

Time management behaviors of head nurses and staff nurses employed in Tehran Social Security Hospitals, Iran in 2011

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ABSTRACT

Background: Effective time management is considered important for managers for achieving the goals in an organization. Head nurses can improve their efficiency and performance with effective use of time. There has always been a lot of disagreement in understanding time management behaviors of head nurses; therefore, the present study was conducted with an aim to compare the understanding of head nurses and staff nurses of the time management behaviors of head nurses employed in Social Security Hospitals in Tehran, Iran in 2011.

Materials and Methods: This was a comparative descriptive study in which 85 head nurses were selected through census and 170 staff nurses were also selected through simple random sampling method from hospitals covered by the Social Security. Data collection was done through a standard inventory with high validity and reliability, which consisted of two parts: Socio-demographic characteristics and time management inventory. The obtained data were analyzed by descriptive and inferential statistics through SPSS software version 13.

Results: Mean score of time management in head nurses' viewpoint was 143.22 (± 18.66) and in staff nurses' viewpoint was 136.04 (± 21.45). There was a significant correlation between the mean scores of head nurses' time management and some of their socio-demographic characteristics such as gender, clinical experience, passing a time management course, and book reading ($P < 0.05$). There was a significant correlation between the mean scores of staff nurses' time management and their clinical working experience, education, using time management approach, and type of hospital ($P < 0.05$). The majority of head nurses (52.9%) believed that their time management was in a high level; besides, most of the staff nurses also (40%) believed that time management of their head nurses was high. However, there was a significant difference between the perceptions of both groups on using Mann-Whitney test ($P < 0.05$).

Conclusion: With regard to the importance of time management and its vital role in the quality of nursing care for clients, and also the fact that head nurses believed more in their time management behaviors, they are expected to improve organization's goals and developments in order to modify the weaknesses and shortages and promote the skills and capabilities of their staffs and also resolve the disagreement on the understanding of time management. Moreover, effective time management training programs can be an important step for staff nurses and their head nurses.

Key words: Head nurse, nurses, perception, time management behaviors

INTRODUCTION

Health care managers and professionals work in an environment with high work overload which necessitates efficient leadership and management

skills. One of these skills is time management behaviors. It is a broad concept in various executive and managerial domains which is associated with qualitative promotion of performance,^[1] and its application can either reduce a lot of managers' daily work pressures or eliminate them.^[2] A time management behavior was firstly introduced in late 1950s as an efficient method to cope with various time aspects at work and their related stress. This method contains components such as definition of goals, the way of administration, planning, and priority making.^[3] Nowadays, time management behaviors are of great importance as a determinant of success, and the position of obtaining related skills by managers has been defined more than before.^[3] Experts believe that prevention of time waste and having time control can lead to improvement of managerial abilities,

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preservation of human resources, reduction of stress, and eventually, increase of job satisfaction and mental health among managers.^[4] Khodam and Kolagari consider time management skills as a determinant factor for managers' success and believe that improvement of nurses' abilities and performance in time management is among the needs and essentials of human resource development in health care system.^[2] Time management can be suggested as a method to monitor and control time. Through this method, employees with self-management can perform numerous tasks in a specific time, recognize duties and responsibilities, and cope with limitations.^[5] Some nursing procedures are sometimes forgotten or conducted briefly as a result of shortage of time, and the patients are neglected and do not receive adequate care. In this case, time management behaviors have an important effect on the quality of care. On the other hand, employees constantly working under pressure of time is impossible and leads to staff burnout.^[6] Nurses form the biggest group of health care providers and have significant power in providing health care services which can affect the quality of the given care.^[7] If nurses do not use time reasonably, they cannot fulfill all related expectations, and will disturb the functioning of health care team and, eventually, the health care system itself.

This vicious cycle not only endangers the organizational goals but also imposes hazards to the whole society.^[8] By prioritizing tasks based on the time allocated to each activity, multiple tasks can be completed on time. Nursing administrators can be a role model for their staffs through effective time management behavior. They can also initiate staffs' innovation and growth by delegating the responsibilities and determining deadlines for the tasks in order to complete the tasks and feel satisfied. Managers can make an image in their own and their staffs' mind with regard to their interest in time and transfer time consumption methods to them.^[3]

Although using these skills is a major component of nurses' professional practice, time management has not been adequately considered.^[9] It should be also noted that most of the studies concerning time management reported controversies in the application level of nursing administrators' time management behaviors from their own viewpoints and those of the staffs under their supervision. Nasri in a related study showed that head nurses reported higher score of time management behaviors than the staff nurses. This difference in scores could have resulted from individuals' various levels of understanding of the suggested criteria in time management and/or misunderstanding of head nurses' time management from the side of staff nurses and shortage of necessary conditions for manifestation of these skills by head nurses.^[10] Literature

review of published articles in recent years revealed that despite numerous conducted studies concerning time management, understanding of these two groups about nurse administrators' time management has been less studied. A comparison of the perceptions of these two groups can help us detect and reveal nurse administrators' time management. Since time management is one of the managerial skills of the managers and is critical in achievement of organizational goals, in the present study, the researcher tried to compare time management behaviors of head nurses from the perceptions of head nurses and staff nurses employed in Tehran Social Security Hospitals, Iran in 2011.

