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DOI:
10.4103/jehp.jehp_549_20

Promoting the psychosocial and communication aspects of nursing care quality using time management skills training

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Received: 26-05-2020

Accepted: 05-07-2020

Published: 29-12-2020

Abstract:

BACKGROUND: Although using time management skills is a major component of nursing professional practice, they have not received much attention. Time management training can improve the psychological and communication aspects of nursing care quality. Therefore, this study aimed to evaluate the effect of time management skills training on the psychosocial and communication aspects of nursing care quality.

MATERIALS AND METHODS: This semi-experimental study was conducted at Valiasr Hospital of Shahr Babak City, Kerman Province, in the Southeast of Iran, during 2018. The study population consisted of 100 nurses who were randomly assigned to one of the two groups: an intervention group or a control group. To identify and measure the outcomes, nurses' perceptions of the psychosocial and communication aspects of care quality were first assessed by the Quality Patient Care Scale (Qualpacs) at pretest. Then, the intervention group received the 2 days of training on time management skills for 12 h. The posttest outcome data were collected from both the groups 1 month after the intervention.

RESULTS: No statistically significant differences were observed between the two groups with respect to the total mean scores of nursing care quality and its psychosocial and communication aspects before the intervention ($t = 1.96$, $P = 0.09$). However, there was a statistically significant difference between the two groups in this regard after the intervention, and the mean nursing care quality scores and its related aspects were improved in the intervention group ($t = 5.76$, $P < 0.0001$).

CONCLUSIONS: The time management skills training could significantly improve psychosocial and communication aspects of nursing care quality. Health-care managers should allocate facilities to clinical training programs so that health-care professionals can acquire the time management skills. The higher effectiveness of time management training can be determined by its application in diverse domains of health care.

Keywords:

Nurses, nursing care, quality improvement, time management, training

Introduction

Recently, efforts have been made to promote the nursing care quality, and improving the capabilities and competencies of nurses to provide high-quality care is at the top of nursing programs.^[1,2] Improving

the nurses' performance in nursing care provision can affect the objectives of the health-care organization and its efficiency.^[3-5] Moreover, in most countries, hospitals are ranked in terms of nursing care quality.^[6,7]

The quality is defined based on a list of standard quality indicators. Patient-oriented

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How to cite this article: Farokhzadian J, Miri S, Doostkami M, Reza Hosseini Z, Shahrabaki PM. Promoting the psychosocial and communication aspects of nursing care quality using time management skills training. *J Edu Health Promot* 2020;9:361.

health outcomes and the care processes are considered as the two important components of care quality. These indicators are composed of death, disease, disability, discomfort, and dissatisfaction.^[8] Nursing care quality is characterized as the processes and outcomes of care. The care processes are related to the provision of care/interventions that must be effective, efficient, timely, safe, and patient centered. The care outcomes are related to patients' health condition and functioning and satisfaction with care. The implementation of high-quality care is enhanced by improvement of nursing competencies such as time management skills training.^[9]

Studies showed that similar to many countries,^[10,11] the quality of nursing care in Iran is reported to be suboptimal.^[12,13] While emphasizing time management as a key determinant of less-than-optimal nursing care quality, nurses need to increase the skills of the effective time management as time management skills have the positive effects on work-life balance, safety, optimal use of time, and increased organizational efficiency.^[14] Claessens *et al.* have defined time management as behaviors, the purpose of which is the effective use of time for objective-oriented activities such as business and academic tasks. These behaviors include time assessment, planning, and monitoring behaviors.^[15] Moreover, due to lack of time, some nursing practices are sometimes forgotten and many patients are neglected, and as a result, they do not receive adequate care. Therefore, time management skills have major effects on the quality of care. On the other hand, employees continuously suffer from occupational burnout due to time pressure.^[16] The prevention of time waste and having time control can improve management skills, maintain human resources, reduce stress, and finally, increase the hospitals' staff job satisfaction and mental health.^[16,17] Meeting the patients' needs in a health-care institution depends on planning. Thus, it is essential for nurses to focus on time management of the patient care plan and assign an appropriate time for care processes.^[18]

