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Research Article

Performance of Health Caregivers in the Eastern Health Center of Ahvaz, Iran, in the Self-Care Program

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Abstract

Background: Human factor has currently become the source of change in organizations. The evaluation of human performance is a practical issue in human resources management and the best way to obtain information for organizational decision-making.

Objectives: The current study aimed to monitor the performance of health caregivers in the eastern health center of Ahvaz, Iran, in the self-care program.

Methods: This cross-sectional descriptive study was conducted on 72 health caregivers in 20 affiliated and 31 non-affiliated health posts in the eastern health center of Ahvaz in 2018. The census sampling method and ministerial checklist were the tools of assessment for the performance measurement of the health caregivers. The checklist consisted of two parts for personal information and technical performance evaluation. The data were analyzed using the t-test and analysis of variance in SPSS software (version 22).

Results: All the participants were female health caregivers. The results showed that there was notanysignificantdifferencebetweenthestudy dimensions with the participants'fieldofstudy (P = 0.798;F = 0.226), academic degree (P value =0.957; t = 0.003), age (P = 0.419; F = 0.955), and work experience (P-value = 0.537; F = 0.627). The health caregiversofthe eastern Ahvaz health center of Ahvaz scored 767.35 out of the total 1,000, indicating that their performance was generally at an acceptable level.

Conclusions: The findings of this study can assist the managers and experts of the health sector in evaluating the performance of health caregivers in their self-care program. For the enhancement of the performance of health caregivers, not only health ambassadors should be identified and trained, but also the dimension of organizational self-care should be reinforced.

Keywords: Performance; Health Caregivers; Health Center; Self-Care

1. Background

Organizations should continuously improve their performance to survive in the competitive world of today. The factors, such as the competitive environment, lack of resources, reengineering, social pressures (1), and dramatic changes in knowledge management, have made the need for an efficient organizational performance measurement system inevitable (2). Otherwise, the lack of evaluation in different organizational dimensions, including the use of resources and facilities, employees, goals, and strategies, is regarded as a symptom of organizational disease ending in the cessation of communications with intra-organizational and inter-organizational environments. The aftermath is the increase of medical costs, negligence in providing primary health care, organizational insentience, and ultimately organizational death (3, 4).

In a health system, the measurement of performance is an important activity (5) that can provide the decision-makers with prompt information to raise the awareness of planning managers and policymakers in their path to managing national goals and evaluating associated policies. Timely evaluation and management can provide evidence for directing the implementation of reforms (6). Due to the nature and scope of health and medical services, any mistakes in the sector can be irreversible; therefore, the evaluation of performance and provision of flawless services compliant with functional standards are felt necessary. The factors, such as the complexity of contemporary health and medical organization, increasing costs of health and medical services, need for specialization, customer centricity, and significance of service efficiency and effectiveness, give health and medical organizations incentives to reform organizational performance management (7).

Health services in a community are directly related to its health and development. Health centers are regarded as first-level health care providers to meet the needs of clients

in various aspects of physical, mental, and social activities; therefore, it can be said that one of the components of community health is the performance of organizations providing health services, such as health centers, and poor delivery of health care due to the loss of public confidence, loss of financial resources, lack of adequacy for funding the health system, and catastrophic costs in health care services (8). The evaluation of their performance has nowadays become a vital issue (9), requiring the strong support of the management in the field (10).

Regarding the role of health workers in the quality of service delivery, it can be said that the progress of any organization depends on its employees, who should be aware of the quality of care in their organization (9). The results of a study conducted by Milani et al. showed that the quality rates of health care delivery by employees were 40% (poor), 31% (average), and 29% (good) (11). Working as a team in primary care centers, the health caregivers who mainly perform the role of health providers and trainers for patients and play a crucial role in their empowerment (12) can better plan for more effective training programs through information and awareness to facilitate self-care behaviors of patients to help the reduction of disability, medical costs, and associated mortality risks (13).