MATERIALS AND METHODS

This is a comparative descriptive study in which head nurses' time management behavior has been studied. Study population comprised all staff nurses and head nurses working in Social Security Hospitals in Tehran, Iran, and the research was conducted in nine hospitals under the coverage of social security organization.

As the head nurses were less in number, all of them ($n = 85$) were included in the study. The sample size for staff nurses was calculated based on the sample size formula, $n = \frac{z^2 \cdot s^2}{d^2}$ where $z = 1.96$ and $d = 0.15$, and sigma and SD, with regard to former studies, was considered 17.57.^[10] Finally, the sample size was calculated as 170 subjects. With regard to sampling in staff nurses, as their number was twofold more than that of head nurses ($n = 170$), from each ward under the supervision of a head nurse, two staff nurses were selected through simple random sampling and were given the questionnaires to complete. On the whole, a total of 255 subjects were studied. A staff nurse in the present study is defined as the nurse with a BS degree or above, working in Social Security Hospitals in Tehran, and with an employment code as a nurse and at least 12 months of work experience in the related ward. A head nurse is defined as a nurse with an employment code of a head nurse working in one of the Social Security Hospitals in Tehran and who has at least 12 months of work experience as a head nurse. This period of time (12 months) was adequate to manifest head nurses' time management behaviors and for their detection by staff nurses. A self-report questionnaire including two sections was used. The first section contained personal and social characteristics of staff and head nurses. The second section included the questionnaire of time management behaviors, specified for staff and head nurses, which was designed and used by Nasri (2009). The adopted questionnaire of time management behaviors had two versions, specially designed for staff nurses and head nurses,

respectively. The questionnaire included 36 five-point Likert questions on staff nurses' and head nurses' time management behaviors, which were scored from score 1 (never) to score 5 (always) with a score range of 36-180. Validity coefficient of this questionnaire was 0.95 and its reliability coefficient was calculated by Cronbach's alpha value of 0.94.^[10] Data collection was performed after getting related permissions and approval of ethical considerations committee in Tabriz University of Medical Sciences, as well as subjects' informed consents. Anonymous questionnaires were distributed to the subjects. Then collected data were analyzed by descriptive (frequency, percent, mean and standard deviation) and inferential statistical tests through SPSS. As the number of the subjects did not follow normal distribution, Mann-Whitney U test was used to compare the mean scores of perception of head nurses and staff nurses about the head nurses' time management behaviors. Kruskal-Wallis and Pearson correlation coefficient were used to evaluate the relationship between time management behaviors and personal-social characteristics.

RESULTS

Out of 85 distributed questionnaires, 84 were completed. All questionnaires distributed among nurses were collected, with a response rate of 99.60.

Demographic characteristics of the subjects are presented in Table 1. With regard to the existing association between the demographic components of staff and head nurses and head nurses' time management, the results showed that from the viewpoint of head nurses, there was a significant association between the component of sex ($P < 0.05$, $z = -3.51$), clinical work experience ($P < 0.05$, $r = 0.22$), and head nurses' time management, as female head nurses used time management more than male head nurses and there was a direct association between head nurses' work experience and their time management. There was no significant association in the rest of the demographic characteristics of head nurses. From the viewpoint of staff nurses, there was a significant association between the components of clinical work experience ($P < 0.05$, $r = -0.158$), education ($P < 0.05$, $z = -3.59$), use of time management method ($P < 0.05$, $z = -2.18$), and variable of time management. It was such that head nurses' time management had an inverse association with nurses' clinical work experience and education, and head nurses were given a higher score of time management by the staff nurses in general hospitals. There was no significant association in the rest of the demographic variables of staff nurses. Frequency distribution of subjects' personal and social characteristics are presented in Table 1 and the mean scores and SDs of time management behaviors

based on these characteristics are presented in Table 2. From the viewpoint of head nurses, score of their time

Table 1: Frequency distribution and percentage of head nurses and staff nurses based on personal and social characteristics

