

## Original Research Article

# Effect of supervision and education on community health workers performance in the field of primary health care

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### ABSTRACT

**Background:** Effective supervision strategies help to address the challenges unique to community health workers (CHWs) or Behvarz and improve poor practices. Current research is comparing situation of two supervisors group on performance of CHWs in Lahijan city.

**Methods:** This study was done through a quasi-experimental method in which with census it was considered through pre and post-test after education, then the statistical society was divided through systematic random sampling method and was supervised by two supervisor groups (health care providers and headquarters experts) and their situation were compared using the standard performance checklist in 10 primary healthcare fields for a four month period.

**Results:** Education section showed that 120 CHWs of statistical society, 56 CHWs of capability (in pre-test) answered 70% of questions correctly and in post-test 83 CHWs have answered to 70% of questions correctly and totally it shows 34% of enhancement. Result of in performance section showed that 63% CHWs under supervision of health care providers could have performance higher than 70% in 10 fields. Also result showed that 73% CHWs supervised by headquarter experts could have performance higher than 70% in 10 fields.

**Conclusions:** The effect of the education and supervision on the performance increased although with little difference in the two groups of observers. It can be concluded that the only field that is fully specialized after the implementation of Health Reform Plan is the field of pregnant mothers who provide services to this highly specialized group through midwives.

**Keywords:** Performance, Supervision, In-service training, Community health workers, Behvarz and health reform plan

### INTRODUCTION

On community health workers (CHW) performance, the authors pointed that was based on three elements which are knowledge and skills, motivation, and the work field. supportive supervision was a one of the most important factors in creating and maintaining an enabling work field.<sup>1</sup>

Supervision is a process for guidance, assistance, education and motivation for improve performance

CHWs in providing and delivering high quality health services, which consists of three components as monitoring, training and engagement.<sup>2,3</sup>

In the view of economist current era is called knowledge-oriented era and now assets of an organization is its invisible assets (it is something more than 85% of value of that organization).<sup>4</sup> Among invisible assets capability of workforce has been called as the most important factor and a constant competitive advantage.<sup>4</sup> Doing educational activity in current organizations is inevitable. Educating

staff besides facilitation of achieving organizational goals through improving personal and group performance, creating flexibility against change and reducing unwillingly resistance causes staff achieve maximum output through identifying their benefit and organization's benefit from limited resources of organization that in this case managers instead of considering daily involvement consider viewpoint and strategic plans of organization.<sup>5</sup>

Nowadays healthcare houses were as the most environmental health unit of the city and situated in village were the symbol of development of system of primary health care (PHC), and have valuable effect at enhancing index of health.<sup>6</sup> In system of healthcare of the country the first human force rank at presenting healthcare services in villages of healthcare's and since this group are responsible form presenting service to the extensive group of villagers with population of 20 million at more than 60 thousands villages considering situation of health and existing problem in this group has importance that all events and different events of daily life of people and families such as birth, vaccination-school- marriage-insurance, events, drug and cure-death and so on have direct relation with healthcare and healthcare house.<sup>7</sup> Therefore updated training and constant supervision of this group of staff has been the necessities of system of health, so for usefulness of healthcare services in each society existence of award healthcarers is necessary and if it is not paid attention and it is less paid attention it will have bad consequences on performance and activities of healthcare houses and finally it leads to decrease of quality of CHWs and reducing level of health of people and society.<sup>8</sup> Since in system of healthcare it was observed and repeated many times that CHWs were training and following that trainers of CHWs should be assessed, it will have better performance in the organization, so a researcher is going to consider and compare is his research "he relation of education and supervision on job performance of healthcarers by two groups of searcher (health care providers and headquarter experts) of healthcare houses in lahijan city".

