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Original Article

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The Impact of Smoking Cessation Training-Counseling Programs on Success of Quitting Smoking in Patients with Acute Coronary Syndrome

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Abstract

Background: The smokers who use supportive programs have a greater chance to quit smoking. Smoking cessation recommendation is one of the most important prevention and treatment methods mentioned in care guidelines provided for patients with acute coronary syndrome.

Aim: The main objective of this study is to determine the effects of training-counseling programs on smoking cessation in patients with acute coronary syndrome.

Method: In this randomized controlled clinical trial, 51 patients with acute coronary syndrome in Ghaem and Imam Reza hospitals in Mashhad, 2015, after filling the Multinational Monitoring of Trends and Determinants in Cardiovascular Disease (MONICA) questionnaire, were categorized into two groups. Intervention group received smoking cessation training-counseling program and control group received some advices/recommendations to quit smoking. After a three-month telephone follow-up, smoking cessation standard questionnaire was filled for all patients. The data were analyzed using SPSS v11.5 and Chi-square test.

Results: The age of study participants was 52.6± 7.9 and 56.2±12.3 for intervention and control group, respectively. According to Chi-square test, a significant difference was observed between intervention and control groups in first through fifth stages after the intervention in terms of succeed to quit smoking (p<0/05), but this difference wasn't significant in sixth stage after intervention (p=0/06).

Implications for Practice: According to the findings of the study and given that the nurses are in the frontline of treatment process and also because they spend more time with patients and have a major impact on them, it is suggested to take advantage of the nurses to improve smoking cessation training-counseling programs regarding patients with acute coronary syndrome.

Keywords: Cigarette, smoking cessation, training, counseling

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Introduction

Cardiovascular diseases are one of the major causes of premature death (over 17.1 million people in 2010) and high costs of health care systems around the world. In U.S, cardiovascular diseases accounts for 39.4% of the deaths. In Iran, the first and most common cause of death is also cardiovascular disease, especially coronary artery, and from 700-800 daily deaths 317 cases are due to cardiovascular diseases where 166 cases are because of heart attack (1, 2).

Numerous risk factors are reported regarding this disease (3, 4). One of the risk factors that frequently is investigated and emphasized in related literature is smoking, where it is reported as a preventable cause of death in patients with cardiovascular diseases around the world (1, 5-10).

Smoking leads to blood clots, reduced cholesterol (High Density Lipoprotein) HDL, high blood pressure and increased heartbeat. In addition, passive smoking (inhaling the smoke from other people's cigarettes) endangers the health of non-smokers people exposed to secondhand smoke, especially the children and can cause cardiovascular disease, respiratory problems and cancer (12-20). In addition, smoking (recommend to leave it), among the other numerous risk factors, is the only factor which is addressed straightly in the guidelines provided to care the patients with acute coronary syndrome and providing smoke cessation training-consuling is considered a criterion to evaluate the quality of care provided for these patients.

Investigations show that smoking cessation can be beneficial for all smokers, regardless of their age and intensity of smoking (11, 21). On the other hand the findings of the studies suggest that 70% of smokers are interested to quit smoking (5). It is also indicated that smokers who use supportive programs are more likely to successfully quit. (11).

Different factors affect success or failure of the smoking cessation programs. A study by Vahidi et al. (2013) showed that different factors including concerns about getting sick, awareness of the effects of smoking, the benefits of a healthy lifestyle, recommendations provided by a physician, respect for family values, health status, and peers pressure affect the success of smoking cessation programs, regardless of the smokers motivations to quit smoking (22, 40). Patrick (2008) cites using smoking as a compliance mechanism, great confidence in alternative nicotine products and lack of an accurate and systematic program for smoking cessation as major reasons of failure to quit smoking. Therefore, it is important that policy-makers consider the effects of these factors when developing smoking cessation plans.

Among the smoking cessation programs, using drugs because of their side effects is not preferred; on the contrary using non-pharmacological methods, especially using training and counseling interventions is preferred (11).

Smoking cessation programs mainly include emphasizing the effects of smoking, the benefits of quitting smoking and providing answer for Frequently Asked Questions about smoking. Studies have shown that taking part in smoking cessation sessions increases the chance of a successful quitting (21).

