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Update The Sterilizing Techniques And The Knowledge And Performance Of Family Planning Staff.

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ABSTRACT

Following placement of intrauterine device, 10% of the cases are associated with infection that can be caused by mediators like devices and tools utilized in examination. On the one hand, there is evidence on negligence in controlling infection and its increased incidence in developing countries. On the other hand, widespread use of IUDs was an incentive for us to hold training classes on control of infection. In the present quasi-intervention interventional study, an educational intervention of sterilization and disinfection that was composed of some learning methods was examined in the form of a 2-day workshop, and the personnel's performance and knowledge in the intervention group (52 subjects) and the control group (52 subjects) at three stages (before, immediately after, and 6 to 8 weeks after the intervention) were examined. Data collection instruments were questionnaire (to determine the knowledge) and checklist (to examine the performance). The results of the present study indicated that there were significant statistical difference in the intervention group's knowledge and performance scores after the intervention ($p<0.05$). However, these changes were not significant in the control group ($p>0.05$). And, knowledge and performance were correlated. Conducting educational interventions and utilizing methods that lead to active learning can improve the personnel's knowledge and performance in healthcare centers in terms of sterilization and disinfection involved with IUD placement and reduction of infection transmission while placing IUD.

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INTRODUCTION

Nowadays, there exists different temporary and permanent methods of contraception and population control [1]. One of the reversible contraception methods that is used by 106 million women all over the world is IUD [2].

In a study, the most common causes of premature exit of IUD were introduced as: except for self-exit 28.7%, in respect with menstrual disorder 38%, tendency to get pregnant 14.7%, and infection 10% [3]. Infections of urinary and genital systems account for an important part of these infections [4]. These infections are the most important causes of mortality and increased expenses and exert remarkable financial expenditure on both patients and health systems [5].

Transmission of infection among patients through mediators like tools and devices utilized in examination, diagnosis, and treatment and the personnel's hands is highly common [6]. An important part of infection control includes the processes of preparing the required devices and tools [7]. Presence of different evidence on negligence in controlling infection is rising in developing countries [8]. Moreover, due to the large number of married women and prevalence of using intrauterine devices [9], their frequent reference to experts and midwives in order to place IUDs, and numerous conferences with enormous expenses in order to change knowledge and performance of IUD placement practitioners are among incentives to prevent infection in the form of educational intervention.

In this regard, continuous education through educational meetings and preparation of printed texts are among two highly common methods for professional health practitioners [10].

In the present study, the researcher has investigated and analyzed the effects of empowering healthcare personnel through training workshop in regard with sterilization and disinfection on their knowledge and performance. It is hoped that the results of the present study provide useful approaches to conduct more extensive studies in this field and be utilized in continuous educational planners by the health deputy of the country.

MATERIALS AND METHODS

The present study is a quasi-intervention interventional investigation. The statistical population consisted of the personnel responsible for sterilizing and placing IUDs in health centers in Shiraz. Based on the study's aims and type and according to previous studies and assumptions like error of 5%, capacity of 80%, effect size of 20%, and correlation of 70%, each group size was determined as 44 subjects. Considering the probable loss of 10%, the final sample size was considered as 52 in each group and a total of 104 subjects.

First, a list of Shiraz's health centers that were placing IUDs was prepared by referring to reliable sources, and the personnel responsible for sterilizing in the centers and willing to participate in the study were selected. Once the number of the participants reached 104 individuals, a code was assigned for each of them. Then, based on the assigned codes, the participants were divided into two groups. A 2-day workshop was held for the intervention group, where the participants were provided with new topics of sterilization and disinfection along with some booklets. In the present study, the data collection was carried out through a checklist and a questionnaire each of which included 37 questions that were aimed at measuring the participants' knowledge and performance in three stages (before training, one week after training, and six to eight weeks after training). After data collection, SPSS software was utilized to analysis the data according to the study's objectives.

RESULTS

In the present study, 104 healthcare personnel participated who were divided into two groups of 52 subjects. There was no significant difference between the two groups in regard with their demographic characteristics (age, work experience, education, etc.) ($p<0.05$).

There was no significant difference between the knowledge and performance scores of the two groups before the intervention ($p>0.05$). However, after the intervention, significant change was observed in

the intervention group in the first, second and third stage after the study ($p<0.05$). However, the control group experienced a decrease in the mean scores of knowledge ($p>0.05$) (Fig.1).

