International Journal of Nutrition Sciences

Journal Home Page: ijns.sums.ac.ir

ORIGINAL ARTICLE

The Effect of Self-assessment on Health Care Personnel's Knowledge

Seyed Jalil Masoumi[1, 2], Zohreh Mazloom[1]*, Mohammad Fararouei[3], Mohammad Rahim Kadivar[4], Ezat Mazloomi[5]

1. Nutrition Research Center, Department of Clinical Nutrition, School of Nutrition and Food Sciences, Shiraz University of Medical Sciences, Shiraz, Iran
2. Gastroenterohepatology Research Center, Shiraz University of Medical Sciences, Shiraz, Iran
3. Shiraz HIV/AIDs Research Center, Shiraz University of Medical Sciences, Shiraz, Iran
4. Professor Alborzi Clinical Microbiology Research Center, Shiraz University of Medical Sciences, Shiraz, Iran
5. Vice Chancellor for Health, Shiraz University of Medical Sciences, Shiraz, Iran

ARTICLE INFO

Keywords:
Self-assessment
Knowledge
Pregnancy
Personnel

*Corresponding author:
Zohreh Mazloom,
Nutrition Research Center,
Department of Clinical Nutrition,
School of Nutrition and Food Sciences,
Shiraz University of Medical Sciences,
Shiraz, Iran.
Tel/Fax: +98-71-37251004
Email: zohreh.mazloom@gmail.com
Received: 5 December 2016
Revised: 4 February 2017
Accepted: 4 March 2017

ABSTRACT

Background: Providing sustainable training for personnel and promoting their knowledge would have undeniable effects on health services delivered by them and would improve community healthcare systems. We aimed to determine the effect of an assessment method on increasing the knowledge of health center personnel who provided health services compared with common methods.
Methods: In a semi-experimental study, 12 cities and 5 towns in Fars province were entered in our study as the control and case groups, respectively. The subjects were experts and staff with associate degrees from urban and rural health centers, delivery facilities, and pregnancy care providers. 473 and 660 people participated in pre-test and post- test, respectively.
Results: Most of the participants in this study (65%) were long-term contractor employees with associate degrees and 55.8% had received their degree from government universities. The mean±SD scores before and after implementing the program were 32.7±5.2 and 37±4.7, respectively. The highest score was reported to be 39.4±4 in groups with a bachelor's degree.
Conclusion: self-assessment training has a significant effect on the promotion of knowledge among health center personnel compared with common training methods.

Please cite this article as: Masoumi SJ, Mazloom Z, Fararouei M, Kadivar MR, Mazloomi E. The Effect of Self-assessment on Health Care Personnel's Knowledge. Int J Nutr Sci 2017;2(1):16-20.

Introduction

Evaluation or assessment can determine the value of everything and is considered as a valid judgment. Assessment is a systematic process to collect, analyze and interpret data in order to determine whether foods are fulfilled or are being fulfilled (1, 2). Self-assessment in health education programs aims to provide information on the efficacy of health education programs in order to improve the results, efficiency and quality of health education interventions. By self-assessment evaluation, the ability to achieve these goals, their importance and expenditure can be investigated (1).

Self assessment is an evaluation method for a comprehensive monitoring of systematic and regular activities and providing feedback to the organization. The process of self-assessment enables the organization to determine merits for improvement, and is used as a tool to monitor the improvement and promotion of a program (2).

The most important advantages of self-assessment include identifying key points for organizational improvement, providing a

complete approach based on facts for periodic evaluation and measurement of the organization, engaging individuals in all levels and units to improve, understand, and use services.

Materials and Methods

All health care providers for pregnant women in urban, urban-rural health centers and health posts and delivery facilities in Fars province were studied. At first, a test was given to healthcare personnel about prenatal care in 12 cities and 5 towns. At first, some pamphlets were provided about correct methods of providing care for pregnant women using reference books approved by the Ministry of Health and Medical Education (3). Then, these pamphlets were evaluated and approved by the Ministry of Health and measurement tools were determined. Next, a checklist was provided in which the step by step care required for pregnant women were included. Participants in the case group were trained about using the pamphlets and checklists. Healthcare personnel were asked to provide necessary care for referring pregnant women and completing the checklists. For each case, one of the choices in the checklist i.e. "performed and correctly performed", "performed and not corrected" and "not performed" was marked. In cases of "not performed or "not correctly performed", personnel referred to pamphlets to study proper prenatal care methods. After using this method for one year, both case and control groups were again tested. Then, pregnancy post-test scores of both groups were compared. Mamassani, Kazeroon, Firoozabad, Marvdasht, and Sepidan were included in the case group, while Abadeh, Eghlid, Estahban, Arsanjan, Bavanat, Khorrambid, Darab, Shiraz, Lar, Lamerd, and Neiriz were in the control group. There was no difference among personnel's characteristics and the cities and towns were randomly selected.