Finally, nurses are responsible for providing the high-quality care, and strategies such as the development of research and educational interventions should be added to professional development for nurses. Moreover, the strategies can help nurses to minimize time pressure in practice and reduce negative impacts of time pressure. This process can be accomplished by developing and evaluating effective educational programs in different settings. The literature review showed that there were few studies on the effectiveness of both time management behaviors and time management training programs, especially on nursing care quality. For example, a study showed the positive effects of time management training program on the perceived stress and occupational performance of participants.^[19]

In another study performed in Malaysia, a significant relationship was found between time management and occupational performance.^[20] In a study conducted in Iran, time management training could promote time management behaviors by improving the organizational skills and time control in head nurses. In addition, a systematic review of 32 studies showed that only seven studies focused on the effect of time management training on management behaviors and its consequences, i.e., occupational performance, and the effectiveness of the training was only supported in four studies. In this study, the researchers emphasized that there were many research gaps in the time management skills training, and more extensive research is needed in this area.^[15] Given the importance of improving time management skills in nurses and the scarcity of such studies in the Iranian context, therefore, the present study aimed to evaluate the effect of time management skills training on the psychosocial and communication aspects of nursing care quality.

Materials and Methods

Study setting and sample

A pretest and posttest quasi-experimental design was employed to evaluate the nursing care quality in terms of the psychosocial and communication aspects before and after time management training during 2018. This study was conducted at Valiasr Hospital of Shahr Babak City, Kerman Province, in the Southeast of Iran. At the time of data collection, this hospital was small in size, with 85 beds. All nurses working in the hospital who were available during the data collection period were considered as the source population ($N = 140$). The sample size was equivalent to the source population, and all nurses were included in the study by the census. In such a way that at the beginning of the study, the hospital supervisor as a member of the research team, who taught to nursing staff, called all qualified nurses through the hospital's website and sending a text message to them to participate in the training program. She posted the terms, conditions, and the structure of the intervention program on the hospital's website and the nurses were asked to take part in the volunteer training program. At least, overall 100 nurses voluntarily registered and they were randomly assigned into two groups: an intervention group ($n = 50$) and a control group ($n = 50$).

Inclusion and exclusion criteria

The study inclusion criteria were as follows: having at least 2 years of work experience, having at least a bachelor's degree in nursing, no history of participation in time management training programs over the past year, desire to participate in the study, and not being scheduled for a clinical shift on the day of the intervention. The study exclusion criteria included the following: being absent

in training sessions, leave or transfer to other hospitals, and incomplete questionnaires.

Data collection and training program

The aims of this training program were to familiarize nurses with time management skills and to aid them to make changes in the nursing care quality. We were particularly interested in the arrangement of training programs to promote the psychosocial and communication aspects of nursing care quality. The intervention and control groups simultaneously completed the pre-and post-test questionnaires in separate places immediately before the intervention and 1 month later. A coded research identifier was assigned to each participant. Furthermore, all participants were required to sign the written informed consent forms.

The training program included time management skills and was held as a 2-day workshop for 12 h^[21] by the first researcher and a psychologist. To increase the opportunity for participation in the workshop, the intervention group was divided into two groups of 25 participants each, and the workshop with the same training protocol was held in 4 days. The content of training program was prepared and developed by the researchers and psychologist based on the research literature^[17,18,22] and approved by a nursing faculty member who was expert in the management field [Table 1]. In this workshop, training was provided by slides, educational clip, lectures, group discussions, questions and answers, brainstorming, and group work, and also the course CD, notes, and materials were given to them. The control group received no intervention or training program during this period.

