Evaluation of Healthy Work Environment Training Course in Critical Care Units Using Focus Groups – Croatian Data Presentation

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Abstract

Introduction. Research on healthy work environments has shown that they are associated with reduced staff turnover, improved health care outcomes, greater staff and patient satisfaction, and lower levels of workplace and burnout.

Aim. The aim of the research was to evaluate training courses designed to promote healthy working environments in intensive care units.

Methods. The course was based on the six HWE standards proposed by the American Association of Intensive Care Nurses and was created as part of the Erasmus+ project. Croatia is one of the countries that participated in the project. After the course, two focus groups were held with course participants.

Results. Data processing resulted in three main topics: Importance of healthy working environment, Motivation to participate, Evaluation of training courses. Both participants and trainers expressed a positive opinion regarding the content of the course.

Conclusion. The course enables nurses to develop the competencies needed to influence their work environment. The course can be integrated into continuous professional development programs not only for intensive care nurses.

Introduction

In recent years, research on healthy work environments in health care facilities has increased as they are recognized as a key factor in ensuring high-quality, safe patient care, as well as the element that leads to higher productivity and staff satisfaction (1). The World Health Organization defines a healthy work environment as a workplace that supports the whole human being, is patient-focused and joyful, and enables healthcare workers to meet the needs of their patients and their families as well as the goals of the unit and organization (2). Health workers are crucial for the sustainability of health facilities, yet many European countries are faced with health workforce shortages (3).

In their research, Salehi et al demonstrated the relationship between a healthy working environment and job satisfaction and the intention to leave work among intensive care nurses (4). Motley et al state that it is important for managers in healthcare institutions to support healthy work environments, as these are essential for retaining good quality staff (5). The work environment is also very strongly associated with indicators of nursing care quality in hospital settings: patient mortality rate, falls, bedsores, medication malpractice, repeated admission to hospital, length of hospitalization, and infections related to nursing care (6).

A group of authors in Croatia found that the implications of nursing care rationing and nurses' dissatisfaction was associated to poor quality of nursing care provided to patients (7). Association between rationing of nursing care and nurse's satisfaction has also been confirmed on a wider European sample (8).

Kester et al. wanted to examine the effect of the implementation of AACN standards on staff satisfaction, turnover, and tenure two years after initial implementation. The results of the study showed that there was statistical significance in all standards except in the skilled communication standard (9).

Wei et al conducted a systematic review of studies on nurse work environments in the USA, to identify elements that affect the improvement of nurse work environments. The authors found that work environments affect nurses in a way that leads to impaired mental health, job dissatisfaction, and retention. The review also stated that there is a link between the work environment and work performance and productivity. The authors found that it is necessary to continuously improve work environments (10).

Samur and Intepeler wanted to find out the nurses' perspectives on healthy work environments. They conducted a qualitative descriptive design using in-depth semi-structured interviews and identified two key components: one related to "physical environment regulations" and the other related to "administrative arrangements". They believe that it is necessary to work on improving healthy work environments, especially by preventing work accidents and injuries (11).

In 2001, the American Association of Critical-Care Nurses (AACN) made a commitment to actively promote the creation of healthy work environments in critical care units. In 2005 the AACN published their Standards for Establishing and Sustaining Healthy Work Environments: Journey to Excellence. After the 2005 publication of the AACN standards, research was conducted on the impact of work environment on team effectiveness, patient outcomes, patient safety, nurse retention, and burnout syndrome in healthcare professionals. The AACN established six standards based on evidence: skilled communication, true collaboration, effective decision making, appropriate staffing, meaningful recognition, and authentic leadership (12, 13).

The HWE4CCN project (2019-2022) was developed to be the first open, multilingual combined course for professional educators in the nursing field, aimed at healthy work environments in ICUs. The project was based on the six standards of the American Association of Critical Care Nurses – AACN). The project coordinator is the Cyprus Nurses and Midwives Association, and the partners are the Universität International de Catalunya, the Polish Society of Anesthesia and Intensive Care Nurses, Croatian Nurses Society of Anesthesia, Resuscitation, Intensive Care and Transfusion and the European Federation of Critical Care Nursing Associations as an associate partner. The project was supported by Media Partners SRL (Romania).

As part of the project, focus groups were used to validate the online training content and identify best practices.

Aim

The aim of the research was to evaluate training courses designed to promote healthy working environments in intensive care units.

