safety culture before the training. The pretest results of knowledge, perceived skills and attitude of the five domains: Team Structure, Communication, Leadership, Situation Monitoring and Mutual Support using the five-point Likert scale from don't know (1) to agree (5) strongly were analyzed from the highest and lowest mean.

Table 1 shows pre-test results of knowledge, perceived skills and attitude component, majority showed positive response from the highest mean score obtained. The lowest mean score of the items in pre-test results were further reinforced and strengthen for understanding during the training. The pre-test data provides clue in improving the training to reach a good outcome.

| Pre-Test | | Strongly Agree | | Agree | | Disagree | | Strongly Disagree | | Don't Know | | Mean | Std. Deviation |
|--------------------|--|-------------------|------|-------|------|----------|------|----------------------|-----|---------------|------|------|-------------------|
| | | п | % | n | % | п | % | n | % | n | % | | |
| KNOWLEDGE | Team Structure | | | | | | | | | | | | |
| | Understanding a team's structure and how multiple teams interact is important in the implementation of teamwork | 27 | 48.2 | 29 | 51.8 | 0 | | 0 | | 0 | | 4.48 | 0.5 |
| | Communication | | | | | | | | | | | | |
| | A Time Out is done before skin incision by Circulating staff in the presence of Surgeon, Scrub staff and Anaesthetist | 32 | 57.1 | 21 | 37.5 | 2 | 3.6 | 0 | | 1 | 1.8 | 4.48 | 0.74 |
| | Mutual Support | | | | | | | | | | | | |
| | The tools to empower team members to advocate for the patient are the Two-Challenge Rule and CUS. | 3 | 5.4 | 41 | 73.2 | 0 | | 0 | | 12 | 21.4 | 3.4 | 1.29 |
| PERCEIVED SKILL | Communication | | | | | | | | | | | | |
| | Staff allow enough time for the patient to ask questions when communicating with patients | 24 | 42.9 | 30 | 53.6 | 2 | 3.6 | 0 | | 0 | | 4.39 | 0.56 |
| | Mutual Support | | | | | | | | | | | | |
| | Staff request assistance from fellow staff when they feel overwhelmed | 22 | 39.3 | 34 | 60.7 | 0 | | 0 | | 0 | | 4.39 | 0.49 |
| | Team Structure | | | | | | | | | | | | |
| | The components and composition of a multi-team system defines clearly team structure | 14 | 25 | 35 | 62.5 | 1 | 1.8 | 0 | | 6 | 10.7 | 3.9 | 1.11 |
| ATTITUDE | Leadership | | | | | | | | | | | | |
| | It is important for leaders to share information with team members | 28 | 50 | 28 | 50 | 0 | | 0 | | 0 | | 4.5 | 0.51 |
| | Mutual Support | | | | | | | | | | | | |
| | Personal conflicts between team members do not affect patient safety | 12 | 21.4 | 32 | 57.1 | 9 | 16.1 | 3 | 5.4 | 0 | | 3.9 | 0.77 |

Table 1: Pre-test results of Knowledge, Perceived Skill and Attitude component: Highest & Lowest Mean.



Figure 1: Mean Scores for safety culture teamwork domains for pre and post-training.

Figure 1 shows the mean score for safety culture teamwork of the five (5) domains: Team Structure, Communication, Leadership, Situation Monitoring and Mutual Support for pre and post training. The mean score for each domain has shown an increase in post training. The results have demonstrated that the participants scored highest after they were exposed to the training as compared before the training conducted.

Table 3 shows the overall sum of scores, mean, and standard deviation of the safety culture teamwork pre training and post training session. The table below confirms there is a noticeable difference in the pre training score (M = 315.41, SD = 25.93) and post training score (M = 359.3, SD = 21.1) on safety sulture teamwork. The result of the descriptive analyses conducted on the safety culture teamwork pre and post training demonstrated that the participants scored the highest after they were exposed to the training and practice them in the long run.

Table 3: Overall scores of safety culture teamwork pre and post training.

| Component | Sum | М | SD | |
|--|---------|--------|-------|--|
| Safety culture teamwork (pre training) | 17663.0 | 315.41 | 25.93 | |
| Safety culture teamwork (post training) | 20121.0 | 359.3 | 21.1 | |

Table 4 shows the dependent t-test result that indicates that differences exist in term of safety culture teamwork pre and post training and the significant is .000 (Significant at the 0.05 level). As the safety culture teamwork increases over time after the training, it can be said that the training is effective in this setting.

Table **4:** T- test result of difference between safety culture teamwork pre and post training

| Effect | Df | Mean difference | t | Sig. | Standard error difference | | |
|---|-----|--------------------|--------|-------|------------------------------|--|--|
| Safety culture teamwork pre *post | 102 | -44.77 | -10.68 | .000* | 4.19 | | |

Significant at the 0.05 level

Table 5 indicates there is a difference of Team Performance Behavior 1^{st} three months and 2^{nd} three months of safety culture teamwork practices. It has shown an increase in mean score of team performance behavior from 1^{st} three months to 2^{nd} three months of practices.