In order to increase the health literacy of Iranians and empower them for self-care, the Ministry of Health has started training health ambassadors since 1993. In this strategy, which has been started in the framework of the national self-care program as the fifth health system transformation plan, individuals receive a wide range of quality basic health services in the field of promotion, prevention, treatment, rehabilitation, and palliative care at home, place of study, and workplace. In this program, self-care is divided into three categories, namely individual, organizational, and social self-care (14).

Individual self-care is an approach in which the health care system tries to empower individuals in the field of self-care to pay attention to the health of family members and those around them in addition to protecting their health and taking action if necessary (15). In this approach, the goal is to train one health ambassador per household. The health ambassador is a member of the family who has at least eight literacy classes and is responsible for voluntarily transmitting what he/she has learned in the field of health and takes active care of his/her health and that of family members and the community (14).

Organizational self-care is a selective, participatory, and active process to promote the health of an organization that is designed, implemented, monitored, and evaluated by a coalition of members of the organization. The goal of this approach is to create a healthy work environment through the implementation of programs and policies to promote health in the workplace, create a physical environment and supportive culture, and encourage a healthy lifestyle with the cooperation of employees and employers (16). In organizational self-care, the health ambassador is an individual of the organization employees who is the link between the health system and organization employees. Social self-care is a selective, participatory, and active process for promoting the health of a community that is designed, implemented, monitored, and evaluated by a coalition of its citizens. This approach aims to empower different communities to develop healthy environments. To achieve this goal, urban and rural councils can play an important role in engaging the community to control the determinants of health (14).

A study carried out on the effect of caregivers' awareness and role in the improvement of students' dental and oral health in the Minnesota state of America showed a direct and significant correlation between awareness and performance (17). The secret of organizational health survival and training needs diagnosis is the labor force assessment as the basic principle for organizational performance improvement and enhancement (18).

With regard to the critical role of health staff in the progress of health improvement goals, along with the significance of their duties in training society and properly implementing prevention programs (19), their performance is to a great extent determinative of the quality of health and medical cares and services. Therefore, the performance measurement system and its implementation process for this group require great attention (20). As self-care program is highly important in the health system transformation plan in the health sector and no study has yet evaluated the performance of health caregivers for the implementation of this program, it could be great to help the execution of self-care program with better quality by analyzing the results of a one-year performance evaluation of health caregivers. Accordingly, this study aimed at monitoring the performance of the health caregivers of a health center in the eastern part of Ahvaz, Iran, in their self-care program in 2018.

2. Methods

The present cross-sectional descriptive study was conducted on 72 health caregivers in 20 affiliated and 31 non-affiliated health posts in the eastern health center of Ahvaz in 2018. The intended population was selected from the health caregivers in the eastern health center of Ahvaz. Due to the fact that 72 health caregivers are working in these posts, the census method was used for sampling. It is worth noting that due to their small share of participation (1.38%), assistant nurses were excluded from the study while evaluating the performance of health caregivers of the health center in eastern Ahvaz.

Ministerial checklist for the performance measurement of health caregivers was the data collection tool. The checklist consisted of two parts for personal information (e.g., age, gender, work experience, study field, and academic degree) and performance evaluation. The performance evaluation included analysis, interpretation, and enhancement of training and health improvement indicators (items 1 - 4) scoring 150, health ambassador identification and training (items 5 - 7) scoring 310, organizational self-care (item 8) scoring 100, and social self-

care (items 9 - 11) scoring 340.

In order to determine their performance level, the health caregivers in the eastern health center of Ahvaz were classified as follows: (1) health caregivers scoring 1 - 125, (2) 126 - 187, (3) and 189 - 250 had poor, average, and good performance in the first dimension (i.e., analysis, interpretation, and enhancement of training and health improvement indicators), respectively. Health caregivers scoring 1 - 155, 156 - 232, and 233 - 310 had poor, average, and good performance in the second dimension (i.e., health ambassador identification and training), respectively. Health caregivers scoring 1 - 50, 51 - 75, and 76 - 100 had poor, average, and good performance in the third dimension (i.e., organizational self-care), respectively. Finally, health caregivers scoring 1 - 170, 171 - 255, and 256 - 340 had poor, average, and good performance in the fourth dimension (i.e., social self-care), respectively.