However, various studies suggest that smoking cessation will be a complicated process for smoking people, so that one cannot expect them to quit smoking merely through training (11). Mainly, in order to fully and successfully leave a behavioral habbit, besides training especial attention should be paid to the internal problems and the challenges these individuals are faced, as well as to provide support for them (24). Therefore, for a successful quitting, besides training interventions, many studies have embarked on conducting smoke quitting counseling and have emphasized the necessity of these consultations. Evidence shows that a 3-10 minute consultation can improve the chance of smoking cessation by 60% (25). In addition, providing training and consuling services is one of the main aspects of nursing care and indicates the key role of nurses to provide healthcare services. Studies have shown that nurses can play an important role in training patients and this is an important component of their independent tasks (26).

Consultations can be done individually or in groups. Studies have shown that group consultation can be effective regarding substance abuse problems, including cigarettes. The first and most obvious advantage of group consultation is its feasibility (24). A study by Nichol de Guia showed that individual counseling is less effective compared to group treatments regarding smoking cessation and group interventions are effective interventions to increase the number of people quitting smoking (29).

The role of nurses to provide smoking cessation intervention and consultations has been known for a long time and is confirmed in numerous studies (5, 25, 30 -23).

Despite the importance of developing some programs for smoking cessation in patients with acute coronary syndrome, the studies conducted in Iran indicate unfortunately adequate attention is not paid to this issue in the cardiac intensive care units. A study by Kabiri (2005), for example, showed that among the quality of care criterions in patients with myocardial infarction in Yazd hospitals, smoking cessation

counseling never has been performed and the percentage of reported cases was almost zero (33). Likewise, the studies conducted in other countries also show some deficiencies in providing services related to smoking cessation interventions in patients with myocardial infarction which indicates the need to revise and review this important factor (33).

Accordingly, present study investigates smoking cessation program to provide training and consultation for patients as an important but neglected component of quality of patient care in patients with myocardial infarction. The study also surveys the impact of smoke cessation training-counseling program on success of quitting smoking in patients with Acute Coronary Syndrome.

Methods

The study was a randomized controlled clinical trial with two pre- and post-test groups which was conducted in 2015 in Mashhad. The subjects were 51 patients with acute coronary syndrome in Ghaem and Imam Reza hospitals of Mashhad. The sample size of the study according to the pilot study and given that dependent variables are both quantitative and qualitative, was determined through "compare means for two independent societies" for quantitative variable (smoking cessation self-efficiency) and "compare ratio for two independent societies" for qualitative variables (smoking cessation success and training–consuling success). The sample size was estimated according to each one of three measured indices in dedicated objectives, and the maximum obtained amount was considered. Thus, the minimum sample size, according to the extent of success in smoking cessation variable, with a confidence level of 95% and a test power of 80% was calculated 22 patients in each group. Considering a 10% attrition, 27 individuals in control group and 27 individuals in intervention group were surveyed, but in intervention group 3 individuals were omitted because of unwillingness to continue the study and death. Therefore, the number of patients in intervention group reduced to 24, but in control group we had no omission and all 51 individuals were surveyed.

A non-probability convenience sampling method was used for the purposes of the study and the participants were selected from qualified patients. The participants randomly were assigned into intervention and control groups, so that from the beginning one block (one week block for intervention and one week block for control) was assigned to each block. To select the first hospital and intervention and control blocks coin flipping was used, and finally the participant were taken part in the study after obtaining their informed written consent. Inclusion criteria includes a decisive diagnosis of acute coronary syndrome (ACS) by the specialist physician, the desire to participate in the study, a history of smoking at least six months before admission, being able to read and write, being fluent in Persian language, lack of known mental disorder, lack of drug addiction and the ability to make phone calls. Smoking cessation training-counseling program was implemented for intervention group, and control group only received some recommendations about quitting smoking. Exclusion criteria included unwillingness to continue taking part in training-consuling sessions or phone follow-up or the death of participant.

Research tools include a questionnaire to evaluate demographic and disease status, smoking status, and a successful smoking cessation questionnaire. The questionnaire on investigating demographic and disease status included 10 questions in order collect the data including age, gender, education, marital status, occupation, living conditions, previous history of having myocardial infarction and associated diseases which was developed through reviewing the literature and related studies. The questions were objective and clear and repeatedly used in similar studies. In order to determine scientific validity of the questionnaire content validity index was used. To that end, after preparing the questionnaire it was handed to 10 professors of Mashhad Nursing and Midwifery school and their comments and suggestions were received and necessary amendments were applied.