The total number of participants in the pre-test group was 473 while 660 individuals took part in the post-test group. After data collection and post-intervention test, data were analyzed using t-test. Data analysis was carried out using t-test, ANOVA and Epi software. $P<0.05$ was considered to be significant.

Results

The total number of participants in this study was 473 in pre-test and 660 in post-test, out of which 35.9% and 33.5% had associate degrees in midwifery, respectively. Most of the personnel were from urban health centers (55.8% in pre-test and 50.6% in post-test). 46.7% of participants in pre-test and 49.4% in post-test were official university employees.

Most participants in pre-test (48%) and post-test (55.8%) groups were graduated from state universities. 30% and 26.6% of the participants had 1-4 years and less than one year of experience in pre- test and post-test, respectively. Only 3.2% of the participants in the pre-test group were 25-30 years of experience. 26% of participants in pre-test and 30% of participants were in the case group and 74% of participants in pre-test and 70% were in control group. In this study, the mean score of the control group before and after training showed no statistical significant difference ($P=0.05$), but the mean score in the case group after the self-assessment program showed a 4.3% increase ($P=0.001$). We found an increase in the mean scores in both groups ($P=0.1$) while a statistical difference was observed between scores and degrees ($P<0.001$, table 1).

The mean scores before and after implementing the program were 32.7±5.2 and 37±4.7, respectively (table 3). Accordingly, no significant

Table 1: Mean and SD scores of participants in self assessment project by method of training and educational degree

Educational degree	Common training			Self -assessment training		
	Number	Mean	SD	Number	Mean	SD
Associate degree in family health	129	32.5	4.6	73	36.9	4
associate degree in Midwifery	23	34.2	4.1	11	38.7	2.7
BSc in family health	149	23.7	5.5	63	36.7	4.9
BSc in midwifery	64	35.9	3.8	18	39.4	4
Other	67	29.9	4.8	20	37.9	6.6
Unknown	7	26.4	4.3	2	37.5	7.8
Total	436	32.7	5.2	187	37	4.7

*BSc: Bachelor of Science

Table 2: Mean and SD scores of participants in self-assessment by method of training and place of education

Place of training	Common training			Self- assessment training		
	Number	Mean	SD	Number	Mean	SD
Urban health center	226	33.1	5.2	88	36.6	4.7
Rural health center	58	33.4	4.2	47	38.3	4.1
Health assessment	87	32.6	5	21	36.6	4.5
Delivery facilities	55	31.4	5.7	27	36.7	4.2
Unknown	3	29.3	1.5	2	3	1.4
Total	436	32.7	5.2	187	37	4.7

Table 3: Mean and SD scores of participants in self-assessment by method of training and employment condition

Employment	Common training			Self assessment training		
	Number	Mean	SD	Number	Mean	SD
Official personnel	237	33.3	5.3	68	38	5.1
Experimental personnel	57	33.9	4.4	37	36.4	4.4
Contractor personnel	27	34.5	4.2	12	38.7	3.7
Plan personnel	107	307	4.7	67	38.8	4.4
Unknown	8	–	–	3	–	–
Total	436	327	5.2	187	37	4.7

difference was seen in both groups in terms of place of work and type of training (P=0.084, P=0.51, table 2). A significant difference was observed between the mean scores of both groups (control group; P<0.001 and case group, P=0.038, table 4).

A comparison between scores and experience records and training methods in both groups showed a significant relationship as individuals with 10-19 and 20-30 years of experience had the highest and the lowest scores in both groups, respectively (table 5). Finally, participants' view about the self-assessment program showed that 80.3% considered the program to be completely more useful and more effective than common training programs.

Discussion

There are different methods for training and refreshing training for personnel providing

Table 4: Mean and SD scores of personnel participating in self assessment project by method of training and university

University	Common training			Self-assessment training		
	Number	Mean	SD	Number	Mean	SD
Government	236	33.9	4.9	111	37.7	4.2
Azad	134	32.1	5.1	59	35.7	4.7
Unknown	57	29.9	4.9	14	35.5	6.7
Total	428	32.7	5.2	184	37	4.7

Table 5: Mean and SD scores of participants in self-assessment by method of training and experience

Experience	Common training			Self assessment training		
	Number of participants	Mean	SD	Number of participants	Mean	SD
4 months-1year	87	3101	4.2	59	35.7	4.5
1-4 yrs	67	34.4	4.1	45	37.2	3.4
5-9 yrs	120	34.3	4.7	33	40.3	2.9
10-14 yrs	46	35.2	5	12	38.3	4.2
15-19 yrs	27	30.1	5.6	7	39.3	4.8
20-24 yrs	26	29.9	4	8	35.4	5.6
24-25 yrs	14	29.6	5.7	6	30.5	7.8
Unknown	13	29.6	5.4	5	34.6	5.1
Less Than 4 months	36	–	–	13	–	–
Total	436	32.7	5.2	187	37	4.7

services in the health system where annual training programs are done, but since this method was not evaluated in health systems so far, we decided to evaluate it. One reason was that the quality and quantity of common trainings neither satisfied personnel (learners) nor their teachers and finally the desirable outcome was not achieved (4). Therefore, providing a method by which personnel would be able to give services while receiving desirable training seemed to be necessary.