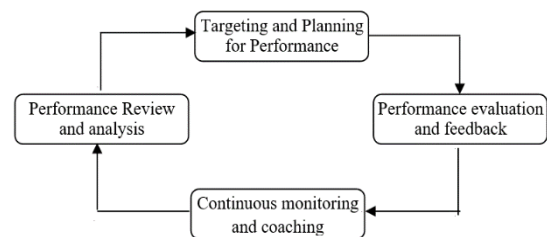
The reason for comparing the two supervisory groups is as follows that in 1984 and 3 consecutive years, a college student at Public Health Associate Degree Majors: Family Health and Control of Diseases (PHADM: FH&CD) was admitted to universities for work in rural health centers. The educational programs and teaching materials of these students were fully in line with the PHC and the functions and responsibilities of the CHWs and their supervisory role. And these staff were committed to work in the rural for five years. The recruitment of these staff was at the same time as implementing the healthcare system in the country. From the years 2001-2005, in the city of Lahijan, like other cities, when the old staff, they retired while undergraduates associate degree in family health and diseases received a bachelor's degree and entered the system as alternatives.

The headquarter experts were those who worked in the rural centers, the role of family health care provider and illness, and had full control over the performance of CHWs.

The system was needed to use new staff (family health and diseases) in order to complete the vacancy of Associate's health in the rural, with encountered employment problems, and the recruitment of related staff was stopped. Therefore, the graduates of the paramedical staff (midwife-public health) used. Staff those were not compatible with the first group conditions (health care provider). In these years, services and acceptance of CHWs, like the National Standard Instruction, we faced a poor performance.

### **Performance management**

Performance management is a regular process based on information that helps manager to manage in the direction of achieving goals and implementing plans and successful implementation of mission and delivered responsibilities well. Performance management needs behavior to be analyzed, performance become assessed, staff being given feedback and staff be encouraged for favorable behavior and performance. Simple model of performance management cycle has been shown in Figure 1.<sup>9,10</sup>



**Figure 1: The cycle of performance management.**

Constant supervision on behavior and performance of staff and implementing role of tutor by managers and supervisors is one step of the process of performance management. In this sensitive role a manager in the role of a tutor helps staff, support and guides them, gives reforming feedback, gives his experiences to staff, provide resources tools and necessary opportunities for behavior and favorable performance and supplies necessary education for staff. Another step of connected process of performance management is that we should assess behavior and performance of staff in comparison with pre-determined goals and expectation. We determine strength and weakness of staff and give their behavioral and functional certificate to them.<sup>10,11</sup>

### **METHODS**

The present study was carried out quasi-experimental method.

This research based on goal that concentrates on situation of supervision of health care providers and headquarters experts is and comparative ones. Statistical society in this research is CHWs of Lahijan city that are 120 ones during the period of April to July 2017.

### Sample size

Samples were selected by census. It consisted of a total of 120 CHWs is working in Lahijan city. 120 CHWs were assigned to two group supervision by systematic random sampling method.

### Inclusion criteria

CHWs were included who reside in the Lahijan city. Because in Iran, CHWs must be native to the region by law.

At the first step through census pre-test was done so that a step of educational need metric is done, in the following after education and doing post-test effect of education at knowledge area was assessed. Then for interference the effect of searching and supervision after education, 120 CHWs were divided into two groups of 60 people through systematic random sampling (Group A and group B). In this research field method was used for data collection. During 4 months, group A by health care providers and group B were considered by headquarter experts and during two weeks performance of health carers were considered by tutors of center of CHWs education by completing standard checklist of ministry of health. Questions of pre-test and post-test were prepared based on Blom taxonomy that its validity and content validity at different steps of education were approved based on expert panel opinion. Also, standard checklist of ministry of health that was announced asked on instruction for measuring performance of CHWs to health deputies were used and its validity and reliability in all provinces was approved respectively.

The data were analyzed using the SPSS version 18.0 software. The summary statistics (means, standard errors, frequencies, and percentages) were used to describe the participant characteristics.

## RESULTS

In this section result of pre-test and post-test are compared that its result is presented in Table 1.

### Test of the first question of research

Does knowledge situation of CHWs before and after in-service training change at considering area? Regarding consideration of the whole questions, 10 fields that were 45 questions 56 CHWs could (pre-test) answer 70% of questions correctly that this section is almost 46.66% and in post-test 83 health carers answered 70% correctly that this section is almost 69.16%.