Studies groups/Characteristics	Head nurses		Staff nurses	
	No	%	No	%
Sex				
Female	67	20.2	117	68.8
Male	17	79.8	53	31.2
Marital status				
Single	7	7.1	39	23.1
Married	77	90.5	129	76.3
Employment status				
Employed	83	98.8	138	81.2
Casual	1	1.2	32	19
Clinical work experience				
<10 years	7	8.33	67	39.3
15-11	43	51.2	76	44.7
20-16	27	32.1	22	12.9
>20 years	7	8.3	5	2.9
Working shift				
Changing	7	8.3	93	54.63
Evening and night	2	2.3	53	31.13
Morning	75	89.3	24	14.1
Education				
BS	79	94	152	89.9
MS	5	6	117	10.1
Monthly income				
<200 \$	23	27.3	100	58.75
>200 \$	61	72.6	70	41.12
Passing time management course				
Yes	52	61.4	48	28.2
No	32	38.6	122	71.8
Use of time management methods				
Yes	45	72.6	38	36.9
No	17	27.4	65	63.1
Type of hospital				
General	19	22.6	38	22.4
Special	65	77.4	132	77.6
Number of personnel in the ward				
<10	17	20.2	34	20
10-15	43	51.2	88	51.8
16-20	15	17.9	30	17.6
>20	9	10.7	18	10.6
Reading about time management				
Yes	62	73.8	95	55.9
No	22	26.2	75	44.1

Table 2: Mean and SD of head nurses' time management based on head nurses' and staff nurses' personal and social characteristics

Studies groups/ Characteristics	Head nurses		Staff nurses	
	Mean	SD	Mean	SD
Sex				
Female	146.74	9.66	137.31	23.3
Male	137.64	8.76	133.22	20.54
Marital status				
Single	148.5	8.06	139.48	22
Married	144.67	10.39	135.32	21.27
Employment status				
Employed	145.05	10.10	135.81	21.99
Casual	133		137.03	19.25
Clinical work experience				
<10 years	135.43	12.71	139.17	18.93
15-11	145.79	8.54	135.28	21.64
20-16	144.85	10.64	130.8	28.76
>20 years	149.14	11.15	133	11.11
Working shift				
Changing	134.86	14.96	134.75	20.40
Evening and night	158.5	3.53	134.94	23.52
Morning	145.48	9.05	143.45	19.98
Education				
BS	145.3	10.2	138.01	21
MS	138.6	6.91	118.47	18.25
Monthly income				
<200 \$	145.22	11	134.69	23.46
>200 \$	144.79	9.87	137.97	18.2
Passing time management course				
Yes	146.6	8.06	133.25	21.59
No	142.34	11.94	137.53	19.6
	147.08			
Use of time management methods				
Yes	144.23	8.4	147.15	16.16
No	146.68	9.64	126.96	23.39
Type of hospital				
General	144.38	8.17	142.63	16.53
Special	146.88	10.63	134.14	22.37
Number of personnel in the ward				
<10	145.25	11.3	139.67	16.49
10-15	142.13	10.3	134.22	23.4
16-20	144.11	10.7	140.33	21.25
>20	146.46	5.2	130.88	19.27
Reading about time management				

Table 2: Contd....

Yes	146.46	8.34	134.84	21.44
No	140.5	13.26	137.56	21.52

management was 143.22 (18.66), while the lowest score of time management was 36 and the highest score was 180. Therefore, head nurses believed they highly considered time management in their function and work. Staff nurses also believed so, and their mean score of head nurses' time management was 136.04 (21.45). Meanwhile, based on Mann-Whitney test, there was a significant difference in staff nurses' and head nurses' perception of nursing time management behaviors ($P < 0.05$, $z = -3.05$).

It can be concluded that head nurses, compared to staff nurses, believed their time management behavior was more.

DISCUSSION

It was revealed in the present study that increase of clinical work experience enhances the score of head nurses' time management and both staff and head nurses agreed on this issue. Female head nurses used time management more than male head nurses. Meanwhile, use of time management among head nurses with different marital status and age is the same. In a similar study, it was shown that time management skills were more among female head nurses compared to male ones,^[11] and this difference was significant ($P < 0.05$). But in the study of Nasri, no significant difference was observed between personal characteristics and time management behaviors.^[10] Not passing educational courses of time management by most of the staff nurses and their head nurses could have caused this difference. In the present study, 39.1% of the respondents had passed a time management course, while in Nasri's study, less than half of the head nurses (42.2%) and most of the staff nurses (89.1%) had not passed time management education.^[10] On the other hand, in another study, there was a significant association between age and level of education and time management behaviors, but there was no correlation between head nurses' marital status and sex and time management behaviors.^[1] The different result could be attributed to the lower number of male nurses in Iranian nurses community. In another study on the association between the level of time management skills' application and subjects' personal characteristics, the obtained results showed a significant association only between head nurses' work experience and organizing skills.^[2] In the present study, head nurses believed that their work experience in the related ward had no effect on their time management behavior, but staff nurses believed that there was an association between head nurses' time

