Rapid transition of health, population change, process of aging, and rapid lifestyle changes in addition to socioeconomic changes have led to a growing trend of disease, disability, and mortality due to noncommunicable diseases [1]. Cardiovascular diseases, with 17 million annual deaths, are introduced as the most important cause of mortality around the world [2]. Cardiovascular diseases include vascular system diseases affecting the blood supply to the heart, brain, and peripheral areas of the body [3].

The main reason for mortality in Iran with 39.3% of total deaths is cardiovascular diseases, out of which 19.5% is related to heart attack, 9.3% to stroke, 3.1% to high blood pressure, and the remaining to other cardiovascular diseases [4]. These diseases by creating various physical and psychological stressful factors (e.g., pain and lack of health), losing a job, sensory deprivation, feeling of imminent death, and various degrees of mental reactions (e.g., hopefulness, fatigue, and fear) cause a feeling of worthless and loss of self-confidence in patients [5]. Due to the length and intensity of the disease, the physical, psychological, economic, and mental health of these patients significantly changes over time [6]. Accordingly, it can be said that psychological factors can play a fundamental role in this process [7].

Mental health is defined by the World Health Organization as a state of complete physical, mental, and social well-being (not only lacking disease with weakness) [8]. The signs of mental health have intrapersonal resources enabling the person to continue his adaptive growth despite
adverse situations and negative consequences and maintain his/her mental health [9]. Corrsini also describes mental health as a mental state in which the person is relatively released from anxiety symptoms with the ability to constructively communicate and face stressful life stimuli [10]. Therefore, decreasing mental health in an individual not only reduces his personal and social adaptability but also disturbs the safety and mental health of the family and other social groups [11].

Hopefulness is among factors that play an essential role in facing problems and their resulted tension in the life of cardiovascular patients. It is useful as a potentially influential factor in the improvement and compatibility of the patients [12]. Hopefulness can be described as a healing, multidimensional, and influential factor playing a vital role in compatibility with deprivation. In addition, physiologists have accepted that hope can have a psychological effect on illness [13].

When a patient sees the matter rationally that there will be a better future, hopefulness is the feeling that is experienced within him/her [14]. Hopefulness is a structure very close to life as the ability to design ways toward desired goals despite present barriers and agents with required stimulating factors to use these ways [15]. According to this conception, hope is powerful when including valuable aims. Furthermore, despite challenging but not resolvable barriers, hope can affect people in order to make their lives purposeful [16].

Different treatment procedures have been applied to improve mental health and hopefulness among individuals with cardiovascular diseases [17]. Short-term solution-focused therapy is a nonpathological approach to treatment that instead of focusing on problems and illnesses emphasizes finding solutions [18]. In this approach, in opposition to the problem-oriented perspective, the emphasis is on finding solutions instead of focusing on problems [19]. Maljanen et al. [20] concluded in their study that short-term solution-focused therapy has been effective in the improvement of depression and anxiety disorders in annual follow-ups. Reddy et al. [21] studied the effect of short-term solution-focused therapy on the improvement of moderate depression symptoms. They indicated that after short-term solution-focused therapy sessions, depression symptoms were relieved.

Given the increasing number of cardiovascular patients, their major problems in the mental health domain, and their hopefulness, it seems that many of these cases do not have sufficient knowledge and skill to properly manage such problems. Using solution-focused therapy for patients with cardiovascular diseases can decrease such problems.

Objectives
Considering the efficacy and improvement using solution-focused therapy for a broad range of clinical problems, the current study aimed to determine the effectiveness of solution-focused therapy in mental health and hopefulness among patients with cardiovascular diseases.

Materials and Methods
This was a quasi-experimental study with a pretest-posttest design, follow-up, and control group. The statistical population of the study included all cardiovascular patients referring to Isfahan Cardiovascular Research Center, Isfahan, Iran, within January to March 2018 with a history of heart attack or open-heart surgery in the last month. In this study, 30 patients with cardiovascular diseases willing to participate in the study were selected based on convenience sampling. The study participants met the study inclusion criteria and randomly assigned to experimental (n=15) and control (n=15) groups. The subjects were asked to complete questionnaires at the pretest and posttest stages. In this study, the training was collectively conducted.