The data were analyzed using descriptive statistics, such as mean, standard deviation (SD), percentage, and frequency distribution tables, and t-test and analysis of variance in SPSS software (version 22). Moreover, the inferential statistics had a significance level of 0.50.

3. Results

As for frequency distribution, the health caregivers aged 30 years and below had the highest (37.50%) frequency; however, those over 50 years of age had the lowest frequency (8.33%). Regarding work experience, the maximum and minimum frequency rates were for health caregivers with work experience of 10 years and below (56.94%) and 20 - 30 years (20.83%), respectively. In terms of field of study, midwifery and assistant nursing had the highest (59.72%) and lowest (1.38%) frequency rates, respectively. Considering academic degree, bachelor's degree was more frequent (65.27%). In addition, regarding the sex ratio, all 72 participants were female (100%).

Table 1 shows the mean, SD, and P-value at all four dimensions of performance evaluation for the health caregivers according to the field of study.

Table 1. Performance of Health Caregivers in Eastern Health Center of Ahvaz, Iran, in Self-Care Program According to Field of Study

Variables/Field of Study	n	Average Score	Standard Deviation	Total Points	F	P-Value
Analysis, interpretation, and enhancement of training and health improvement indicators				250	1.306	0.278
Midwifery	43	205.42	25.78			
Public health	12	206.80	22.40			
Family health	16	194.14	26.19			
Total	71	203.11	25.47			
Health ambassador identification and training				310	1.114	0.334
Midwifery	43	231.27	42.58			
Public health	12	217.70	52.01			
Family health	16	242.68	40.71			
Total	71	231.55	43.93			
Organizational self-care				100	3.247	0.045
Midwifery	43	72.46	11.40			
Public health	12	61.31	18.48			
Family health	16	71.45	14.68			
Total	71	70.35	13.96			
Social self-care				340	0.187	0.830
Midwifery	43	260.91	41.44			
Public health	12	269.02	45.64			
Family health	16	261.14	38.62			
Total	71	262.33	41.07			
Performance monitoring				1000	0.226	0.798
Midwifery	43	770.07	67.94			
Public health	12	754.86	86.87			
Family health	16	769.42	64.53			
Total	71	767.35	69.86			

According to Table 1, based on the field of study, there was no significant difference in the dimensions, such as analysis, interpretation, and enhancement of training and health improvement indicators, health ambassador identification and training, and social self-care (P > 0.05). There was only a significant difference between the field of study and their organizational self-care (P = 0.045; F = 3.247). In the estimation of overall scores (out of 1,000), the highest and lowest mean values belonged to midwifery (770.07) and general health (754.86), respectively. Furthermore, no significant correlation was observed between the subjects' field of study and study dimensions (P = 0.798; F = 0.226).

Table 2 tabulates the mean, SD, and P-value of different dimensions of performance evaluation according to health caregivers' academic degrees.

Table 2. Performance of Health Caregivers in Eastern Health Center of Ahvaz, Iran, in Self-Care Program According to Academic Degrees

Variables/Academic Degree	n	Average Score	Standard Deviation	Total Points	*t*	P-Value
Analysis, interpretation, and enhancement of training and health improvement indicators				250	0.925	0.020
Associate's degree	24	207.03	30.32			
Bachelor's degree	47	201.11	22.70			
Total	71	203.11	25.47			
Health ambassador identification and training				310	1.986	0.968
Associate's degree	24	245.74	44.48			
Bachelor's degree	47	224.30	42.29			
Total	71	231.55	43.93			
Organizational self-care				100	1.761	0.068
Associate's degree	24	74.37	10.19			
Bachelor's degree	47	68.29	15.23			
Total	71	70.35	13.96			
Social self-care				340	-0.027	0.575
Associate's degree	24	262.15	43.13			
Bachelor's degree	47	262.42	40.46			
Total	71	262.33	41.07			
Performance monitoring				1000	0.003	0.957
Associate's degree	24	789.30	64.13			
Bachelor's degree	47	756.14	70.64			
Total	71	767.35	69.86			