Self-assessment is a method by which a person would be able to find his/her shortcomings to learn whatever he/she does not know or has forgotten besides evaluating his /her own activities. As seen in our results, the number of participants in the post-test was more than the pre-test; one reason was that participants believed the implementation of this program would influence them in practice. They knew that this program was not only a test, but also an assessment of implementing a new program in their training system. Most participants were personnel of urban health centers who provided care for mothers in cities where desirable knowledge will be followed by better services. The other group included personnel working in rural centers and delivery facilities who initially had little access to urban health centers. Second, due to the small number of personnel, their ongoing presence in training courses was not possible. Therefore, corresponding training methods could have a tremendous effect on increasing their knowledge. These results are in agreement with a similar study by Ferraro and colleagues that investigated maternal health care providers across Canada with respect to their self-perceived knowledge. The participants were reported to be well-informed of the upper limits of acceptable knowledge about gestational weight gain after following Health Canada/ Institute of Medicine (IOM) guidelines (5).

The other important point is that official and long-term contraction personnel who constituted 71% of the participants in our study would remain in the health system, so providing a desirable training program for these personnel will be an investment to improve their abilities and to train future instructors. The necessity of qualified training in the university and exact supervision were clear in our study, as graduates from governmental universities had higher scores than those graduated from non-governmental ones. Although new graduates are expected to have the latest information and knowledge, it was observed that those with less than 20 years of experience had a higher score than those who were newly graduated. In other studies in Iran and other countries, the importance of self–assessment has been distinguished. Druker is one of the most outstanding theoreticians in management in the present century. He provides consultation to great business companies in different aspects of management in an institute by his name in the U.S. One of the projects of this company is consultation about using self–assessment tools to improve activities and as Druker believes, change knowledge to practice. He showed that self-assessment would make us think about what we are doing and why. The institute is one of the largest private organizations for measurement and evaluation of training systems of universities and gives service to more than 200 countries. One of the services of this company is self-assessment system which is designed to evaluate different schedules of universities in basic and higher levels called schools with a self-assessment system which was established in the U.S. in 1996 and works under the supervision of the Academy for training development with more than 40 years of experience in the field of training (6). A study was conducted in the Ministry of Defense on self assessment as a reliable method in management functioning in 2001 by Tavakoli and Azizi. This method was used to improve the functioning (7). Also, another study conducted by Tousignant and Des Marchais in Canada about the accuracy of self-assessment on students who enrolled in problem–based learning training course showed no desirable accuracy in post-test (8).

Conclusion

The present study revealed that self-assessment training has a significant effect on the promotion of knowledge among health center personnel compared with common training methods. What is important here is to have training and refreshing continuous programs for personnel in order to improve their knowledge.

Acknowledgement

The authors would like to thank the Vice Chancellor for Research, Shiraz University of Medical Sciences, for providing financial

support for this study.

Conflict of Interest

None declared.

References

1 Fix K. Principles of evaluation. [Translated by] Shahverdi M, Shiri J. Tehran, Ghazi Jahani Pub. 1998.
2 Evaluation of functioning, a step towards improvement. 2000. Available from: http//: www.iphrd.com.
3 Masoumi SJ, Mazloomi E. Step by step with mothers. Health Education Pub, Shiraz University of Medical Sciences. 2002.
4 WHO training for all. [Translated by] Parsinia S, Hekmat S. Tehran: Chehreh; 1992.
5 Ferraro Z M, Kaitlin S B, Gaudet L M, et al. Counseling about gestational weight gain and healthy lifestyle during pregnancy: Canadian maternity care providers' self-evaluation. *Int J Womens Health*. 2013;629:5-36.
6 Drucker PF. Drucker Foundation Self-Assessment Tool: Content. How to Develop a Mission Statement. The Peter F. Drucker Foundation For Non-Profit Management, 2002, p. 1-7.
7 Tavakoli GH, Azizi M. self-assessment: certain way in performance management. Proceedings of the Third International Congress of Quality Managemen, 2002, Tehran, Iran. (persian)
8 Tousignant M, Des Marchais JE. Accuracy of student self-assessment ability compared to their own performance in a problem-based learning medical program: a correlation study. *Adv Health Sci Educ Theory Pract*. 2002;7:19-27.