Instrument

In this study, the two self-report questionnaires were used to collect the data. Demographic characteristics include age, gender, education level, marital status, employment status, work experience, position, and work shift. Nursing care quality was assessed in terms of psychosocial and communication aspects using the Quality Patient Care Scale (Qualpacs). The Qualpacs was developed by Wandelt and Ager.^[23] The original questionnaire includes the general professional implications and the physical, psychosocial, and communication subscales. In this study, we used psychosocial (28 items) and communication aspects (13 items) for two reasons: first, those concepts are very broad that directly associated with time management skills. Based on the management skills theories, our intervention may affect more specific outcomes such as the psychosocial and communication aspects of the quality patient care. Second, these sections of Qualpacs were translated to Persian and their validity and reliability were confirmed previously by Neishabory

et al. in Iran. The content validity of the questionnaire was approved by faculty members of two nursing schools, and also its reliability was measured with Cronbach's alpha (0.80). The Qualpacs was scored from 1 to 5, with 1 attributed to the poorest performance and 5 to the best.^[24]

Ethics approval

The study protocol was approved by the Ethical Committee of Kerman University of Medical Sciences (IR.KMU.REC.1395.254). The researcher presented a letter of introduction for the required coordination with the context of the study. A cover letter explaining the purpose of the study and the procedure of the data collection was provided for the eligible participants prior to the data collection. Written informed consent was obtained from all participants, and the confidentiality and anonymity of the data were ensured and the participation in the study was absolutely voluntary. Upon the completion of the intervention and the collection of the second phase data, the participants in the control group received training on time management skills in the same way.

Statistical analysis

The data were analyzed using SPSS version 19 (SPSS Inc., Chicago, IL, USA), descriptive statistics (such as frequency, percentage, mean and standard deviation), and inferential statistics (such as independent sample *t*-test, paired *t*-test, Chi-square, and Fisher's exact test). $P \leq 0.05$ was considered statistically significant.

Results

All the participants completed the training program. Our results showed that most participants in both the groups were female, married, formally employed, and nurses working in rotating shifts. The majority of the participants in the intervention group belonged to the 33–43-year-old group, whereas the participants in the control group belonged to the age group of 22–32 years. The Chi-square test results showed that there was no statistical difference between the intervention and control groups in terms of demographic variables [Table 2].

In the pretest phase, the total mean nursing care quality score in the intervention group (3.66 ± 0.27) and control group (3.77 ± 0.36) was compared, and no statistically significant difference was observed between the two groups in this regard ($t = 1.69$, $P = 0.09$). In the posttest phase, there was a statistically significant difference in the total mean nursing care quality score between the intervention group (4.19 ± 0.35) and the control group (3.77 ± 0.34) ($t = 5.76$, $P < 0.0001$). In other words, the intervention had a significant effect, and the psychosocial and communication aspects of nursing care quality were improved in the intervention group.

Table 1: Content of the time management workshop

Target audience: Nurses Group 1=25 and Group 2=25		Delivery methods: Slides, educational clip, lectures, group discussions, questions and answers, brain storming, and practical group exercise		Expected duration: 12 h
Goal: To understand the effectiveness of time management training on the nursing care quality, particularly in psychosocial and communicative aspects				
Date	Section	Topic	Content	Objectives nurses can
First day	1	Introduction to time management	History of time management Definition of time management	Describe time management Apply time management in workflow and nursing care Consider a broader perspective time management in nursing care
	2	Advantages and effects of time management individual and work life	Definition and objectives, advantages and the effect of time management on individual and work life	Explain objectives of time management Understand positive effects of time management on job satisfaction, health and nursing practice
	3	Setting goals and priorities	Definition of goal and prioritization Determining how to set goals and select tasks, in order to obtain specific goals	Understand the necessity of setting goals and priorities in nursing care planning Prioritize patient care activities using categories Write everything down, cross items off as you complete them Re-prioritize as events unfold throughout the day
	4	Mechanics of time management	Description of techniques associated with effective time management such as making lists, scheduling activities, checking off each task as it is accomplished, and avoiding interruptions	Create and use of lists Assign activities to particular time in accordance with the client requirements Make a schedule of the activities that have to be done on work days Apply a range of time management techniques to work place
	5	Practical exercise in group		
	6	Preference for organization	Description of the way subjects organize their time and environment	Assess how to organize time Structure the workspace for efficiency and productivity Use the appropriate time-planning strategies Prioritize and delegate tasks
Second day	7	Perceived control	Description of the extent to which subjects believe they can directly affect how to control time	Have work under control Obtain confident to complete work on time Be conscious of the amount of time spent on different tasks Allow time for unscheduled Decrease work strain Find positive effects of time management behavior on perceived control of time
	8	Review of time management in nursing practice	Description of the importance of implementation of time management in nursing practice	Assess time management functions at nursing practice Examine strategies and skills for managing time more effectively in a nursing practice Apply learning to their current nursing practice Develop a plan for more effective time-management in their roles as nurses Apply a range of time management techniques to nursing practice
	9	Practical exercise in group		

