یک مطالعه مداخله‌ای انجام شد مراجعه به جامعه مراقبین سلامت در مرکز بهداشت مشهد و ارائه سه گروه آموزشی شامل سخنرانی و استفاده از بسته آموزشی مربوط به مراقبت مادران باردار و همکاری و همکاری در مطالعه انجام شد. با استفاده از تست سؤالی به صورت کلیو متغیر و تحلیل کامپارایز تکنیکی (Chi-square) در نتیجه گرفته شد که نسایل مراقبین سلامت واقعی در دوره‌های آموزشی مختلف مختلف بودند و با توجه به توصیه کارشناسان و پژوهشگران، می‌توان به‌طور کلی به دو گروه آموزشی پرسی و بازرسی و سخنرانی‌گر برای اجرای برنامه آموزشی انتخاب شود.

نتایج: در این مطالعه با استفاده از سه گروه آموزشی شامل سخنرانی و استفاده از بسته آموزشی مربوط به مراقبت مادران باردار و همکاری و همکاری در مطالعه انجام شد. با استفاده از تست سؤالی به صورت کلیو متغیر و تحلیل کامپارایز تکنیکی (Chi-square) در نتیجه گرفته شد که نسایل مراقبین سلامت واقعی در دوره‌های آموزشی مختلف مختلف بودند و با توجه به توصیه کارشناسان و پژوهشگران، می‌توان به‌طور کلی به دو گروه آموزشی پرسی و بازرسی و سخنرانی‌گر برای اجرای برنامه آموزشی انتخاب شود.

مقدمه: از نوع مطالعه مداخله‌ای بوده است که در این مطالعه به منظور تعیین تأثیر آموزش اصول مراقبت مادران باردار بر دانش و عملکرد مراقبین سلامت به ترتیب روش‌های آموزشی شامل سخنرانی و استفاده از بسته آموزشی در مراقبت مادران باردار بررسی شده است.

مراجعه‌ای: در این مطالعه به منظور تعیین تأثیر آموزش اصول مراقبت مادران باردار بر دانش و عملکرد مراقبین سلامت به ترتیب روش‌های آموزشی شامل سخنرانی و استفاده از بسته آموزشی در مراقبت مادران باردار بررسی شده است.

کلیدی: آموزش، مراقبت مادران باردار، مراقبین سلامت، دانش، عملکرد، ستاد بهداشت مادران، مراقبین سلامت، نوسنجاری، هدفکنی، دانش آموزی، تربیت فنی، پرسشنامه آزمون، تست سؤالی، جامعه، گروه آموزشی، تحلیل کامپارایز تکنیکی (Chi-square).

کلمات کلیدی: آموزش، مراقبت مادران باردار، مراقبین سلامت، دانش، عملکرد، ستاد بهداشت مادران، مراقبین سلامت، نوسنجاری، هدفکنی، دانش آموزی، تربیت فنی، پرسشنامه آزمون، تست سؤالی، جامعه، گروه آموزشی، تحلیل کامپارایز تکنیکی (Chi-square).
INTRODUCTION
Applying innovative and active teaching methods will help employees play their role effectively. One of the components of society health is the educational empowerment of staffs in service centers of that community (1). Pregnant women are desirable as a part of society in need of health services (2). Efforts to maintain and promote the health of mothers have always been a global action (3). One way to reduce the maternal mortality rate which is one of the indicators of developing countries, is to take care of mothers' adequacy during pregnancy and after delivery, so there is no doubt about its effectiveness in fostering a healthy pregnancy and providing maternal and infant health (4). There is always a need to build capacity in health care providers to diagnose and manage the complications during pregnancy, childbirth and postpartum, therefore regular education is recommended in relation to services and in some cases, healthcare providers need to be approved by their professional associations (5).

Paying full attention to health care providers (as a large group of health care staffs) and increasing their scientific and practical ability is one of the strategic goals in the health system. Considering the large number of health care providers and the high volume of their hours of study and their employment, it has always been one of the concerns of higher education centers to choose a suitable and cost-effective educational method for their training courses.