The criteria for the diagnosis of cardiovascular disease was the diagnosis recorded in the patient’s medical record by a cardiologist. The subjects of this study were selected from the patients referring to the Isfahan Cardiovascular Research Center Rehabilitation Unit. Moreover, the participants were informed about the plan and objectives of the study and treatment method. Finally, those who met the inclusion criteria participated in the study as a sample group. The patients in the experimental group, in addition to receiving regular medical care, weekly attended solution-focused therapy sessions (n=8) for 90 min. However, the subjects in the control group received just regular medical care. The study participants in both groups filled out the hopefulness and public health questionnaires at the baseline and immediately after the intervention (Table 1).

The inclusion criteria of this study consisted of the patients with coronary heart disease, including stable angina, unstable angina, and myocardial infarction. Moreover, the patients with angiography, at least in one of the coronary arteries, with 70% or more so-called angio-positive involvement were included in the study. The exclusion criteria were lack of cooperation, two consecutive absences during the intervention, and severe physical disability. In order to perform the study, all the subjects completed the questionnaires before and after the treatment sessions. The researcher also pledged to do this intervention for the control
Snyder’s Hopefulness Questionnaire
This scale with 12 items, including two subscales of pathway and motivation, has been developed by Snyder [22]. The scores to the items were rated within a range of entirely wrong to completely right [22]. The reliability of the Iranian version of this scale was confirmed through the internal consistency method and Cronbach’s alpha coefficient of 0.89 [23]. The reliability of this scale in this study was also investigated using the internal consistency method with the Cronbach’s alpha coefficient of 0.84.

Public Health Questionnaire
This questionnaire includes 28 items, which are based on a 4-point Likert scale (i.e., Never, Usually, Often, and Most often). In this questionnaire, as the points get higher, a lower level of mental health is reported. The public health questionnaire has been developed by Goldberg et al. in 1972, translated to Persian, and normalized in Iran. The reliability coefficient of the whole test has been reported as 0.88, and the reliability coefficient of the subtests have been calculated at 0.77, 0.81, 0.50, and 0.58, respectively. The questionnaire has sensitivity and specificity within the ranges of 0.84-88 and 0.77-93, respectively, with the classification error of 8.2%. The best method of scoring is according to 0, 1, 2, and 3, and the best score is reported as 23 [24].

The data were analyzed using descriptive and inferential statistics by SPSS software (version 22). Descriptive statistics include frequency tables, and diagrams, central indices, and scale dispersion indices (e.g., mean and standard deviation). Inferential statistics, including analysis of variance (ANOVA) and Kruskal-Wallis test, were used to compare age and gender between the two groups and ensure that the baseline characteristics of the groups regarding these two variables were similar. Analysis of covariance and multivariate analysis of covariance were used to analyze the data. Data analysis was performed using SPSS software (version 22).

Results
A total of 30 patients were studied in the solution-focused therapy (n=15) and control (n=15) groups. The mean values of participants’ age were reported as 57.73±9.39 and 53±9.81 years in the solution-focused therapy and control groups, respectively. Table 2 tabulates the demographic characteristics of the present study.

As it can be observed in Table 2, the significant level is higher than 0.05; therefore, both groups of the study were similar in terms of gender distribution and educational level. Table 3 presents the mean scores of the components of mental health and hopefulness in the experimental and control groups.