Table 5: Team Performance Behavior 1^{st} three months and 2^{nd} three months.

| Team Performance Behavior | Sum | Mean | Standard deviation |
|---------------------------|------|-------|--------------------|
| 1st 3months | 5034 | 91.3 | 16.31 |
| 2nd 3 months | 5376 | 97.75 | 14.68 |

Table 6 shows the result from the dependent t-test indicates there is a significant difference between Team Performance Behaviour in the 1st three months and 2nd three months after training in which the team performance behaviour increases over the time period.

Table 6: T-test of the significant difference between Team PerformanceBehavior in 1st Three Months and 2nd Three Months.

| Effect | Df | Mean difference | t | Sig. | Standard error difference | |
|--|-----|--------------------|------|-------|---------------------------------|--|
| Team Performance Behavior 1 st three months * 2 nd three months | 107 | 5.83 | 2.31 | .023* | 2.52 | |

*Significant at the 0.05 level

Discussion

The pre-test descriptive results and the positive response in table 1 shows the highest mean of the five (5) domains of Team Structure, Communication, Leadership, Situation Monitoring and Mutual Support together with the components knowledge, perceived skills, and attitudes. The pre-test results have supported the OT staff of the existence of safety culture teamwork practices pre-training. Perceptions and attitudes about components of safety culture among the working personnel in an organizationsafety climate-can deliver an essential clue for the level of its safety culture [22]. For the the item that obtained the lowest mean, it will be reinforced on the further understanding of the respondent during the multidisciplinary teamwork training. The added information that was obtained from the pre-test has assisted the multidisciplinary training team in improving their teaching approaches to reach a satisfactory outcome of Safety Culture Teamwork multidisciplinary training to the OT staff. To promote safety and excellent care is to increase the affirmative outcome [23].

To determine the difference in safety culture teamwork practice pre and post SCT multidisciplinary test was conducted. Figure 1 shows there is significant increase of mean score in the post test findings. The results have demonstrated that the participants scored highest after they were exposed to the training as compared before the training conducted.

Starting with the team structure domain comparison of pre and

post is the first to be analyzed. Team structure is the fundamental part of a teamwork process. The team structure pre training, mean score was 63.67, while the mean score post training increase to mean 70.16. The results demonstrated that the participants scored the highest after they were exposed to the training as compared to before the training was conducted. Team structure enables the individual team members to understand and appreciate their own functional roles and those of others [24]. Thus, this is evidence that the OT staff understand the structure of a team, familiar with their team members and knowing the way to interact within the team is important in the implementation of teamwork. Hence in team structure, there is an increase of safety culture teamwork practices post multidisciplinary training. A well-designed group tasks foster high, task-focused effort by team members [25].

Next is the comparison of communication domain, the core components in communication includes the efficient exchange of information and consultation with other team members [26]. In the overall component of communication domain, the mean score pretest training is 63.64 and post-test test mean is 72.34, demonstrated that the participants scored the highest post training as compared to pre training. The OT staff has shown positive response in the communication especially after the training which is seen in the post-test results. It is confirmed in OT communication is defined as skills for working in a team context to ensure that the team has an acceptable shared picture of the situation and can complete the tasks effectively [27].

In the overall component of leadership domain in SCT multidisciplinary training, the post-test mean sore is 72.98 (pretest mean 64.25). The safety culture teamwork practices post multidisciplinary training in leadership domain has shown an increased. Leadership facilitates discussions, enables join decision-making, and motivates members to participate, which in turn enhances the performance of the group [28]. The situational approach treats leadership effectiveness as arising from the dynamic interplay of three factors: the leader, the followers, and the situation in which they all take part [29].

Next domain to compare and analyze is Situation Monitoring. In Team STEPPS: Optimizing perioperative setting, situation monitoring (or mutual performance monitoring) the capacity to develop common understandings of the team environment and apply appropriate strategies to monitor teammate performance accurately [26]. The domain of situation monitoring post-test result has shown increase to mean 71.91 (pre-test mean 62.07).

The shared mental models are about improvement of team performance, if team members have shared understanding of the task that is to be performed and the teamwork involved [30]. By showing concern and supporting each other in OT, it is appropriate for one team member to provide help to who may be too tired or stressed to perform a task. Teamwork is not solely a consequence of co-locating individuals together. Rather, it depends on a willingness to cooperate, coordinate, and communicate while remaining focused on a shared goal of achieving optimal outcomes for all patients [31].

The last of the fifth domain is Mutual Support. There is an increase in the overall post-test mean score after the SCT multidisciplinary training, mean 72.21 as compared to pre-test mutual support mean score 61.92. The mutual support or back up behavior refers to the ability to anticipate needs of other team members to be able to offer support among teams is a vital aspect of healthy work environment [32]. Thus, mutual support is relevant to OT which is a highly risk area that requires safety. Therefore, seeking help from other team members is greatly encouraged in such situations. As the saying goes staff that care for each other, will care for patients better.