In the estimation of overall scores (out of 1,000), the highest mean value was related to associate's degree (789.30). Therefore, no significant correlation was observed between the subjects' academic degrees and study dimensions (P = 0.957; F = 0.003).

Table 3 shows the mean, SD, and p-value of different dimensions of performance evaluation according to health caregivers' age.

Table 3. Performance of Health Caregivers in Eastern Health Center of Ahvaz, Iran, in Self-Care Program According to Age

Variable/Age (y)	n	Average Score	Standard Deviation	Total Points	F	P-Value
Analysis, interpretation, and enhancement of training and health improvement indicators				250	4.208	0.009
Less than 30	27	204.45	21.80			
30 - 40	22	214.85	23.86			
40 - 50	17	191.22	23.50			
More than 50	5	184.58	35.58			
Total	71	203.11	25.47			

Health ambassador identification and training				310	0.181	0.909
Less than 30	27	227.31	39.46			
30 - 40	22	236.70	42.57			
40 - 50	17	231.12	49.11			
More than 50	5	233.25	64.90			
Total	71	231.55	43.93			
Organizational self-care				100	2.414	0.074
Less than 30	27	65.33	15.15			
30 - 40	22	72.84	13.04			
40 - 50	17	75.73	11.62			
More than 50	5	68.16	12.28			
Total	71	70.35	13.96			
Social self-care				340	0.140	0.936
Less than 30	27	258.61	36.95			
30 - 40	22	263.48	43.01			
40 - 50	17	264.75	45.71			
More than 50	5	269.16	48.85			
Total	71	262.33	41.07			
Performance monitoring				1000	0.955	0.419
Less than 30	27	755.72	69.30			
30 - 40	22	787.88	74.43			
40 - 50	17	762.84	71.20			
More than 50	5	755.16	36.30			
Total	71	767.35	69.86			

According to Table 3, the age factor did not show any significant difference in dimensions, such as health ambassador identification and training, organizational self-care, and social self-care ($P > 0.05$). There was only a significant difference between participants' age and dimension of analysis, interpretation, and enhancement of training and health improvement indicators ($P = 0.009$; $F = 4.208$). In the estimation of overall scores (out of 1,000), the highest and the lowest mean values belonged to the age range of 30 - 40 years (787.88) and 50 years and above (755.16), respectively. Consequently, no significant correlation was observed between subjects' age and study dimensions ($P = 0.419$; $F = 0.955$).

Table 4 tabulates the mean, SD, and p-value of different dimensions of performance evaluation according to health caregivers' work experience.

Table 4. Performance of Health Caregivers in Eastern Health Center of Ahvaz, Iran, in Self-Care Program According to Work Experience

Variables/Work Experience (y)	n	Average Score	Standard Deviation	Total Points	F	P-Value
Analysis, interpretation, and enhancement of training and health improvement indicators				250	5.153	0.008
1 - 10	41	210.80	21.78			
10 - 20	16	189.95	27.26			
20 - 30	14	195.62	26.76			
Total	71	203.11	25.47			
Health ambassador identification and training				310	0.560	0.574
1 - 10	41	232.35	37.66			