| Table 1. Contents of solution-focused therapy sessions |
|---------------------------------|--------------------------------------------------|
| Session                         | Content                                                                                     |
| First                            | Introducing and starting communication, presenting a brief description of solution-focused therapy, and especially emphasizing their ability to solve a problem |
| Second                           | Focusing on the goal and mentioning the problem, firstly checking the assignment of the previous session, and then asking members to state their goal for participating in the group |
| Third                            | Focusing on the solution, checking previous session assignments, and asking members to understand their ability to find the problem and stating what they will do if they take a small step to solve their problem |
| Forth                            | Presenting a summary of previous sessions; every member should report about his/her activity outside the group; every member should make a list of solutions for him/herself using other member’s experiences |
| Fifth                            | Presenting a summary of previous sessions about tasks performed by other members of the group, stating individuals’ problems with communication and social function, and receiving other members’ strategies |
| Sixth                            | Using the critical word of “instead”; checking the assignments of the previous session, and expressing the goals of the current session |
| Seventh                          | Grading questions, checking the assignments of the previous session, and then using graded questions (0-10) to better understand the emotions and wishes of the participants and their progress |
| Eighth                           | Asking group members to continuously discuss their progress and increase the ability to change in him/herself as the solution to the problems is hidden inside themselves and they can solve their problems and then conducting posttest |
Before performing ANOVA with repeated measures, the results of the Box's M, Mauchly's, and Levene's tests were checked for assumptions. Since the Box's M test was not significant for any of the study variables, the homogeneity of variance-covariance matrices was correctly observed. In addition, the nonsignificance of all the variables in the Levene's test showed the equality of inter-group variances. Furthermore, the error variance of the dependent variables was equal in all the groups, which was not significant for any of the variables. Therefore, the assumption of the equality of variances was observed among the subjects. It is worth mentioning that the Wilks' lambda test with a similar amount (P=0.14; F=77.57) showed a significant difference regarding the effectiveness of solution-focused therapy scores in the improvement of hopefulness between the two experimental and control groups (P=0.0001).

The results of Table 4 show that ANOVA is significant for within-group factor (i.e., time) and only for physical symptom variables among between-group factors. These results demonstrated that the effect of the time was significant alone without taking into account the influence of the group. The interaction between group and time was also significant (df=2; F=12.84) with an effective rate of 0.50.

**Discussion**

According to the obtained findings of the present study, it can be observed that solution-focused therapy is effective in the improvement of hopefulness in patients with cardiovascular diseases. The results of this study are consistent with the findings of studies by Baldwin et al. [25], Yakup [26], Koorankot et al. [27], and Zatloukal et al. [28]. In explaining this finding, it can be said...
that the solution-focused therapy model sees clients as qualified specialists who can solve problems themselves and is considered a process by which the client and therapist reconstruct the desired reality.

During the process of the treatment, the therapist needs to establish collaborative relationships by amending language, beliefs, and clients’ performances and use shifting language and questions [29]. In solution-focused therapy, gradual discovery of the exceptions in the clients’ life can induce hopefulness to the individuals to see approaches to a better future [30]. The solution-focused therapy sessions helped the members to establish their positive, bright, measurable, and tangible goals and provide resolving solutions to the complaints helping to think about different activities bringing them the most satisfaction in life. By doing such activities, it was realized that in some situations the patients might need to look for abilities they are not currently using and awaken those dormant skills to solve their problems.

Targeting another level is to help patients begin changing their language to talking about solutions [31]. Therefore, the patients after solution-focused therapy will be able to learn more about their abilities, strengths, and emotions. In describing the above-mentioned findings, it can be said that as an attitude in the sessions, patients learn to see the problem as a solvable issue, think about possible solutions, and present their solutions in the meeting.

Solution-focused therapists believe that they can arouse effective behaviors; however, their effectiveness is blocked due to their mindset [32].

One of the limitations of the present study was the difficulty in filling out the questionnaire and performing the intervention for the patients due to their disease. This study was performed only on the cardiovascular patients of Isfahan, and caution should be exercised while generalizing the results to other areas and cities. Therefore, it is suggested to carry out similar studies in other cities. In addition, this study was conducted on cardiovascular patients, therefore, the results should be generalized with caution. Moreover, it is recommended to perform further studies on a larger population of cardiovascular patients to obtain more definite results.

Conclusions

Overall, the findings of the current study showed that solution-focused therapy was effective in mental health and hopefulness in patients with cardiovascular diseases and can be used in treatment centers to improve the status of patients with cardiovascular diseases.

Compliance with ethical guidelines

All ethical principles were considered in the present study. The participants were informed about the purpose of the study and implementation of stages. In addition, informed consent was obtained from all the study participants. The subjects were also assured of the confidentiality of their information. Moreover, the patients were allowed to withdraw from the study at any time, and the results of the study would be available to them if desired. The present study was extracted from the first author’s doctoral thesis, which was reviewed at Hormozgan University of Medical Sciences, Bandar Abbas, Iran, and approved by the ethics code of IR.HUMS.RIC.1398.327.

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Conflicts of Interest

The authors declare that there is no conflict of interest.

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