In the overall scores, there is a noticeable difference pre training was conducted where the total sum is 17663.0, mean = 315.41, SD = 25.92 and post training the total sum increased to 20121.0, mean = 359.3, SD = 21.10. The dependent t-test indicates that the differences exist in term of safety culture teamwork pre and post-training in which the safety culture teamwork increases post-training given to them at t(102) = -10.68, p = .000 (Significant at the 0.05 level). Hence, from the positive results and the high mean score of post-test results, has shown that the training on the safety culture teamwork through multidisciplinary approaches is worth to be conducted as a training program, and the training is working in this OT setting.

The TPO (Team Performance Observation) of the five domains have been conducted end of the first three months and the second three months during the clinical OT practices. In the observation for the first three months of team performance behavior showed from the total sum 5034, mean=91.3, standard deviation=16.3, has increased to sum 5376, mean 97.75, standard behavior 14.68 in the second three months. The t-test has shown the significant difference between Team Performance Behavior in the first three months and second three months t(107) = 2.31, p = .023 (significant at the 0.05 level). Based on the overall analysis, the results have shown there is an increase in their behavior change after the second three months at the end of their practices. The increase results of safety culture teamwork performance behavior change from the first three months to the second three months of practices has demonstrated that the multidisciplinary teamwork training towards safety culture has taken effect. Teamwork training improve teamwork processes in the operation theatre and staff attitudes towards safety [33]. Safety culture improved patient safety, which concludes that if safety was to be promoted then it was important to use strategies comprising multiple components that incorporate team training and mechanisms to support team communication [34]. In response to this, multidisciplinary teams were appropriate to be gathered in specific departments of organizations. It could promote positive teamwork or collaboration as well as positive safety culture.

Implications

The first implication is in terms of the expert's multidisciplinary team involved in the training. Multidisciplinary team approach in OT training has proven significant, positive effects of team training for a useful tool to enhance important team outcomes, especially dealing with patient safety culture. The involvement of clinical and non-clinical healthcare providers in the multidisciplinary team will instill collaboration of a strong intrinsic sense of belonging to the hospital. The promotion of multidisciplinary training and the opportunity to learn how to collaborate built strengthened and sustained positive effects on group cohesion [35]. Thus, the collaboration effort will further increase the commitment to teamwork towards safety culture.

Further enhanced by practitioners are reported to enjoy better communication and relationships with their colleagues, the ability to focus on the entire patient, increased efficiency and effectiveness of care delivery collaboration includes an enhanced potential for resource exchange and a movement toward power parity among members, allows individuals to expand their knowledge and expertise while providing support, dividing responsibility, and cushioning the effect of failure [36]. Multidisciplinary collaboration means a team consisting of members with different professional backgrounds and skills that can compensate each other and work together toward the same direction to achieve the same goals [37]. Therefore, involving the hospital team of experts in their field of work, applying multidisciplinary collaboration in design education is relevant and pertinent to OT practices.

The training of teamwork in safety culture can have an impact on the hospital overall. The activity can lead to identifying the strengths and weaknesses of their healthcare safety culture, their existing patient safety problems, and able to benchmark their scores with other hospitals. Such assessment will allow healthcare organizations to implement numerous changes that can advocate to improve hospital safety culture and to enhance patient safety. Significance findings can promote and develop a training program for healthcare safety culture as innovative solutions to improve hospital patient safety. Benchmarking – a planned process by which an organization compares its health and safety processes and performance with others to learn how to reduce accidents and ill health, improve compliance with health and safety law and cut compliance costs [38].

The introduction of a behavioral safety process can identify and reinforces safe behavior and reduces unsafe behavior. There are some fundamental elements to implement include training, policies, systems, assessing and improving management performance and operational factors. The techniques for sustaining change behavior over a long period to improve an existing safety culture should consider the observation, intervention and giving feedback to the staff. Therefore, significant workforce participation and full engagement in the audit observation of behavioral safety culture is essential to sustain the continuance safety behavioral performance change in patient safety in the healthcare industries. The safety rules and procedures are referred to the organization that set clearly on their mission, vision, responsibilities, set up the standards of employee behavior and provide safety system to correct the worker's safety behavior [39].

Limitations of the Study

The generalizability of the results for only one hospital in OT is

limited as it covers only small population's sample. Targeted and valid only in one hospital will not be able to represent the different population and the impact of implementation effectiveness can be restricted. The participating in a single education session and only implemented in one high-risk area can restrict the effectiveness and may limit the lasting safety teamwork behavior changes.

Conclusion

Patient safety, for a medical institution, is the essential uncompromised issues and has become an emerging interest in health care particularly in operation theatre when compared to other hospital settings. Errors in operation theatre can be a fatally tragic event which can be catastrophic to the healthcare professions and the hospital [40]. The teamwork training using the five domains integration with knowledge skills and attitude with a multidisciplinary approach is justifiable in its values being included to achieve safety culture outcome. Multidisciplinary approach in training Safety Culture Teamwork in operation theatre is essential in behaviour change in creating a high-performance team that will lead to high-reliability organisations.

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