Smoking status questionnaire was adopted from the World Health Organization MONICA Smoking Questionnaire (*Multinational Monitoring of Trends and Determinants in Cardiovascular Disease) (1992) (34).* To assess scientific validity of the questionnaire, after translating it into Persian and adjusting its statements, content validity test was used. To that end, the questionnaire was handed to 10 professors of Mashhad Nursing and Midwifery school and their comments and suggestions were received and necessary amendments were applied. In order to assess scientific confidence of the questionnaire, test-retest was performed within one week, and reliability of the tool was approved (r=0.86).

Successful smoking cessation questionnaire was drawn from two questionnaires developed to evaluate performance of smoking cessation services: The Russell Standard (clinical) (2005) and the questionnaires used before and after smoking cessation sessions, developed by Tobacco Control Evaluation Center at the

University of California (36, 37). The validity of the questionnaire was also assessed after translating it into Persian, through content validity method. To that end, the questionnaire was handed to 10 professors of Mashhad Nursing and Midwifery school and their comments and suggestions were received and necessary amendments were applied. Also, in order to gain scientific confidence the questionnaire was evaluated through internal consistency method (Cronbach alpha coefficient) with taking part 10 patients in a pilot study and a one-time measure (r=0.87).

Before starting the intervention, demographic information and disease questionnaire and smoking status questionnaire were filled by both intervention and control groups through interviewing the participants.

In order to perform intervention, intervention group was categorized into three subgroups and received two group 45-60 minute training-consuling sessions on smoking cessation, while control group only received some advices on smoking cessation. Training- consuling sessions were held in conference room of the hospital wards. The objectives were explained for participants. The agenda for first session was getting familiar with the effects of smoking on cardiovascular system, smoking harms and consequences of continuing smoking. The agenda for second session was to investigate the barriers to smoking cessation and identifying appropriate solutions with the help of participants.

In first session, the researcher introduced himself to the group and group members also introduced themselves. Then researcher described the procedure of the sessions and his expectations from participants during these sessions. In this session the researcher provided some teachings on smoking harms, the effects of smoking on cardiovascular system, the importance of smoking cessation and the consequences of continuing smoking, and to begin intervention process each one of the group members was asked to mention the problems he or she may face when trying to quit smoking. The problems mentioned by members were discussed. In this session some hints were dropped about available solutions to quit smoking but it was mentioned that discussing these solutions remains for next session. At the end of the session besides wrapping the materials up, the members were asked to think about their problems till the next session and raise them in the next session. In second session, all members were asked to mention their problems about quitting smoking on a priority basis. After hearing the problems most common problems that there was a consensus about them were discussed.

At this stage, as well as the previous stage, the researcher used consulting techniques such as Socratic dialog and developing insight, depending on the situation. Socratic dialog includes asking patients to describe how and why of their emotions, their beliefs and behaviors about quitting smoke and related issues. (For example, asking numerous questions about issues related to the smoking cessation clarifies the issue for the patient so that they obtain a proper attitude about what they are doing.) Developing insight is to change the patients' prejudices about smoking cessation. (For example, a history of a person who has similar demographic characteristics will be presented to the patients and then some examples will be provided on how the prejudices about inability or failure to quit smoking have shaped throughout the life. Emotional confrontation is a technique where the patients will be exposed to the consequences of their decisions emotionally and dramatically. (For example, in a patient who is in doubt about smoking cessation, a situation will be depicted where he has suffered more complications because of not quitting smoking)(24).

In addition, during the obtained opportunities, the researcher presented some information about recommended solutions for quitting smoking. According to a research conducted by author on the methods of smoking cessation, there are different approaches to deal with problems when one is trying to quit smoking. Some of the approaches which are more efficient according to the opinions of the experts and specialists were adopted. At the end of the session, the solutions provided by participants were concluded and to answer the probable questions of the participants and removing their ambiguities a contact number was given to them (A summary of the training class specifications is presented in table 1).