Methods

Research design

A qualitative design using focus groups was employed. The focus group was conducted live for an hour. Two focus groups were conducted, each consisting of four participants. Due to restrictions imposed by the COVID-19 pandemic, the study was limited to a sample of eight participants. Despite the small sample size, the researchers deemed it sufficient to reach data saturation, as no new themes emerged during the second focus group and participants expressed consistent perspectives regarding their work environment (14). Nevertheless, the limited number of participants is acknowledged as a constraint, and the authors recommend conducting follow-up research with a larger and more diverse sample to enhance the robustness and transferability of the findings.

The focus groups were led by two people, one conducted a semi-structured interview due to her experience in conducting qualitative research, while the other person took notes and recorded the conversation. At the beginning of the focus group, it was explained that the conversation would be recorded and that the results would be used for scientific work. Each participant signed an informed consent for the recording and use of data obtained during the focus group. Each participant had the opportunity to add something at the end of the focus group.

Respondents

Two focus group discussions were conducted with nurses who participated in respective training courses. Four nurses participated in each focus group dis-

cussion, a total of 8 respondents were included in the research. Focus group discussions have been conducted in January 2021. The participants were nurses who work in critical care departments and who participated in at least one workshop on a healthy work environment.

Table 1. Characteristics of focus group participants			
Gender	Age in years	Experience in the CCU in years	Number of standards listened prior the focus group
1. Focus group			
Female	32	7	4
Female	24	1	4
Female	35	10	6
Male	20	1	4
2. Focus group			
Male	24	2	4
Female	27	2	3
Female	39	19	2
Female	27	2	4

Data collection

The moderator used a semi-structured interview guide. Table 2 shows the questions addressed to the participants of the focus groups. Focus groups were organized on January 15, 2021 and January 22, 2021, shortly after the training. They were moderated by a researcher with clinical experience in intensive care and expertise in conducting focus group discussions. The average duration of the focus groups was 60 minutes. At the end of each focus group, the moderator summarized main discussion points, and participants were encouraged to correct or add comments to ensure veracity and verifiability. Each focus group session was video recorded.

Data analysis

The data obtained by conducting the focus groups were transcribed word for word by one of the authors of the study. Participants were given the transcribed text to add to or confirm what was said in the fo-

cus group. Both researchers who conducted the focus group worked separately on coding the text. The researchers cross-checked the codes and looked for preliminary themes based on the initial codes. Preliminary themes were reviewed and revised by two researchers. Each topic is given a name that reflects the content expressed in the focus groups.

Table 2. **Questions for focus group participants**	
1.	What challenges did you face while holding the course? What would you change?
2.	What motivated you to take the course? Who do you think should implement the HWE standards and in what way?
3.	To what extent is the course relevant to you and your work environment? What information was most useful to you, and which will you apply in your work?
4.	To what extent could this course affect your work environment?

Ethics

Approval for conducting the study was obtained from the Ethics Committee of the UHC Zagreb, where the research was conducted. Also, each respondent gave written consent to participate in the study.

Results

Topic 1: Importance of a healthy working environment

There is consensus among all respondents that the working environment is important for their optimal functioning during work. Since work in ICUs is incredibly stressful, the working environment is the factor that makes a huge difference: whether it will be stress reliever or increase it further.

> "The fact that we are all working in such a stressful environment does not mean that every day must be stressful and bad. I mean... these workshops are perfect for improvement." (G1)

After participating in training courses, nurses became aware of previously overlooked aspects of daily work, such as the motivating effect of appropriate praise, and the benefits of adequate conflict management, which, when improved on a personal level, can contribute to a healthier working environment. However, to achieve significant improvement, they emphasized the need to raise awareness of these aspects among all employees in the unit, especially to head nurses, whose leading and communication skills contribute the most to the overall atmosphere in the unit. Therefore, it is recommended to include as many nurses as possible, starting from the head nurses.

> "Personally, it has definitely affected me, but I'm just sorry that maybe the department head nurses aren't as present at such workshops as they might be, because as the colleague said, it all actually starts with them. So, they are the people who should try to create a positive atmosphere, who should resolve conflicts so that they do not discriminate against anyone, etc., and I think that maybe for them there should be a little more organized activities... workshops... Because they really hold the whole department in their hands. I won't say that they determine everyone's destiny, but they really have a noticeably big impact on the workers and their satisfaction." (G2)

> "I think more focus should be put on the head nurses of the wards and not just the wards, maybe the head nurses of the departments or something like that. They can change something because, realistically, let's be honest, we can't really change anything. We can point out some things, we can say: 'this is not good for us, this does not suit us, maybe we could ... ' But in fact, we do not have too much of an influence, so I think it would be better suited, let's say, better suited for them." (G4)

However, there is a dose of skepticism towards the head nurses and their willingness to adjust their established approach. Participants pointed out there was no formal/standardized education and preparation for head/leading positions so far, just a transfer of knowledge from one leading nurse to the other so there is no unified leading approach, but it depends on the character and skills of individual. Therefore, it is necessary to incorporate certain standards which head nurses can easily follow and play a role in an even better way.