Before the intervention, there was no significant difference between the two groups in terms of their performance scores ($p>0.05$). However, after the study, significant difference was observed in the performance scores ($p<0.05$). At the same time, there was no change in the intervention group's performance score in the eighth week; however, it dropped in the control group ($p<0.05$) (Fig. 2). The results of the present study indicated that the personnel's knowledge and performance are correlated, i.e. performance rises with knowledge score (Table 1).

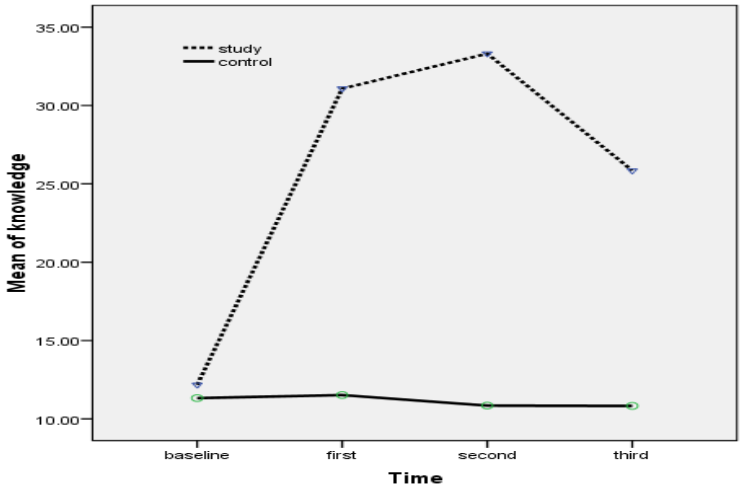

Figure 1.Mean of knowledge increase over time comparing to control group

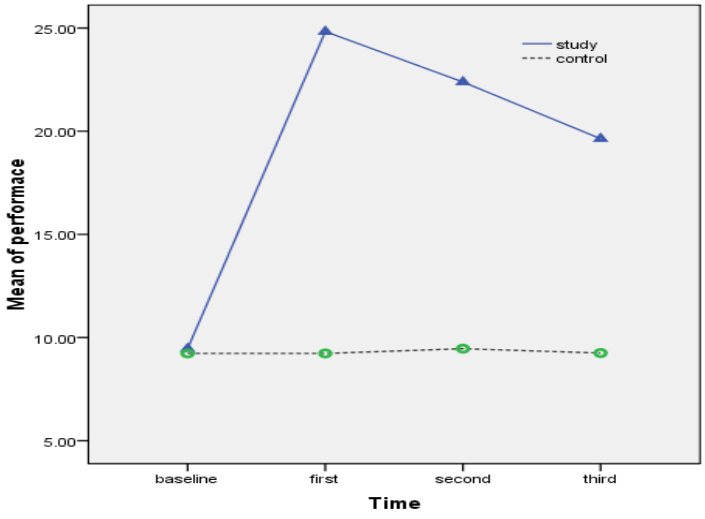

Figure 2. Mean of perfirmace increase over time as knowledge in figure1 comparing to control group.

Table 1: This table shows the personnel's knowledge and performance are correlated, i.e. performance rises with knowledge score

Stage	Variable		r-value	p-value
First	Knowledge before training	Performance before training	-.09	.365
Second	Knowledge one week after training	Performance one week after training	.957	<.001
Third	Knowledge 6-8 weeks after training	Performance 6-8 weeks after training	.930	<.001

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DISCUSSION

The results of the present study indicated that a comprehensive method to enhance healthcare conditions is to provide techniques that can affect human's health. Healthcare personnel are among those whose role is to manage people's health and enhance the quality of their lives. In fact, enhancing the personnel's knowledge about sterilization of disinfection of IUD placement can be helpful. In the present study, the effects of training classes and workshops on the personnel's levels of knowledge and performance were investigated.

The two groups were similar in regard with demographic characteristics like age, work experience, and education; therefore, it can be stated that the mentioned factors did not have any effect on the results of the study and bias was at a minimum level.

The results of the present study showed that methods of active learning like group discussion, question and answer, role play, and lecture can improve the personnel's knowledge and performance. On the one hand, it was concluded that the utilized educational methods have a significant effect on the participant's learning. Moreover, if the learners feel tired during sessions, they acquire less knowledge and their knowledge and performance levels will drop a lot.

In the present study, it was observed that by utilizing methods of active learning (group discussion, question and answer, role play, and lecture), significant progress will be achieved in the personnel's knowledge and performance.

