Original Research

The Effect Of Training Professional Pre-Hospital Emergency Approaches On Job Motivation Of Emergency Medical Technicians In South Khorasan Province

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Abstract:

Background: Pre-hospital medical emergencies, as a challenging field of work, require motivated staff. Studies in some occupations have shown the effect of employees' familiarity with professional approaches on their motivation. Therefore, the present study was conducted to determine the effect of teaching pre-hospital emergency professional approaches on job motivation of emergency medical technicians.

Materials and Methods: The present study was performed quasi-experimentally on 60 emergency medical technicians in South Khorasan province with less than one year of experience. Samples 60were selected by available methods and randomly divided into two equal groups of test and control. Data collection tool was Ludahl and Kitchener job motivation questionnaire which was completed before the intervention in both groups. Then, teaching professional approaches based on texts and related researches was performed in a period of 8 hours for 4 days, in the form of face-to-face training sessions and short lectures, group discussions, and scenario-based problem solving. The control group did not receive training. At the end of the intervention, the level of job motivation was assessed.

Results: The results showed that the score of job motivation and all its dimensions in the intervention group had a significant increase before and after the training of professional approaches. Also, the rate of increase in job motivation was significant between the intervention and control groups ($p < 0.05$).

Conclusion: Findings of this study indicate the effect of training professional approach to increase the job motivation of emergency medical technicians. Therefore, in addition to emergency medical skills training, professional approach training can be used as an inexpensive method to improve emergency medical services. It is also training suggested that the training of pre-hospital emergency-specific professional approaches be included in the emergency medical program.

Keywords: Professional Approach, Job Motivation, Emergency Medical Technician, Pre-hospital Emergency Medical Services.

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Introduction

EMS pre-hospital emergency medical services are responsible for providing out-of-hospital care and are an important part of the health system. EMS is essential to reduce the consequences of time-sensitive accidents and diseases (1). By providing fast and convenient emergency medical services at the scene of an accident, many of the 1,300,000 lives lost in accidents can be saved annually. It is also possible to reduce many 50 million cases of disability caused by accidents in the world annually (2, 3). The development of EMS in low- and middle-income countries has a special need, because the evaluation of EMS in these countries shows the distance between it and the current world knowledge, so there is a need to better understand the problems and identify the necessary interventions (4). Although in recent years the Iranian EMS has been developed to reduce the high mortality rate from accidents and heart disease (5, 6), it is still far from many standard indicators; Therefore, in addition to its physical development, there are opportunities for the development of emergency medical service processes (7-9). Despite the importance of the human aspects of pre-hospital emergency medical service providers, few studies have been conducted on this subject (10, 11). Pre-hospital emergency studies have focused on quantitative assessment of care rather than creating a new perspective on staff. While the views and attitudes of stakeholders are important for quality improvement (12). An important aspect of providing pre-hospital emergency services is adherence to the accepted values of the profession. (13). An examination of the philosophy and mission of pre-hospital emergencies in developing countries has shown that institutionalizing values is effective in staff training (14). Also, EMT emergency medical technicians, in order to perform services in an effective and acceptable manner, need to have the professional perspective and attitude that is an effective factor in pre-hospital emergency services (15, 16). Studies have shown that staff motivation is necessary to maintain and improve their capabilities, but the difference in job benefits, social status and the impossibility of promoting pre-hospital emergency staff compared to hospital staff, along with pre-hospital emergency anxiety, caused them dissatisfaction. . Technicians have reported that anxiety and stress in the workplace cause emotional stress and problems for technicians (17). One of the most important issues in health care is motivation; This is because employees need to increase their productivity by 4 and 6 percent. Decreased motivation in health care providers as well as EMS staff will have irreversible effects on the health of people in the community. It also reduces patient satisfaction and quality of care (18). The issue of job motivation has been addressed in numerous articles, and many factors for job motivation have been defined in medical emergencies, but it is still important to look for ways to maintain and strengthen employee motivation. Therefore, the application of methods that can affect the maintenance and motivation of employees, will help managers to improve service delivery and develop staff capabilities. One of the gaps in the emergency medical profession is the lack of sufficient job motivation in staff. (19); Emergency personnel have a moderate level of job motivation that affects their performance (18). In other professions, studies have pointed to the relationship between recognizing professionally motivated career approaches of employees (23-20). In this regard, Hosseini et al. In a qualitative study, identified specific professional approaches to pre-hospital emergencies and introduced them as a component in improving the pre-hospital emergency system (13). Therefore, due to the need to create job motivation in the sensitive job of pre-hospital emergencies, it seems that the effects of training professional approaches

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to improve the job motivation of pre-hospital emergency technicians can also be used. For this purpose, this study was designed to investigate the effect of training professional approaches on job motivation of 115 emergency personnel.