10 - 20	16	238.33	56.56			
20 - 30	14	221.45	46.55			
Total	71	231.55	43.93			
Organizational self-care				100	4.400	0.016
1 - 10	41	67.21	14.44			
10 - 20	16	78.85	13.12			
20 - 30	14	69.82	9.41			
Total	71	70.35	13.96			
Social self-care				340	0.144	0.866
1 - 10	41	263.90	37.62			
10 - 20	16	257.44	46.49			
20 - 30	14	263.33	46.86			
Total	71	262.33	41.07			
Performance monitoring				1000	0.627	0.537
1 - 10	41	774.27	70.05			
10 - 20	16	764.59	87.92			
20 - 30	14	750.23	42.19			
Total	71	767.35	69.86			

Table 4 shows a significant difference between caregivers' work experience and dimension of analysis, interpretation, and enhancement of training and health improvement indicators (P<0.05); nevertheless, there was a significant difference in other dimensions, such as health ambassador identification and training and social self-care, with regard to work experience (P>0.05). In the estimation of overall scores (out of 1,000), the highest and lowest mean values were related to work experience of 1-10 (774.27) and 20-30 (750.23) years, respectively. As a result, no significant correlation was observed between subjects' work experience and study dimensions (P=0.537; F= 0.627).

Table 5 tabulates the performance level of health caregivers in their self-care program in the health center of eastern Ahvaz.

Table 5. Performance of Health Caregivers in Eastern Health Center of Ahvaz, Iran, in Self-Care Program According to Dimensions

Variables/Performance Quality	Abundance	Percentage	Total Points	Score from Total
Analysis, interpretation, and enhancement of training and health improvement indicators			250	203.11
Good	50	70.42		
Average	21	29.57		
Health ambassador identification and training			310	231.55
Good	42	59.15		
Average	23	32.39		
Poor	6	8.45		
Organizational self-care			100	70.35
Good	22	30.98		
Average	40	56.33		
Poor	9	12.67		
Social self-care			340	262.33
Good	35	49.29		
Average	36	50.70		
Performance monitoring			1000	767.35
Good	71	100		

As presented in Table 5, the health caregivers scored 203.11 out of 250 in the first dimension (i.e., analysis, in-

terpretation, and enhancement of training and health improvement indicators), indicating that their performance was at a good level. In the second dimension of performance evaluation (i.e., health ambassador identification and training), the caregivers could score 231.55 out of 310, representative of their average performance level. As for the third dimension, (i.e., organizational self-care), their score of 70.35 out of 100 implies that they had a good performance. In the last dimension, (i.e., social self-care), the caregivers obtained a score of 262.33 out of 340, determinative of their performance at a good level. In the estimation of overall scores (out of 1,000), it can be concluded that the health caregivers working in the health center of eastern Ahvaz could successfully reach an overall score of 767.35 out of 1,000, demonstrating that they had good performance in general.

4. Discussion

Based on the results of this study, the health caregivers had good performance in the analysis, interpretation, and enhancement of training and health improvement indicators. Kianian et al. have identified health workers as capable individuals whose powers are expanding, and updating the information of these forces is essential (8). Otero-Sabogal et al. evaluated that the performance of health staff, indicating their poor performance at all sections, with training dimension included, was a great problem, that is not in line with the findings of this study. However, the difference may contribute to the fact that Otero-Sabogal et al. study was conducted in poor countries whose large study populations and cultural differences could be effective factors (21).

In a study performed by Kabir et al., the average level of need for education among health caregivers was about four times greater than that of family physicians. The reason for the increase in the announced training needs was a lack of correspondence between university education and occupational needs, lack of restrictions on the work to attend classes, and enhancement of individuals' literacy level (22). Bayrami et al. stated that the performance of 75% of family health workers was poor. This difference could be due to the overall performance and training performance of staff only in a special section (i.e., midwifery) (23).

According to a study conducted by Kianian et al., the educational performance of health staff was at a good and acceptable level, which is consistent with the results of the present study (8). Ferguson et al., in the investigation of the educational ability of health workers, showed that their performance after presenting the necessary education significantly differed, and there was a need to develop their capabilities in the field of education to clients (24). It can be concluded that appropriate educational performance is the most important strategy in the domain of health care. Furthermore, proper planning for the improvement of staff educational performance and evaluation of their educational performance, apart from their overall performance, is essential and inevitable. Moreover, the findings showed that there was a statistically significant difference between this dimension with caregivers' age, work experience, and academic degree.