In a study conducted to assess the risk of infection transmission (disease) to patients during failure of disinfection and sterilization process, it was concluded that personnel should be trained in a proper way, their performance needs to be supervised continuously, and their knowledge should be measured constantly [9]. The results of that study are in agreement with those of the present study.

Despite of the significant difference between the knowledge levels of the intervention group in second and third stage, the personnel's performance did not improve significantly. Based on the comparison carried out before, one week, and 8 weeks after the study, it can be concluded that in addition to knowledge other factors that affect the personnel's performance include lack of time, assignment of sterilization and disinfection of the tools to untrained individuals, and large number of referents to health centers. In the present study, knowledge and performance scores of the control group dropped.

A study was carried out in order to prevent infection transmission among women and midwifery outpatients, and the results indicated that education affects the subjects' performance and that educational intervention can lead to improvement of knowledge and performance [10]. This study is also in line with the present one.

However, in a study conducted to investigate the effects of educational interventions on family planning personnel's attitude, knowledge, and performance in regard with intrauterine device, it was concluded that knowledge and attitude in the experimental and control groups after the intervention did not experience significant change [11]. The results of the present study are not in line with those of that study. This disagreement can be attributed the utilization of more active methods of learning (question and answer, group discussion, and role play).

In a study that was aimed at investigating the effects of teaching updates of family planning on healthcare personnel's knowledge and performance, knowledge and performance scores of the two groups were compared and it was observed that both knowledge and performance of the experimental group increased after the intervention while the control group did not experience this rise [12]. These results are in line with those of the present one.

Before the study, the researchers decided to assess the family health personnel's knowledge and performance, and after the study it was concluded that these two variables dropped after the study. The assumption was that the personnel did some readings on sterilization and disinfection of devices so that they could pretend their level of knowledge higher, which can affect the personnel's performance in short run.

However, this indicated their high knowledge only before the intervention, and 8 weeks after the study, their knowledge score decreased.

CONCLUSION

According to the results of the present study, it was observed that continuous education and methods of active learning can have remarkable effect on enhancement of healthcare personnel's knowledge and performance. Moreover, it was concluded that health practitioners can acquire knowledge in different ways like experimental learning, problem solving, and critical thinking.

In other words, according to the society's current needs and in order to improve the practitioners in health centers so that they can provide better service, modern methods of learning and teaching should be utilized. Therefore, continuous education along with modern teaching methods should be taken into account as the major part of heath service management. Due to an increase in the number of applicants and lack of enough time to provide proper service, one of the factors that can affect the personnel's performance is to provide the personnel with latest information on health. In general, factors that are involved with the personnel's weakness or strength should be figured out in order to enhance the quality of the services.

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REFERENCES

[1] Rouzitalab T, Forouhari S,Ghaemi Z, Latifnezhad Roudsari R,Jolaie H,Parsanezhad ME, Roshandel A, Rostambeigy P, Mirzazadegan Shirazi F, Khayer E. Nautilus 2014;128(1):25-30.
[2] Asker C, Stokes-lampard H, Beavan J, Wilson S. J Fam Plann Reprod Health Care 2006;32(2):89-94.
[3] Daneshvar P, Farzan A, Sabzemakan l. J Health Syst Res 1389;6(1):134 - 41.
[4] Caddy S, Yudin MH, Hakim J, Money DM. J Obstet Gynaecol Can 2014;36(3):266–274.
[5] World Health Organization. Prevention of hospital infections, 2003. Javadi A, Mobasheri S, Seroshnia M, Ziadi F, Shahrokhi S, translators. Tehran: Salman publisher; 1382. p.1-3
[6] Wildemeersch D, Goldstuck N, Hasskamp T, Jandi S. J Contracept 2015:6: 1–12
[7] Tabriz Medical University. Annual health statistics. Tabriz: Tabriz Medical University; 2002. [In Persian]
[8] Lankshear S, Brierley JD, Imrie K, Yurcan M. Healthc Q 2010;13(1):84-92.
[9] Weber D, Rutala W. American J Inf Contr 2013:567 - 1.
[10] Jabbari H. Survay on performance of central supply sterilization departments in Tabriz .Iran hospitals [Dissertation]. Tehran: Iran medical university; 1997. [In Persian]
[11] Hubacher D, Vilchez R, Gmach R, Jarquin C, Medrano J, Gadea A, et al. Contraception 2006;73(6):628-33
[12] ForouhariS, TalebanFard H. The International Journal of Health, Wellness And Society 2011;1(3).