### Test of second question of research

How is situation of supervision of Health care providers on enhancement of performance of CHWs in current research? Result of current studies in performance discussion showed (Table 2) that 38 CHWs out of 60 ones could have performance higher than 70 percent in 10 fields that this section is almost 63%, that the highest performance in the field of Pregnant mothers (92%) and the lowest performance in the field of caring adults was 46%.

Regarding the result and since sig for pregnant mothers, adult and nutritional supplement is bigger than 5% in this field questions of research haven't been approved that is supervision doesn't affect performance of CHWs on enhancing performance of the population of research and in other fields supervision affects performance of CHWs on enhancing performance of population (Table 3).

**Table 1: Comparing result of pre-test and post-test.**

Section	Pre-test		Post-test	
	No. of CHWs who answered higher than 70% correctly	% of CHWs who answered higher than 70% correctly	No. of CHWs who answered higher than 70% correctly	% of CHWs who answered higher than 70% correctly
Pregnant mothers	58	48.3	76	63.33
Reproductive health	65	54.16	75	62.5
Mana	47	39.16	75	62.5
Heart-coronary disease	51	42.5	84	70
Flu	53	44.16	84	70
Eltor	59	49.16	84	70
Hepatitis	50	41.66	84	70
Mental health	56	46.66	106	88.33
Adults	62	51.66	75	62.5
Nutritional supplement	52	43.33	94	78.33
Total	56	46.66	83	69.16

**Table 2: Comparison of the performance of CHWs at an optimal level of 70%.**

Field	Health care providers		Headquarter experts	
	Number	%	Number	%
Pregnant mothers	55	92	57	95
Reproductive health	44	74	43	72
Mana	40	67	41	69
Heart-coronary disease	43	71	46	76
Flu	49	81	50	83
Eltor	44	74	41	69
Hepatitis	37	62	40	66
Mental health	28	46	34	57
Adults	29	48	35	59
Nutritional supplements	40	67	49	81
Total	38	63	44	73

**Table 3: Test of second question of research in 10 fields (health care providers).**

Section	Mean	Low limit	High limit	D. F.	Sig.	Conclusion
Pregnant mothers	-0.41	-0.24	0.15	119	0.671	Disapproved
Reproductive health	-0.46	-0.68	0.24	119	0.000	Approved
Mana	-0.66	-0.91	-0.41	119	0.000	Approved
Heart-coronary disease	0.48	0.26	0.69	119	0.000	Approved
Flu	-0.31	-0.47	-0.15	119	0.000	Approved
El Tor	0.80	0.56	1.04	119	0.000	Approved
Hepatitis	0.20	0.03	0.37	119	0.018	Approved
Mental health	-1.26	-1.49	-1.03	119	0.000	Approved
Adults	0.08	-0.02	0.19	119	0.123	Disapproved
Nutritional supplements	0.02	0.11	0.14	119	0.791	Disapproved

**Table 4: Test of second question of research in 10 fields (headquarter experts).**

Section	Mean	Low limit	High limit	D. F.	Sig.	Conclusion
Pregnant mothers	0.57	0.42	0.72	119	0.000	Approved
Reproductive health	0.25	0.13	0.38	119	0.000	Approved
Mana	0.15	-0.10	0.40	119	0.236	Disapproved
Heart-coronary disease	0.05	-0.10	0.10	119	0.548	Disapproved
Flu	-0.30	-0.43	-0.18	119	0.000	Approved
El Tor	-0.38	0.16	0.59	119	0.001	Approved
hepatitis	0.02	0.10	0.14	119	0.731	Disapproved
Mental health	-0.28	-0.39	-0.17	119	0.000	Approved
Adults	-0.03	-0.13	0.08	119	0.639	Disapproved
Nutritional supplements	-0.26	-0.40	-0.11	119	0.000	Approved

### Test of third question of research

How is situation of supervision of headquarter experts on enhancing performance of CHWs in current research? Result of current study at performance discussion showed (Table 2) that 44 CHWs out of 60 ones could have performance higher than 7% at 10 fields that this section is almost 73% that the highest performance in the area of pregnant mothers (95%) and the least performance in the area of mental health was (57%). Regarding result and since sig for Mana area, heart-coronary disease, hepatitis and adults is bigger than 5% in this area questions of research hasn't been approved that is supervision of

health carers by headquarter experts doesn't affect enhancing performance of population of research and in other fields supervision on performance of CHWs by headquarters experts affects enhancing performance of population of research (Table 4).