The paired *t*-test results showed a significant change from pre-test to post-test in the psychosocial and communication aspects of nursing care quality for the intervention group, while the psychosocial and communication aspects of nursing care quality in the control group showed no statistically significant difference at the pre- and posttest [Table 3].

Discussion

This study showed that the time management skills training significantly increased the total mean scores of nursing care quality and its psychosocial and communication aspects in the intervention group as compared with the controls. In consistent with our

results, numerous studies showed that training programs can help participants to obtain the new knowledge and skills and improve their professional learning and job performance.^[1,17,25] Similarly, Hall *et al.* reported that the nurses who learned the time management skill can increase their competence, dignity, and professional pleasure.^[26] Waterworth found that time management is one of the obligations, which must be observed by nurses in the organization.^[27] Raeissi *et al.* showed that there was a significant direct relationship between the nursing organization's responsibilities and care quality. As the quality of nursing services increased, the organizational

commitments also increased.^[28] Another study found that one way to increase patient satisfaction is time management by care providers, as this skill meets the patients' needs in the minimum time with the lowest cost.^[14]

Regarding increased mean scores of the nursing care quality after the intervention, it can be stated that time management is a planned behavior for the proper use of time and increases the efficiency because it is possible to achieve the predetermined objectives with the prioritization of activities. We believe that quality of care must be updated based on professional knowledge as a health service level that increases the chance of achieving desirable health results. Therefore, it is suggested that the effect of the educational interventions may not be sustained over time, and the educational program must be followed for a longer duration.

The results showed that the mean score of nursing care quality in psychosocial aspect significantly increased after the intervention. One of the points considered in the psychosocial aspect of nursing care quality is occupational stress. The occupational stress is highly expensive for health-care organizations.^[29] In line with these results, numerous studies have shown that effective use of time can reduce the stress in nurses.^[15,21,25,30,31] It seems that proper planning increases the efficiency while avoiding time waste and confusion by nurses. Rasooli *et al.* showed that time management training workshops significantly affected work-life conflict control among nurses because the pressured activities and time constraints affect the relationship between stressors and conflict in the two areas of work and family.^[21] In this regard, Yildirim and Aycan showed that high working pressure and irregular work schedules were considered as the predictors of work-family conflict, which partly reduced the satisfaction and work pleasure resulting from lack of planning and shortage of time in many cases.^[32] The results of Claessens *et al.*'s study showed that the time management skills were directly correlated with time control perception, occupational performance,

Table 2: Comparison of demographic characteristics of participants in intervention and control groups

Variables	Control, n (%)	Intervention, n (%)	χ^2	P
Gender				
Female	45 (90)	43 (86.0)	0.38	0.76
Male	5 (10)	7 (14.0)		
Marital status				
Single	11 (22.0)	14 (28.0)	0.48	0.64
Married	39 (78.0)	36 (72.0)		
Type of employment				
Committed	9 (18)	11 (22.0)	0.66	0.71
Contractual	9 (18)	11 (22.0)		
Formal	32 (64)	28 (56.0)		
Position				
Nurse	40 (78)	42 (84.0)	0.27	0.79
Head nurse	10 (22)	8 (16.0)		
Work experience (years)				
≤5	10 (20)	12 (24.0)	0.77	0.94
6- 10	12 (24)	9 (18.0)		
11- 15	9 (18)	8 (16.0)		
16- 20	7 (14)	8 (16.0)		
>20	12 (24)	13 (26.0)		
Shift work				
Fix	9 (18.0)	9 (18.0)	0.000	0.60
Rotation	41 (82.0)	41 (82.0)		
Age groups (years)				
22- 32	16 (32.0)	26 (52.0)	5.48	0.06
33- 43	22 (44.0)	19 (38.0)		
44- 54	12 (24.0)	5 (10.0)		