"...but I think that people who are of a certain age already have their personality and their... I don't know how to express myself... basically, their mode of operation – they will be difficult to change. But the truth is that head nurses have a big impact because they are there every day, they could change something, and we... not so much. Because we sometimes... I don't see some of the co-workers sometimes for a week." (G6)

One participant pointed out the necessity of involvement of physicians they work with, too, as they see a lack of understanding for nurses from some physicians.

Another argument to continue with training courses is that a healthy working environment is considered as the first line of prevention of burnout and leaving the job.

"I think this is certainly very important because if people take all the stress from work home, if they are not only stressed but maybe also nervous because of other co-workers, if they take it all home, they will experience burnout much sooner and I think a healthy work environment is the first level of prevention in such things." (G1)

Topic 2: Motivation to participate

Attendance at training courses (lifelong learning) is still very much determined by individual motivation and a desire to learn. Personal growth and development as well as the wish to contribute personally to a healthier work environment was the main motivation for nurses to participate in respective training courses. Some participants were encouraged by the trainers themselves.

The reason why nurses do not participate in different courses to a larger extent is not seen as much in covered topics (they state that the employer/superiors recognize the need and to a greater extent organize various useful courses and trainings), as in the fact that nurses have to attend courses in their own free time (sometimes before or after the shift), and without some kind of compensation.

It is suggested to the employer to give a day off for some training courses attended or at least symbolic financial compensation, which would affect the motivation and greater satisfaction of the employees.

"The employees were not really interested in investing their free time to attend a course. They said it was a problem for them, they wanted days off... Simply, few people wanted to invest time in training, without you having to force them, at least that's my impression." (G3)

There is an opinion this is an investment in employees which will pay off to the employer later on: employees will be much more trained / educated and will therefore contribute a higher quality of work.

Forced participation in courses does not make sense because employees are not interested and motivated to listen to them for several hours, as well as training courses that they cannot apply in their working environment, therefore there is no benefit neither for nurses nor for the employer.

It is advisable to put a greater focus on the wishes and needs of employees, to give them the opportunity to choose the training they are interested in and that they consider to be useful in their work to a certain extent.

Topic 3: Evaluation of training courses

The following training topics were highlighted positively: leadership, mentoring, skilled communication, and conflict management. Some of them are pointed out because nurses recognized considerable room for improvement and welcomed an effort to address these areas, some because they already apply knowledge from training courses to improve the working environment. Furthermore, their vision of good functioning regarding each topic is described.

It is particularly important that the leading nurse or shift manager is skilled (trained) in managing people and working in a dynamic and challenging environment.

"A head nurse or shift manager should be the person who has the level of knowledge and general ability to be able to control the whole department." (G2)

Leading nurses were not (formally) trained for that role so far, these skills and knowledge were transmitted from nurse to nurse, so respondents see these roles as very undefined and dependent on individual competence/ability to perform. They think that management and mentoring roles should be strictly defined so the person coming to that position exactly knows what their assignments and responsibilities are.

Head/leading nurses should adjust the approach to individual nurses considering their previous experience

(whether it is an experienced nurse in some other field or department, or it is a nurse without any previous experience) and knowledge, while respecting suggestions of younger/newer employees as well.

The praising system should be adjusted along with work experience and knowledge, with a different kind of recognition, praising for beginners and already experienced nurses.

Meaningful recognition is more important to younger/new employees, it contributes a lot to their greater security in work and motivation.

> "...how much this one word 'great', 'bravo' and 'great reaction' means to someone who has just started working in the system, and how much it actually motivates for further work, and I think it is rarely applied, and actually this little word can help a lot." (G5)

Mentoring is not considered a strong point, as there are no strictly defined guidelines outlining mentor's assignments and responsibilities.

> "So I think we are very bad with that part of mentoring and all that, I think it all floats somewhere and there is nothing exactly defined – how, what, where – we should have procedures about it, so that the person who gets that position can look up and see – aha, I have to do this, this and that, I have to check this and that." (G7)

Head nurses' communication should be adjusted to each of the employees, considering their personalities in order to get the best out of them. It is also important to raise awareness of some aspects of communication among employees that can change their relationship positively. As one respondent would say: it is important to learn how to communicate with each other, regardless of the current mood.