### Testing hypothesis of research

Is supervision of headquarter experts in comparison with health care providers on performance of considering field different? Regarding result of considering this hypothesis only in the field of pregnant mother's supervision of headquarter experts in comparison with health care

providers on performance of CHWs is different at enhancing their job performance and in other field it isn't different.

## DISCUSSION

The results of this study showed that 100% of the respondents (120 CHWs) of the pre and post-tests standard questions in 10 fields, 56 (47%) were able (at the pretest) to give up to 70% of the questions, and in the post test, 83 (69%) had good answers to 70%. In general, education helps to raise awareness among CHWs in all fields. Which had the slightest improvement in reproductive health (9%). in the fields of mental health, hepatitis and cardiovascular disease (34%, 29%, 28%, respectively). Similar studies have been conducted to raise awareness by conducting training sessions on health professionals in the country, all of which suggests that education improves awareness of CHWs. In general, the results of our study on the effect of educational role on the level of knowledge and practice were in agreement with the study of Zakeri et al on the impact of diabetes prevention education, Mottaghi et al in Kashan, Nik et al in Saveh, Ansari-pour et al and Salazar-Lindo et al.<sup>12-17</sup>

In assessing the performance of CHWs over a period of 4 months by two observer groups, out of 60 CHW supervised, only 38 (63%) people achieved over 70% performance in 10 fields by the healthcare providers team. The highest performance was in the pregnant mother's field (92%) and the lowest performance was in the youth care field (46%).

The performance results of CHWs were slightly better in the supervisors of the headquarters experts. of the 60 CHWs supervised by the staff of the experts, only 73% of the 44 people achieved over 70% performance in 10 fields. This had the highest performance in pregnant mothers' field (95%) and the lowest in mental health (57%).

By assessing the data, it can be concluded that the only field, which is fully specialized after the implementation of the Health Reform Plan, is the field of pregnant mothers, who provide services to this highly specialized group through midwives. Results showed the effect of the training on the performance with little difference in the two groups of supervisors. The results of this study are in line with the results of Sadeghipour's study in Islamshar that showed the effect of training along with performance monitoring.<sup>18</sup>

Another study was carried out in 1997 by Bolhari et al which showed that the training had a positive impact on CHW performance.<sup>19</sup> The results of the study were in line with the role of supervision and training in planning.

The results of our study were consistent with the findings of David et al. It has been shown that in health systems, monitoring can increase the care process, the patient's

health outcomes and effective care, especially if supervision is accompanied by training.<sup>20</sup>

Regarding equal training of CHWs and supervision by two groups, randomly, difference at performance in different fields has had different results. Since during recent two years by implementing design of changing health in system and mixing various plan of health in healthcare house and deficiency of forces of supervising implementation (health carer providers) due to retiring and lack of employment of forces instead of modified forces inevitably system for supervision has used some contracted forces that hadn't sufficient experience and skill and can't affect performance.

On the other hand, studies have shown that the rural care process has changed in recent years due to changes made in the cultural, social and economic aspects of rurals. Today's old teaching methods are not effective, as well as low literacy educators. They cannot be held accountable. Therefore, the way in which CHWs and teaching methods are recruited should change. although we have seen many changes in employment policies in CHWs today.<sup>21</sup> Undeniably, the conditions of recruitment of native troops and their training related to the needs-based community assessment of the system's efficiency are evolving.<sup>22</sup> Leader tasks in the health system are diverse and not steady. Changes in educational content over time reflect more of the integrated programs in the PHC and show the CHW's expected work.<sup>23</sup>

## CONCLUSION

Supervision is a process for improve performance CHWs in providing and delivering high quality health services. effective and continuous supervision strategies help to address the challenges unrivaled to CHWs, especially in the context of healthcare houses. It is important that this matter is taken into account in delivering for implementers to note that consider and perceive supervision based on previous experience and integrate supervision strategies into their existing situation and values.

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