Method

This study is a randomized controlled field trial on newly arrived pre-hospital emergency medical personnel in South Khorasan Province. The research environment was Birjand University of Medical Sciences Center for Accident and Emergency Management. The sample size was calculated based on the average comparison formula and the result of the study of Khosrow Ashob et al. (20), the number of 25 people was calculated that in order to increase the accuracy or to consider the fall, the sample size was increased to 30 people in each group. Samples were collected by available method and based on purpose to 60 people and were randomly divided into two equal groups of test and control.

To conduct this study, the emergency bases of South Khorasan Province, which has at least one new entrant with less than one year of experience during 2020 (including 40 bases in South Khorasan Province) into two blocks, north and south of the province, which have less contact with each other. Are divided. Then one of the blocks was randomly placed in the experimental group and the other block in the control group. From each block, 30 eligible employees were selected to enter the exam and after explaining the work method and obtaining their informed written consent, questionnaires related to the research were completed for all individuals.

The data collection tool was Ludahl and Kitchener job motivation questionnaire. This questionnaire has 20 terms with a 4-point Likert scale that has been prepared to determine job motivation that measures the characteristics of job interest, job importance, job satisfaction, responsibility, self-confidence and self-control. In this questionnaire, the maximum score is 80 and the minimum score is 20, and a score between 20 to 40 (low job motivation), a score between 40 to 50 (average job motivation), and a score above 50 (high job motivation) is considered. To evaluate the validity of Ludahl & Kitchener Job Motivation Questionnaire, the scores obtained from this scale were compared with the scores obtained from the Spence and Helmrich Achievement Motivation Questionnaire, with a correlation coefficient of r = 0.716. Also in the clerical research of Bonab et al. (2011) the reliability of the questionnaire with Cronbach's alpha has been confirmed 885% (24).

In the next stage, for the experimental group, an educational program was performed by the researcher in the form of 4 2-hour face-to-face sessions in the form of short lectures, group discussions, and scenario-based problem solving. The educational content and related scenarios were prepared in accordance with the reference book of the field of medical emergencies and related studies (25).

The educational content of the course includes the values accepted by medical emergencies, including individual values and beliefs, faith and belief, eagerness to help, service excellence, responsibility, altruism, respect and impartiality in clinical judgment, as well as professional approaches including: recognizing urgency in the sense of any Health threats, sensitivity in patient prioritization, response to all requests for help, importance of early warnings, attention to the role of EMS social support, understanding the goals and standards of the organization, professional self-control (13, 25) whose content validity by a survey of experts Had been approved.

No intervention was performed for the control group. At the end of the intervention, the job motivation information questionnaire was completed again by all participants in both

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groups. The findings were then compared. In order to observe ethics, after completing the research, educational content was provided to the control group.

In this study, the test capability was 95% and the significance level was 5%. In the descriptive statistics section, mean, and standard deviation and in inferential statistics section, independent t-test and paired t-test and mean changes that did not have a normal distribution, Mann-Whitney test were used. All statistical operations were performed using SPSS software version 19.

P-value less than 0.05 was considered significant. This study was registered with the ethics code IR.BMUS.REC.1400.099.

Result

This study was performed on 30 pre-hospital emergency medical personnel in the experimental group and 30 in the control group. Mean age and frequency distribution of education level were the same in the two groups (Table 1).

Before the intervention, there was no statistically significant difference in the mean score of job motivation in the two groups studied, but after the intervention, the mean score of job motivation in the intervention group was significantly higher than the control group. Also, the mean score of job motivation in the intervention group after the intervention showed a significant increase compared to before the intervention and the mean changes in the score of job motivation in the intervention group was significantly higher than the control group ($p<0.05$) (Table 2).