management behavior and their clinical work experience. In addition, the correlation coefficient index between the two variables was poor and positive, which means that head nurses' time management behavior score increases by their higher level of clinical work experience. There was also a significant association between head nurses' time management behavior and staff nurses' clinical work experience. In addition, the correlation coefficient index was poor and negative, which means higher clinical work experience of staff nurses diminishes head nurses' time management score, so nurses with higher work experience score their head nurses less concerning time management. It seems that nurses with permanent employment state have usually more years of work experience and have more experience to evaluate their head nurses' time management behavior precisely. The present study showed that level of education had no effect on head nurses' time management behavior, and head nurses who had studied about time management or had passed its related courses did not obtain higher score of time management, possibly due to low number of related courses, intensive programs of these courses, the overlap between nurses' working shifts and related seminars, and lack of repetition of these seminars. Khodam and Kolagari^[2] also found no significant association between application of time management skills and education. Their study also showed that the level of application of time management skills was not associated with passing management workshop.

In a literature review of 32 studies on time management, of which 7 studies were about the effect of educational programs, the efficacy of such programs had been emphasized only in 4 studies.^[12] Nasri found no significant association between passing time management educational courses and head nurses' time management behavior.^[10] Some factors such as the history of earlier education, unorganized educational courses, intensive programs of education, and their overlap with nurses' and head nurses' working shifts had no effect on this issue. In another study on general time management skills, it was observed that these skills were conducted by 82% of individuals before educational programs while it increased to 95% after educational programs and the observed difference before and after educational programs was significant.^[2] Mean scores of time management among head nurses were not equal in general and special hospitals from the viewpoint of staff nurses. Staff nurses believed head nurses' time management was more in general hospitals compared to that in special hospitals. Meanwhile, head nurses considered no difference in their time management in general and special hospitals. In the present study, from the viewpoint of staff nurses, time management of head nurses who claimed to use time management method was more than those who believed they did not use time management

method, and a total of 50.3% of the respondents used time management method. In Nasri's study,^[10] over half of the head nurses (53.4%) used time management methods in their wards and over half of them (57.8%) believed that they followed time management behaviors most of the time. Head nurses' mean score of their time management from their viewpoint was 144.84 (12.20). In Nasri's study, most of the nurses evaluated their head nurses' time management behaviors as moderate while most of their head nurses evaluated their own time management as good.^[10] In another study, the difference between head nurses' and staff nurses' scoring was overt and head nurses scored themselves higher.^[13] This difference in staff nurses' and head nurses' viewpoints also existed in the present study. Higher mean number of head nurses' work experience compared to that of staff nurses may have led to their higher understanding of their own time management behavior.

CONCLUSION

With regard to the results of the present study as well as other studies, it can be concluded that like other managerial skills, time management skills are being used and developed by head nurses. The difference in viewpoint between head nurses and staff nurses concerning application of time management is overt, which can have many underlying factors. This study showed that the mean scores of head nurses' time management were not equal between BS and MS nurses. MS nurses considered their head nurses' time management less than BS nurses.

With regard to the MS nurses' more knowledge and awareness about work and managerial issues, their evaluation seems to be more precise, although head nurses' education level had no effect on their time management. Head nurses believed their time management was not steady in different shifts, as the highest mean score of time management was for morning shift and the lowest mean score was for night shift. Shorter time of work and higher load of work in the morning shift may have led the head nurses to use more time management. On the contrary, longer time of work in evening and night shifts and having more time to administer all the procedures in these shifts may have led to lesser application of time management in this shift.

Highlighted role of head nurses' attendance in the morning shift can also be effective in this regard. Meanwhile, from staff nurses' viewpoint, time management was the same in different shifts. With regard to lack of other studies concerning these two latter findings, researchers are suggested to conduct further studies on these cases. Crowdedness of research environment, high workload, stressful conflicts of head nurses and staff nurses, the factors affecting concentration, subjects' demographic characteristics, and

mental and psychological conditions, and the difference in individuals' attitude toward nursing and, consequently, their effects on responding to the questions in the questionnaire were out of researcher's control and could be counted as the limitations of the present study.

With regard to the difference in head nurses' and staff nurses' perception of time management behavior, it is suggested to investigate other related causes. Authorities are expected to eliminate these differences. Holding the training programs about time management behaviors and applying the ways to improve the quality of these programs can be useful.

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