One participant stated the necessity of including the communication of all stakeholders involved in patient care (physicians, physiotherapists and even cleaning staff).

Skilled communication is a field where shortcomings are seen as well, therefore training in this field is welcomed by both, leading and shift nurses, as well as physicians.

> "If such workshops were to be held continuously, they would benefit everyone, both supervisors and us who are working shifts." (G1)

> "Someone may not be in a good mood that day, someone may have gotten up on the wrong side of the bed, someone is great and we simply must learn to communicate somehow – as you were saying... sorry... as you were all saying, after situations like these... never talk during resuscitation or any other similar procedure, but afterwards yes, by all means, maybe even include physicians in the communication and absolutely include head nurses and, of course, other co-workers. But physicians should definitely be included." (G2)

Conflicts occur sometimes during work among colleagues for different reasons. One respondent pointed out the situation when he implemented a new, more constructive approach to conflict resolution, the way he was taught in this course so it can be concluded that courses are already giving certain results.

> "Well, take me for example... Three days ago, I suggested how to solve a conflict between two co-workers after the event." (G4)

> "The thing with the aggressive, passive-aggressive thing... those conflicts, how to behave, I mean, we always, maybe unconsciously, experience during the day, during the working day, and it's just, like, 'react patiently', I think I myself am passive so it's not that I burst easily, but it accumulates in me and then when I need to burst then it's like: 'don't, don't, don't' (laughter), so, there were, there were a lot of those segments." (G6)

Desirable training courses

The training courses that the respondents participated in so far are very positively evaluated. Participants complimented the educators' communication skills as well as their ability to encourage all the participants in a discussion.

Respondents pointed out that it is not enough just to narrate about a certain topic, but to demonstrate by showing it through examples, illustrate through games, role playing, etc. In such training courses participants get more involved (they are not passive listeners) and adopt and remember the content to a larger extent. Courses regarding the healthy working environment were consistent with the above findings. All the respondents expressed high levels of motivation to participate in future similar courses and to recommend them to their colleagues.

"Well, it's important to show people how it works, and to present it, I mean, live… I mean, not only to talk about it, but to really show it on examples." (G1)

Participants suggest more frequent similar courses, as well as multiple courses on the one (same) topic so the participants could absorb the content to a higher degree.

They also point out the importance of informal gatherings before or after such courses (refers to live courses which participants are more prone to), where they can evaluate and exchange experiences in a relaxed environment which is stimulating for bonding and creating a better work environment.

Suggestions for improvement point out the need to include a larger number of participants in such training courses, but in smaller groups, with a duration of up to 4 hours per training.

An important aspect of courses praised, especially in the second group discussion was their good, relaxed atmosphere, with participants feeling comfortable to include and express their opinion. It is also one of the most prominent reasons for the recommendation of courses to colleagues.

"So, I was… It was really great for me…. it was one of the segments that makes you take part every time because you learn something new every time and the atmosphere is quite relaxed, informal… This informal part of the course is actually quite okay. I think that will be extremely attractive to people." (G2)

"It was good because the whole atmosphere of the course was so relaxed and there were no wrong answers, and every answer was correct because it represented the opinion of individuals. I think this is the best approach to this course and the result is definitely positive after each training or lecture." (G8)

Participants consider head nurses to have a main role in recognizing the need for education and encouragement of other nurses to participate in training courses. It is suggested to organize the courses for head nurses first, so they can promote the courses and motivate others based on their own experience. After the separate courses for head and other nurses, it is suggested to organize courses for all of them together where different experiences and points of view can be exchanged.

"Well, I think our supervisors, head nurses should recognize the need for a healthy work environment and implement it and encourage people to go to workshops. Of course, including the nursing manager on the hospital level, the level of the organization, but certainly the department head nurse should be someone who takes care of all of us employees. I would leave it to this level." (G3)

"Maybe like you say… first separate them, then confront them all together, and then mix us all together to communicate something, to do something, because if they're in one group and we're in another group, we will talk our stuff, and they will talk theirs and again: where are we? Mix us all, at one point mix us all together…" (G2)

A useful tool for informing nurses about the training courses could be leaflets containing most relevant information such as the duration of course, main goals and benefits for nurses.