In the present time, education is known as the basic rights of humans (6). Education can be learning of learners and a process for acquiring knowledge and skills and increasing the ability of individuals to make health decisions and thus to change behaviors (7).

In a categorization, the educational method is categorized in two ways, "on-site" and "non-attendance" (8). With the advent of science and technology, modern technology replaces old technology quickly to provide a powerful tool for users (9). Also, the rapid development of information and communication technology has created new opportunities for planning and implementing new methods of training (10).

Using these technologies in the field of health has always been sought to achieve three outcomes including the learning of correct information, changes in health related attitudes, and new health interventions (11).

The purpose of this study was to compare and determine the effect of on-site and non-attendance teaching on the care principles of pregnant mothers to promote knowledge and practice of health care providers in 1396; however, it is hoped to help in choosing the appropriate and effective ways to transfer information and skills.

METHODS
The present research was an intermediate and semi-experimental type done in the Imam Reza Educational Center, as well as 35 comprehensive health service centers in Mashhad. The statistical population of this study was 175 health care providers having family health public and health certificates of whom 64 were selected by available sampling method. These numbers were randomly assigned to two groups of 32, and the quota of educational qualifications was considered equal in each group.

Educational materials were provided for participants and then a written pretest were taken. The compact disc (CD) containing power pint slides was put into the on-site Group, and 3 weeks of study were considered for this group. After this period, the presentation was presented in the form of a lecture for 6 hours. At that time, the written posttest was performed for the groups. Subsequently, by referring to the workplace of the research samples, the performance of all was based on health care providers' checklist of control and score.

The data collection tool was a written test questionnaire with 24 questions and a checklist of performance review with 20 skill titles. Also, some check list items were indirectly controlled by the Electronic File System (Sina System). The scores were identified from zero to 20 and compared to determine the amount of knowledge and performance by groups and also by degrees.

In order to determine the validity of educational materials, a written test questionnaire and a checklist were used to apply the final corrections so that they could evaluate the status of performance while considering the content and objectives of the lesson based on the opinions and experiences of 10 people including midwifery and family health educators in the provincial education centers, professors of the university, and technical assistants responsible for the training unit in Mashhad’s Health Center. To determine the reliability of the questionnaire, the number of questions and their difficulty levels were considered and split-half test with a sample of 18 people was used to determine the correlation coefficient of the questions, as well as the accuracy and reliability of the questionnaire. In analyzing this test, the reliability of the questionnaire was confirmed with a coefficient of 0.851. The criteria for entering this study were the working of health care providers at the time of study at Mashhad Health Service Centers, passing elementary education courses, and having a relevant certificate. Exit criteria included care providers that did not attend training sessions, whether they were on maternity leave or in holiday.

Ethical considerations, including obtaining a university license, responding to participant mistakes, not manipulating the information, and mentioning all sources in this research were observed. The study was approved by the Ethics Committee of Mashhad University of Medical Sciences, by ethical approval code: 1397.431.

All research data including pretest, posttest and performance tests were categorized into two groups and academic records in Excel software. Based on the SPSS software program, descriptive indexes including mean, minimum and maximum grades, variance and standard deviation were determined and the distribution of data was also determined according to elongation and skewness. With the help of statistical tests, distribution and normalization were examined.

RESULTS
The findings of this study included the following:
• In the on-site group, 25% were family health experts and 75% were public health bachelors, while in the non-attendance group, 21.88% were family health experts and 78.22% were public health bachelors. The two groups did not differ significantly in terms of educational qualification (P=0.768).

• The average age of health care providers in the on-site group was 32.28 ± 0.777 and in the non-attendance group was 31.09 ± 0.855. Based on the t-test, differences in age groups were not significant (P=0.308).

• The mean, standard deviation, the minimum and maximum scores for quantitative variables in pretest, posttest, and performance status are in accordance with Table 1.

• In order to determine the effect of each educational method on the knowledge and performance of health care providers, the mean scores were considered before and after intervention. The difference in mean scores in the on-site group was 4.50 ± 0.334 and in the non-attending group was 3.77 ± 0.332.