Table 1. Specifications of the training classes for intervention group

Session	Session time	objective	Type of intervention	Presenter
First session	45-60 minutes	Get familiar with the dangers of smoking, the effects of smoking on the cardiovascular system, consequences of continuing smoking	Using slideshows, whiteboard, question and answer section	researcher
Second session	45-60 minutes	To investigates barriers of smoking cessation	To list barriers od smoking cessation according to the comments of the participants, group discussions about the problems according to the participants priorities, to find solutions to eliminate barriers using participants' comments and consultant techniques	researcher
3-month follow up Once every two weeks	Every phone call about 10 minutes	To investigate the extent of success to quit smoking	Using phone call follow up and fill the questionnaire of success to quit smoking	Researcher assistant

At the end, a 3-month follow up survey was conducted. During this 3-month follow up term six 10-minute phone call happened between researcher assistant and subjects once every two weeks. During these contacts the questionnaire of successful quitting smoking was filled. It should be noted that only those subjects were considered successful to quit smoking that according to follow up contacts completely (100%) had quit smoking.

To observe moral principles, after explaining the methodology the patients were asked to fill informed consent form before taking part in the survey. Also, it was explained for them that the results will be published in general and in case of unwillingness to continue cooperation they can withdraw from taking part in the sessions.

The collected data was analyzed through SPSS v11.5 software, as well as independent t tests, Fisher, Mann-Whitney and chi-square.

Results

The average age of the participants was 52.6± 7.9 and 56.2±12.3 for intervention and control group, respectively. The highest age for starting smoking was 50, the lowest age was 8 and the mean and standard deviation were 20.3±7.3. Also, the mean and standard deviation for average cigarettes smoked per day were 15.7±10.1. The highest number of cigarettes smoked per day was 40 and the lowest number was 1. Both groups were homogeneous in terms of demographic variables (age, gender, average number of cigarettes smoked per day, age of starting smoking). The details are presented in table 2.

At first stage after intervention (to weeks later), 18 individuals of the intervention group (75%) and 7 individuals of the control group (25.9%) succeed to quit smoking. Chi-square test shows a significant difference between two groups at this level in terms of success to quit smoking (P=0.001). In second level after intervention (one month later), 16 individual from intervention group (66.7%) and 8 individuals from control group (29.6%) succeed to quit smoking. Chi-square test shows a significant difference between two groups at this level in terms of success to quit smoking (P=0.009). In third level after intervention (six weeks later), 16 individual from intervention group (66.7%) and 8 individuals from control group (29.6%) succeed to quit smoking. Chi-square test shows a significant difference between two groups at this level in terms of success to quit smoking (P=0.009). In fourth level after intervention (two months later), 16 individual from intervention group (66.7%) and 10 individuals from control group (37%) succeed to quit smoking. Chi-square test shows a significant difference between two groups at this level in terms of success to quit smoking (P=0.03). In sixth level after intervention (three months later), 15 individual from intervention group (62.5%) and 10 individuals from control group (37%) succeed to quit smoking. Chi-

square test shows there is no significant difference between two groups at this level in terms of success to quit smoking (P=0.06) (Table 3).

Table 2. Demographic characteristics of patients with acute coronary syndrome separately for intervention and control groups

Variable	Group Intervention (24 individuals)	Control (27 individuals)	Statistical test result
Age (years) Mean ± SD	52.6±7.9	56.2±12.3	P=0.22 t=1.2
Age of starting smoking Mean ± SD	20.3±8.7	20.2±6.0	Z=-0.3 P=0.77
Average cigarette smoked per day Mean ± SD	18±11.88	13.7±8.0	Z=1.1 P=0.25
Gender Female (percent)	2(8.3)	1(3.7)	x^2= 0.5
Male (percent)	22(91.7)	26 (96.3)	df = 1 P= 0.59

Table 3: frequency distribution of the patients with acute coronary syndrome in terms of successful quitting separately for intervention and control groups

Successful smoking cessation Cigarette smoking		Intervention group Number (percent)	Control group Number (percent)	Chi-square test result
Two weeks after intervention	Yes	18(75)	7(25.9)	P= 0.001
	No	6(25)	20(74.1)	df= 1 chi-square: 12.2
One month after intervention	Yes	16(66.7)	8(29.6)	P= 0.009
	No	8(33.3)	19(70.4)	df= 1 chi-square: 6.9
Six weeks after intervention	Yes	16(66.7)	8(29.6)	P= 0.009
	No	8(33.3)	19(70.4)	df= 1 chi-square: 6.9
Two months after intervention	Yes	16(66.7)	10(37)	P= 0.03
	No	8(33.3)	17(63)	df= 1 chi-square: 4.4
Ten weeks after intervention	Yes	16(66.7)	10(37)	P= 0.03
	No	8(33.3)	17(63)	df= 1 chi-square: 4.4
Three months after intervention	Yes	15(62.5)	10(37)	P= 0.06
	No	9(37.5)	17(63)	df= 1 chi-square: 3.2