Farsar et al. observed that health caregivers with lower academic degrees were more willing to attend empowerment programs (i.e., training classes), which is in line with the results of the present study (25). Therefore, a higher academic degree is not necessarily indicative of better educational performance; instead, caregivers with lower educational levels can be empowered in developing their self-care programs at personal and social levels by receiving appropriate guidance in this regard.

The results of the current study also showed that health caregivers had average performance in identifying and training health ambassadors. Farsar et al. removed the scores of attracting new intermediaries from their study due to their lower contribution (1%) (25) that is inconsistent with the findings of the present study, probably due to the different approach in scoring type and criterion. In a study carried out by Raeissi et al., the implementation of the health ambassador program has increased the awareness of the women in Tehran, Sanandaj, and Shahrekord, Iran, in the areas of appropriate age for delivery, healthy drinking water, weight, and child growth control, and care and treatment of children with diarrhea and upper respiratory tract infections which is not consistent with the results of the current study. Furthermore, the reason for this difference could be the type of study (26).

Based on the findings of this study, the performance of health caregivers in organizational self-care was at an average level. In their evaluation of the role and performance of non-government organizations (NGOs) in maintaining and improving the health of society, Damari et al. showed that limited financial resources, insufficient communication of NGOs with the government, and government's poor belief in the effectiveness of NGOs' role are three main barriers requiring constructive interactions between NGOs and responsible health sector in the government (27); this result was not in line with the findings of the present study, and the difference may be related to the study population (i.e., NGO). In addition, the results of this study were representative of a statistically significant difference between the aforementioned dimension with subjects' work experience and field of study.

A study performed by Hafezi et al. on the performance of the family physician team indicated that physicians with 10 - 20 years of work experience had better performance than those with experience of less than 10 years. Their findings are consistent with the results of this study (28). Subsequently, with an increase in the work experience of health staff, their performance would be better.

Additionally, health caregivers showed good performance in their social self-care. However, this dimension did not show any statistically significant difference with

health caregivers' demographic information. Farsar et al. compared the subjects' scores in three areas of accountability, empowerment, and productivity in terms of education and age. Accordingly, they observed that as the caregivers' age increased, their performance in the area of productivity (i.e., participation in social activities and transfer of educational materials) improved, that is not in line with the findings of this study, possibly due to the difference in the type of study and demographic collection tools (i.e., interview). They also showed that there was no statistically significant difference between caregivers' educational level and their productivity which is consistent with the results of this study (25).

It can be concluded that the tendency to plan for the development of a health-supportive urban council, formation of self-help groups in families under protection, and participation in holding training campaigns remained unchanged as the educational level of health staff increases. Nevertheless, Koikatsu et al. demonstrated a positive relationship between the educational level and performance of health staff in society (29); the difference might be related to research tools.

The limitations of the present study included the lack of participation of some health caregivers of the intended health center, which was to some extent solved by necessary follow-ups with authorities. It seems that the checklist of this program had some limitations. It should be noted that the performance assessment of health workers in a self-care program needs a comprehensive instrument, including all dimensions in this area.

4.1. Conclusion

In general, the findings of this study showed that the health caregivers had good performance in the eastern health center of Ahvaz. In order to enhance the performance of health caregivers, not only health ambassadors should be identified and trained, but also the dimension of organizational self-care should be reinforced. The crucial impact of holding training workshops on briefing health caregivers cannot be overlooked. The findings of this study can assist the managers and experts of the health sector in evaluating the performance of health caregivers in their self-care program. Finally, it is recommended to evaluate the performance of managers, physicians, nurses, and other health experts in their self-care program as well as the performance of health caregivers in attracting health ambassadors at state and provincial levels in order to identify the barriers and facilitators for health caregivers in self-care program.

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