• In one of the educational methods, there was a significant difference between the mean scores before and after training (P < 0.001). According to Table 2 in comparing the effect of the type of educational method, there was no significant difference in the mean scores before and after training of the study groups in the posttest or performance condition in comparing the effect of the type of educational method.

• Mean scores for public health bachelors were 16.77 ± 0.151 and family health experts were 17.56 ± 25.88. Mean differences were not significant (P = 0.162). In the performance condition, the mean scores of the public health bachelors were 17.18 ± 0.223 and 17.62 ± 0.140 for the family health experts and there was no significant difference between mean performance scores in two groups (P = 0.131).

### DISCUSSION

The purpose of this study was to investigate and compare the effect of on-site and non-attendance education on the level of knowledge and practice of health care providers in the field of maternity care principles. To this end, an effective and desirable educational method for transmitting information was selected to improve the level of learning and practical skills. According to the findings of the study, both educational methods through lecture and the use of compact discs on the level of knowledge and performance status of health care providers in the field of maternity care principles have been very effective and have had a positive effect. In a comparative study, the education of pregnant women’s care using the two methods of on-site and non-attendance showed the same effect on the information and skills of participants. The results of educational study were similar for two groups of public health bachelors and family health experts, and it was determined that the difference in educational degrees of health care providers does not play any role on their cognitive and functional aspects. Therefore, due to the large number of training courses and a high number of health care providers, in the same conditions, non-attendance education (compact disc) was more appropriate in terms of time and cost; on the other hand, it can be used and run at all times of the day. Therefore, this new method can be replaced with the traditional method. Also, the compact discs can be used as a

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<th>Table 1. Descriptive Indicators of Quantitative Variables in Study Groups</th>
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<td>Maximum Score</td>
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<td>18.33</td>
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<th>Table 2. Comparison of the effect of educational methods on mean scores in study groups</th>
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<td>Independent sample T test results</td>
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<tr>
<td>t= 1.518 p= 0.134</td>
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<td>t= 0.728 p= 0.469</td>
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complement to the lecture method for health care educators. By studying and reviewing the texts of other research in the field of comparing the effect of both on-site and non-attendance teaching methods, as well as the results of this study, Mardigan (12), Sharifinia (13), Ebadi (14), Agarwal (15), and their colleagues have been in line with the results of this study and all of them concluded a significant difference in comparison between the effectiveness of on-site and non-attendance teaching methods. In this research, every type of on-site trainings, including computer-based, compact disc, and online traditional way of lecturing in terms of impact on knowledge scores or performances has been studied. The results of the research done by Nastizai and Hazreh Moghaddam (8), Abotarboosh (16), Enayati and Rayatnezhad (17) about the effect of comparing the two educational methods with the current review were not similar and the impact of the teaching has been reported according to the findings of each study. The research of Hashemi and colleagues (18), for his target group, showed more impact on the method of simulator training using the patient than the traditional method (lecture). Even in Abotarboosh's research, participants were more satisfied with the traditional way. By reviewing the mentioned research and their results, the appropriate actions including problem statements, applied goals, method of implementation and suggestions were considered. This was the strength of the plan. Also, the new and educational needs of study, the good support of managers, and the good cooperation of health care providers were other positive points of the present research. There were some limitations in this study, which involved spending more time of reviewing the performance and attending to the comprehensive health service centers, and the fluctuations in the population under their control. Also, before conducting a training course and doing a study, due to the lack of full service of health care providers to pregnant mothers, their work performance was not possible. Considering the results of the study, it is suggested: 1-In addition to organizing classes for Behvarzi (practical nursing) instructors and curriculum instructors, holding non-attendance courses in more appropriate ways and taking the necessary lessons into practice are suggested. 2-In the rehearsal or in-service training courses for health care providers and other health workers that are conducted annually, non-attendance teaching methods with the help of educational packages are also used to enhance their knowledge and skills. 3-Attitude and opinions of employees on the impact of on-site training and non-attendance surveys will be conducted. 4-The effect of comparing two educational methods with the follow up of the monthly maximum should be considered. 5-Also, designing and intervention to identify effective factors and effective performance problems on health care providers’ performance should be considered in future studies.

Ethical considerations
Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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Conflict of interest: None

REFERENCES