Discussion

The findings of the study suggest that in first through fifth stages, there is a significant difference between intervention and control groups in terms of individuals who have been able to quit smoking. But, in stage six this difference is not significant anymore; though yet the percentage of people who have succeeded to quit smoking is more in intervention group compare to control group. It seems that phone follow up has motivated the members of control group to quit smoking and this can be the cause of insignificance between two groups in sixth stage; although this issue needs more investigations.

Malchodi et al. (2003) maintains that success rate of smoking cessation consuling without using nicotine replacement products in pregnant women 13 weeks after intervention is 24 percent and 21 percent in consulting and control group, respectively (38).

Dejong and Veltman (2004) also showed that success rate of smoking cessation consuling in patients with COPD after providing consultation by a clinical specialist nurse skilled in counseling was 44 percent 8 weeks after intervention (39). In another study, Steven et al. (2000) found out that in an intervention conducted by hospital staff success rate of smoking cessation consuling was 14.2 and 13.6 for consulting and usual care group, respectively (40).

Petty (2000) also showed that success rate of smoking cessation is 22.5 and 5 percent in consulting and usual care group, respectively (41). These findings are consistent with the findings of present study.
In a study on patients with COPD, Shaban et al. reported the success rate of smoking cessation 28.8 percent in consulting group compared to 22.5 percent in control group, one month after intervention; this rate was also 41.3 percent and 26.3 percent three months after intervention in consulting and control group, respectively. These findings indicate that consuling during three months after intervention is more effective than intervention during one month after intervention. However, in present study, intervention during two weeks after intervention had the most effect on smoking cessation. It seems that this difference may be due to hospitalization of the patients. Present study has surveyed the patients hospitalized in the hospital and this may can explain greater effects of intervention, while the study conducted by Shaban et al. has surveyed outpatients.
The average age of starting smoking in the study were 20.3 and 20.2 for intervention and 20.3 control groups respectively, where Mann-Whitney test showed no significant difference in terms of the average age of starting smoking. According to Richmond in many countries, people begin smoking at a young age with an average age under 15 (41). 66.3 percent of smokers in Iran start smoking in 15-24 (43). These findings are in line with the findings of present study.
One of the limitations of present study is the difference in attitudes and former experiences of the participants which may affect the findings of the study. Also, educational backgrounds, beliefs and individual differences may affect learning and applying the teachings which were beyond the control.
Other limitations of the study are unwillingness to continue to cooperate and participate in group training-consuling sessions. The researcher tried to obtain cooperation of the participants and this limitation was controlled. Also, there was a limitation regarding follow up time. Because the study is conducted as an academic dissertation it wasn't possible to follow up the study more than three months.

Implications for Practice

The results of the study show that smoking cessation training-consuling intervention provided by the nurses affects the success of smoking cessation in patients with Acute Coronary Syndrome. The nurses as people who are in frontline of the treatment and due to the fact that they spend more time with patients and their families, have more impact on training and consuling fields, and intervention regarding smoking cessation is no exception. Since investigating the status of smoking in cardiac patients and existence of training-consulting programs for smoking cessation are considered two important factors regarding quality of care for these patients, so through training the members of treatment team, especially the nurses, we can take an important step in this regard.
We suggest conducting some studies on challenges and barriers the nurses are faced to perform their role in training and consuling the patients with Acute Coronary Syndrome to quit smoking, the impact of training nurses in smoking cessation training-consulting on success of smoking cessation in patients with Acute Coronary Syndrome, and the impact of family-centered training and consulting on success of smoking cessation in patients with Acute Coronary Syndrome.
It is also suggested that some studies with longer follow up periods from six months to one year be conducted. Also, it is suggested that if there is a possibility for in-person follow-up, psychometric methods such as Q be used to fill self-efficacy questionnaire to ensure the accuracy of the presented answers.

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Conflict of interest

The authors declare that there is no conflict of interest.