Discussion

Feedback from participants shows how important the work environment is for nurses. All participants agreed that the training course on the standards of a healthy working environment improved their knowledge and skills, and they believe that this will be reflected in the quality of their work and cooperation with other healthcare professionals. They emphasized the pleasant atmosphere, the preparation of the coaches and the interactive participation.

These results are not surprising because other studies have also confirmed the importance of the work environment. Thus, Amaliyah and Tukimin state that some aspects of the work environment, such as recognition for quality work or enough staff in relation to the number of patients, affect the quality of health care (15). In his research, Salehi et al also found a positive connection between the work environment and employee satisfaction (4).

Our feedback emphasizes management staff, with nurses referring to both head nurses and doctors. Participants believe that by implementing the standards of a healthy working environment, management

staff would get the necessary skills that would improve work quality and increase staff satisfaction. Similar results indicating that managers do not support nurses were obtained by other researchers (11, 16). Nurses believe that their managers should work together with them to build a working environment based on cooperation, trust, and motivation, and not worry only about numbers and limits (11).

Nurses believe that leadership is extremely important and that it is a prerequisite for creating a healthy work environment. In their research, Hegazy et al stated that leadership is the path to excellence in nursing (16).

The participants believe that education for employees should be organized in a way that encourages personal growth and development and that they should not be forced to attend education that does not interest them. Also, they placed considerable emphasis on mentoring, which does not have clearly defined roles, thus making it difficult to evaluate mentoring work. In addition, mentoring should be rewarded.

Since this paper is part of a broader project, similar results were observed in other participating countries. Participants expressed high levels of satisfaction with the training and emphasized that a healthy working environment is extremely important for the quality of work and the well-being of employees. All participating countries reported a positive response, with participants noting that the training was content-rich, clearly structured, and interactive. These characteristics further contributed to the high acceptance of the programme among participants. However, a common challenge across all countries was the implementation of the training in an online environment, which required additional adaptation of learning methods and efforts to ensure active engagement from participants. Despite these technical and logistical challenges, evaluations indicated that participants' expectations were largely met (17).

Nurses in Cyprus and Croatia highlighted that such training should be made available to other healthcare professionals as well, not only to nurses, since a healthy working environment is a shared responsibility of the entire healthcare team. In contrast, nurses from Spain particularly emphasized the importance of promoting the training within healthcare institutions in order to ensure broader implementation and long-term impact. In Poland, participants expressed the belief that even small, incremental steps can lead to positive changes in the workplace, underlining the importance of continuous yet realistic interventions. These findings reflect a shared perception among healthcare professionals from different countries regarding the importance of education on healthy work environments, and they confirm the relevance and applicability of the training module in an international context (17).

Limitations

The report was created with a time delay, which means that some nurses' attitudes and preferences may have changed since the focus group discussions. Therefore, caution is advised when considering recommendations.

Focus group discussions were moderated by the same person who held the training courses (which is not in line with research practices), therefore the bias in respondents' answers to some degree can be expected.

A notable limitation of this study is the small sample size, constrained by public health measures during the COVID-19 pandemic. While thematic saturation was likely achieved – as evidenced by the repetition of key themes across focus groups – caution is warranted in interpreting and generalizing the findings. Prior research suggests that saturation can be reached with relatively few focus groups in studies with narrowly defined populations and focused research questions (14). Nevertheless, replication of the study with a larger and more heterogeneous sample would contribute to confirming the findings and expanding their applicability to broader clinical contexts.

Conclusion

The responses from nurses in this study show that there is a clear recognition of the need to change the working environment and that the concept of a healthy working environment must be an integral part of nurse education. The course taken by nurses can be integrated into continuous professional development programs not only for nurses working in intensive care units but also for other healthcare providers. Special emphasis should be placed on training nurse managers who, by completing the course, would acquire the necessary competencies for effectively managing healthcare teams and fostering a supportive work environment.

However, it is important to note that the study included a small sample size, which may have influenced the results. Future research should involve a larger and more diverse sample to confirm the findings and to ensure that the conclusions are generalizable across different clinical settings. Additionally, the moderator of the focus groups should not also serve as the educational trainer, as this could introduce bias into the discussion and the results, as the facilitator's influence could shape participants' responses.

Author contributions

Conceptualization and methodology (SR, JS, AF, EG); Data curation and formal analysis (SR, JS, AF, EG); investigation and project administration (SR, JS, AF, EG); and writing – original draft and review & editing (SR, JS, AF, EG). All authors have approved the final manuscript.

Conflict of interest

The authors declare no conflicts of interest.

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