Table 3: Comparison of the mean the psychosocial and communication aspect scores of nursing care quality in intervention and control groups at pre- and posttest

Variables	Groups	Mean±SD		Mean difference	Statistic t^* , P
		Pretest	Posttest		
Psychosocial	Intervention	3.64±0.29	4.14±0.35	0.50	5.24, <0.0001
	Control	3.76±0.39	3.77±0.40	0.03	0.49, 0.62
	Statistic t^* , P	1.75, 0.08	5.12, <0.0001		
Communication	Intervention	3.72±0.34	4.28±0.43	0.56	3.32, 0.002
	Control	3.79±0.36	3.76±0.40	-0.01	0.12, 0.9
	Statistic t^* , P	0.97, 0.33	5.33, <0.0001		
Total	Intervention	3.66±0.27	4.19±0.35	0.53	10.12, <0.0001
	Control	3.78±0.36	3.77±0.34	0.01	
	Statistic t^* , P	1.69, 0.09	5.76, <0.0001		

*Paired t-test, **Independent t-test. SD=Standard deviation

academic performance, occupational satisfaction, health, and prioritization of activities, while they were negatively correlated with occupational compulsion, family stress, fatigue, and mental distress.^[19] In this regard, our finding can be justified by the positive effect of time management training on mental and social health because the effective use of time leads to work–life balance, reduced anxiety, increased self-esteem, improved social interactions, and increased organizational efficiency. Proper use of time led to an appropriate and effective communication among nurses, patients, colleagues, and family members, and hence, planning tasks resulted in reduced anxiety, increased quality of care, and efficiency. Therefore, a higher level of time management skills leads to lowering the pressure caused by stressors in the work environment and vice versa.

The results of the present study showed that the mean nursing care quality score of communication aspect significantly increased in the intervention group after the intervention. In line with these results, many studies have shown that acquiring time management skills is an instrument to modify internal and external communication of individuals.^[14,17,33] Rasooli *et al.* showed that the time management behaviors reduced stress and modulated stressors and also improved the positive and effective communications and interactions.^[21] Major *et al.* also showed that time management facilitated the communication between work and family.^[34] The results of this study suggest that nurses should receive the required training for communicating with patients. That is why nurses can provide interventions, care, and sympathy through communication, and the nursing care quality and patient satisfaction increase in case of a proper communication between nurses and patients. In general, it appears that time management training can improve nursing care quality and may be effective in better organizing and planning of care providers.

Limitations

This study had several limitations. First, this study was conducted only on nurses working in the hospital of Iran, and thus, its findings cannot be generalized to other communities. Second, the most important limitation of this study is the choice of outcomes and instrument. We only evaluated impact of time management skills training on the psychosocial and communication aspects of nursing care quality. Therefore, it is recommended that further studies should be carried out on all aspects of nursing care quality as well as outcomes such as patient or nurse comfort, as a secondary outcome parameter in different cultural and environmental conditions. Third, we collected data in two stages with a 1-month interval. A longer time may be required to get stronger results. The 3–6 month follow-up and longitudinal studies should be conducted with a larger group to determine

whether educational interventions have long-term effects on nursing care quality.

Conclusions

Time management training programs can play an effective role in different aspects of nursing care quality, including psychological and communication ones. Therefore, it is recommended to enhance time management skills in nursing and other medical professions through continuous training programs as short-term training courses or educational workshops. Facilities must be allocated to clinical training programs so that nurses can have the opportunity to acquire the relevant skills to the desirable level with the help of experts. On the other hand, further research is needed to examine the effect of management training programs on other variables such as the efficiency of medical professions and patients outcome.

Acknowledgments

The researchers would like to thank the nurses who graciously devoted a part of their time to participate in the study.

Financial support and sponsorship

This study was funded by the Kerman University of Medical Sciences, Kerman, Iran, with Grant No. 950229.

Conflicts of interest

There are no conflicts of interest.

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