References

1. World Health Organization. Prevention of cardiovascular disease, Guidelines for Assessment and Management of Cardiovascular Risk 2007; Available at: www.ihrs.ir/statistics information related to cardiovascular disease
2. Hadaegh F, Zabetian A, Tohidi M, Ghasemi A, Sheikholeslami F, Azizi F. Prevalence of Metabolic Syndrome by the Adult Treatment Panel III, International Diabetes Federation, and World Health Organization Definitions and their Association with Coronary Heart Disease in an Elderly Iranian Population. Ann Acad Med Singapore. 2009;38:142-9.
3. Anand SS, Islam S, Rosengren A, Franzosi MG, Steyn K, Yusufali AH and et al. Risk Factors for Myocardial Infarction in Women and Men: Insights from The Interheart Study. Eur Heart J. 2008;29(7):932-40.
4. Berndt N, Bolman C, Lechner L, Mudde A, Verheugt FW, de Vries H. Effectiveness of Two Intensive Treatment Methods for Smoking Cessation and Relapse Prevention in Patients with Coronary Heart Disease: Study Protocol and Baseline Description. BMC Cardiovasc Disord. 2012;12(1):33.
5. Rice VH. Nursing Intervention and Smoking Cessation: Meta-Analysis Update. Heart Lung. 2006;35(3):147-63.
6. Shen L, Peterson ED, Li S, Thomas L, Alexander K, Xian Y & et al. The Association between Smoking and Long-Term Outcomes after Non–ST-Segment Elevation Myocardial Infarction in Older Patients. Am Heart J. 2013;166(6):1056-62.
7. Rigotti NA, Clair C. Managing Tobacco Use: The Neglected Cardiovascular Disease Risk Factor. Eur Heart J. 2013;34(42):3259-67.
8. Kong J-H, Ha Y. Effects of a Smoking Cessation Program Including Telephone Counseling and Text Messaging Using Stages of Change for Outpatients after a Myocardial Infarction. J Korean Acad Nurs. 2013;43(4):557-67.
9. Bandura A. Self-Efficacy Mechanism in Human Agency. Am Psychol. 1982;37(2):122-47.
10. McIvor A, Kayser J, Assaad J-M, Brosky G, Demarest P, Desmarais P, et al. Best Practices for Smoking Cessation Interventions in Primary Care. Can Respir J. 2009;16(4):129-34.
11. American Cancer Society Guide to Quitting Smoking 2013; Available at: www.cancer.org/acs/groups.
12. Arythmy and heart failer clinic. effect of smoking 2012; Available at: Jam heart clinic.com/FA/Learning show.aspx.
13. Gordon JS, Mahabee-Gittens EM, Andrews JA, Christiansen SM, Byron DJ. A Randomized Clinical Trial of a Web-Based Tobacco Cessation Education Program. Pediatrics. 2013;131(2):e455-62.
14. Biagini JM, LeMasters GK, Ryan PH, Levin L, Reponen T, Bernstein DI, et al. Environmental Risk Factors of Rhinitis in Early Infancy. Pediatr Allergy Immunol. 2006;17(4):278-84.
15. Yi O, Kwon H-J, Kim H, Ha M, Hong S-J, Hong Y-C, et al. Effect of Environmental Tobacco Smoke on Atopic Dermatitis among Children in Korea. Environ Res. 2012;113:40-5.
16. Burke H, Leonardi-Bee J, Hashim A, Pine-Abata H, Chen Y, Cook DG, et al. Prenatal and Passive Smoke Exposure and Incidence of Asthma and Wheeze :Systematic Review and Meta-Analysis. Pediatrics. 2012;129(4):735-44.
17. Tutka P, Wielosz M, Zatonski W. Exposure to Environmental Tobacco Smoke and Children Health. Int J Occup Med Environ Health. 2002;15(4):325-35.