According to the results of the study, in all components of job motivation, no statistically significant difference was observed in the motivation score of the two groups before the intervention, but after the intervention in all components, the mean motivation score in the intervention group was higher than the control group. Also, in all components in the intervention group, a significant increase was observed in the mean score before and after the intervention, and the mean score changes in all components in the intervention group were significantly higher than the control group (Table 3).

Discussion

The results of this study showed the significant effect of training professional approaches on job motivation in pre-hospital emergency technicians in South Khorasan province. There is also a significant effect of teaching professional approaches to increase job motivation in all its components, including: job interest, job importance, job satisfaction, responsibility, self-confidence and self-control. Similar studies have shown the effect of topics such as teaching cognitive strategies and self-efficacy training on employee motivation as well as the effect of organizational culture on employee motivation (21, 26, 27); Which can be considered in line with the recent study on the effect of teaching professional approaches on employee motivation. These topics can also be the goal of future research on the impact of organizational culture and the teaching of cognitive and self-efficacy strategies on the motivation of pre-hospital emergencies. It also seems that more studies are needed to better understand the professional perspectives on EMS.

Familiarity with professional approaches is necessary for the emergence of appropriate professional behaviors. Different occupations have different professional approaches that require initial training and can adjust the future performance of employees according to the goals of that occupation (25). For example, to achieve the desired result, the appropriate professional approach of a firefighter, sacrifice and a soldier would be courage. Applying professional approaches actually leads to different behaviors between professionals and non-professionals. It seems that the observance

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of specific professional approaches in each job guarantees professional standards and the quality of service provided by members (25).

In the emergency medical system, professional approaches refer to the perspectives or traits that characterize the behaviors of the emergency medical technician while providing care. An emergency medical technician can become acquainted with the philosophy of all kinds of decisions and priorities in providing emergency medical services by being aware of professional approaches and apply rescue measures by recognizing the root causes of decisions.

By recognizing professional approaches and ensuring the purposefulness of career processes, many of the difficult and tedious steps that a medical emergency technician takes in providing patient care become easier and more meaningful. Therefore, it seems that familiarity with the reason for taking emergency medical rescue measures will increase the motivation for better and more quality services.

It seems to pay attention to teaching a professional approach that includes; Values such as neutrality, eagerness to help, and altruism can prevent differences and delays in trying to alleviate patients' pain. Similarly, other studies have suggested that health workers should have a spirit of self-sacrifice and usefulness to others (22). The Vocational Approach Training Program trains the values and professional approaches of emergency medical technicians. Teaching professional approaches and values are part of the structure of professional ethics in the health system and their identification is in line with the results of other studies in which professional ethics was introduced as an important principle in service delivery (28).

Important Findings in this study The effect of teaching a specific professional perspective such as recognizing urgency in the sense of any health threat and not only critical situations, importance to early warnings, the need to respond to all requests for help, high sensitivity in patient prioritization, social support role for EMS services and Self-control is a profession. Patients were instructed, for example, in recognizing the urgency of any health threat as one of the essential perspectives for responding promptly. If the EMS only activates in the event of an emergency and the ambulance operator considers the dispatch conditional on a serious change in vital signs and the presence of definite and established symptoms of the disease, patients who contacted before the emergency occurred and the disease was established will be lost. Therefore, it is necessary for staff to change their views in this regard and consider any potential threat to the patient's health as an emergency and in need of assistance.

The need to provide services at the time of the initial warning of illness was also taught as one of the professional perspectives of employees. However, such a practice leads to an increase in their missions and workload; However, paying attention to the initial warnings by the staff increases the timely treatment of emergency situations (29,30).

Values and beliefs of internal and personal origin along with acquired factors such as professional perspectives seem to be important in providing appropriate pre-hospital services. Entering the workplace, the person brings with him / her values and beliefs, but gains professional insights from his / her training and experiences in the pre-hospital environment. Therefore, it seems that managers can have motivated employees to improve the system by employing people who are committed to appropriate values and beliefs and teaching them professional approaches.