18. Jones L, Hassanien A, Cook D, Britton J, Leonardi-Bee J. Parental Smoking and the Risk of Middle Ear Disease in Children: A Systematic Review and Meta-Analysis. Arch Pediatr Adolesc Med. 2012;166(1):18-27.
19. Jones LL, Hashim A, McKeever T, Cook DG, Britton J, Leonardi-Bee J. Parental and Household Smoking and The Increased Risk of Bronchitis, Bronchiolitis and other Lower Respiratory Infections in Infancy: Systematic Review and Meta-Analysis. Respir Res. 2011;12(5):1-11.
20. DiFranza JR, Masaquel A, Barrett AM, Colosia AD, Mahadevia PJ. Systematic Literature Review Assessing Tobacco Smoke Exposure as a Risk Factor for Serious Respiratory Syncytial Virus Disease Among Infants and Young Children. BMC Pediatr. 2012;12(1):1-16.
21. Quit Smoking 2012; Available at: www.canv.org.
22. Gholipour K, RG IS, Mojahed F, Shokri A, Gholipour K. Factors Affecting Successful Smoking Cessation: Patient Views Regarding Determinants of Successful Smoking Cessation-A study from East Azerbaijan, Tabriz–Iran. Iran J Pioneer Med Sci. 2013;4(2):89-93.
23. Meninga P. The 3 Reasons that People Fail to Quit Smoking 2008; Available at: www. Spiritual river .com.
24. George RL, Cristiani TS. Counseling: Theory and Practice. Prentice Hall; 1986.
25. Siene. Help Your Patients Quit Smoking a Coaching Guide: Instructions and Suggested Language to Help You Effectively Counsel Patients to Stop Smoking 2013; Available at: www.nyc.gov.
26. Patient Education 2012; Available from: nursing.rhc.ac.ir.
27. Robert GL, Marianne MH. Introduction to Counseling and Guidance. Pearson education: Inc; 2003.
28. Gibson RL. Introduction to Counseling and Guidance. Prentice Hall; 1999.
29. De Guia N. Smoking Cessation in Ontario 1998/999: Current Trends, Interventions and Initiatives: Ontario Tobacco Research Unit; 2000.
30. Kim J, Gall SL, Dewey HM, Macdonell RA, Sturm JW, Thrift AG. Baseline Smoking Status and The Long-Term Risk of Death or Nonfatal Vascular Event in People With Stroke A 10-Year Survival Analysis. Stroke. 2012;43(12):3173-8.
31. Nurse consultant facts sheet. Nurse Consultant Q & A 2012; Available at: www.nnba.net/facts-consultants.html
32. Bodner ME, Miller WC, Rhodes RE, Dean E. Smoking Cessation and Counseling: Knowledge and Views of Canadian Physical Therapists. Phys Ther. 2011;91(7):1051-62.
33. Kabir K, Nojomi M, Motafaker M, Jamali A, Sadr Bafghi M. The Effect of Guality Improvement Program on In-Hospital Acute Myocardial Infarction Care in Afshar Hospital (Yazd-2004). Razi Journal of Medical Sciences. 2006;13(50):163-72. (persian)
34. Who Monica project 1990 ; Available at: www.thl.fi/monica
35. Heatherton TF, Kozlowski LT, Frecker RC, Fagerstrom Ko. The Fagerström Test for Nicotine Dependence: A Revision of The Fagerstrom Tolerance Questionnaire. Br J Addict. 1991;86(9):1119-27.
36. West R. Assessing Smoking Cessation Performance In NHS Stop Smoking Services: The Russell Standard (Clinical). London: National Centre for Smoking Cessation and Training; 2005.
37. Sciences Doph. Center for Evaluation and Research: Tobacco Control Evaluation Center University of California, Davis2009 ; Available at: www.tobaccoeval.ucdavis.edu./

38. Malchodi CS. The Effects of Peer Counseling on Smoking Cessation and Reduction. Obstet Gynecol. 2003; 101(3): 504-10.
39. Dejong SR, Veltman RH. The Effectiveness of A CNS-Led Community-Based COPD Screening and Intervention Program. Clin Nurse Spec. 2004; 18(2): 72-9.
40. Steven VJ, Glasgo RE. Implementation and Effectiveness of a Brief Smoking - Cessation Intervention for Hospital Patients. Med care. 2000; 38(5): 451-59.
41. Petty TL. COPD: Intervention For Smoking Cessation and Improved Ventilatory Function. Geriatrics. 2000; 55(12): 30-82.
42. Richmond R. Educating Medical Student about Tobacco: Planning and Implamentation. Paris: Iuatld; 1998.
43. Masjedi M, Masule H, Heidari G. Knowledge smoking. Tehran: Publications Training Center Management of Tuberculosis and Lung Disease; 1378. (persian)