Conclusion

Findings of this study indicate the effect of training professional approach as an effective factor in improving the job motivation of

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emergency medical technicians. According to the results of this study, it is recommended. Managers try to create specific professional perspectives by training and transferring experiences. This program is able to improve the quality of service delivery in the field of health by improving job motivation based on the training of professional approaches. Professional approach training does not require money, equipment and time, so it can be used as a suitable and cost-effective tool with high productivity to increase job motivation. Since some factors such as poor working conditions, occupational hazards and low wages can be effective in reducing the motivation of employees to identify and use the training of professional approaches as a tool to promote job motivation, can reduce the effect of the above. Due to the high increase in job motivation after training in professional approaches, it seems that familiarity with the subject professional approach is neglected in the training of emergency medical technicians and its inclusion in the training program of emergency medical courses seems necessary.

Research Limitations

This research has been done on new employees, so care should be taken to generalize these results to employees with higher professional experience. Also, due to time constraints, it was not possible to evaluate the effectiveness of the intervention in longer follow-up stages. Lack of resources and research background in teaching a professional approach was one of the limitations beyond the control of the researcher.

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Tables

Table 1: Comparison of mean age and frequency distribution of education level in intervention and control groups

Study groups	Control (30 person)	Intervention (30 person)	P-Value
Age ($\bar{x}$± SD)	1.11±22.87	1.06±22.9	0/91
Education level (percentage) Associate Degree Bachelor	21(70%) 9(30%)	21(70%) 9(30%)	1

Table 2: Comparison of mean job motivation score before and after the intervention in the two groups studied

Study Group	Before intervention N=$\bar{x}$± SD	After intervention N=$\bar{x}$± SD	The result of t statistical test Paired	Average changes N = x ± SD
Intervention	48.3±9.6	65.8±6.2	t =36.9 P<0.001	17.4±2.6
Control	48.7±6.6	48.3±9.6	t =0.41 P =0.69	1.34±0.1
Independent t-test test result with Mann-Whitney	t=0.21 P=0.84	t=10.1 P<0.001		Z=6.7 P< 0.001

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Table 3: Comparison of the mean score of job motivation component before and after the intervention in the two groups studied

Interest in the job		**Before intervention N=$\bar{x}$±SD**	**After intervention N=$\bar{x}$± SD**	**The result of statistical t-test Paired**	**Average changes $\bar{X}$ ± SD**
Interest in the job	Intervention	4.3±21	3.1±30.5	t=17.3 P<0.001	3±9.53
	Control	4.1±21	4.3±21	t =0.53 P= 0.6	0.69±0.07
Independent t-test test result with Mann-Whitney			t =9.82 P<0.001	t =0.03 P= 0.98	Z=6.77 P<0.001
The importance of the job	Intervention	2.9±12.2	2.5±14.7	t =4.1 P<0.001	3.36±2.5
	Control	1.9±13.1	2±13	t=0.83 P= 0.42	-0.66±0.1
Independent t-test test result with Mann-Whitney		t =1.3 P=0.2	t =2.99 P=0.004		Z=4.3 P<0.001
Self-esteem	Intervention	t =2.84 P=0.008	0.78±7.5	1.03±6.8	1.41±0.73
	Control	t =0.44 P=0.66	1.5±6.33	1.6±6.3	0.41±0.3
Independent t-test test result with Mann-Whitney			t =3.86 P<0.001	t =1.41 P=0.16	Z=2.86 P=0.004
responsibility	Intervention	0.96±2.1	1.2±2.83	t =2.7 P=0.012	1.5±0.73
	Control	0.99±2.03	0.97±2.13	t =1.79 P=0.08	0.06±0.31
Independent t-test test result with Mann-Whitney		t =0.12 P=0.79	t =2.47 P=0.16		Z=2.81 P=0.005
Self – control	Intervention	1.07±2.13	0.83±3	t =3.49 P=0.002	1.4±0.87
	Control	0.91±1.7	0.91±1.73	t =1 P=0.33	0.18±0.03
Independent t-test test result with Mann-Whitney		t =1.68 P=0.09	t =5.64 P<0.001	t =3.49 P=0.002	Z=3.41 P=0.001

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