Journal of Vessels and Circulation
Qom University of Medical Sciences
Spring 2022. Volume 3. Number 2

Research Paper

The Effect of Coping Therapy on Blood Pressure of Under-stress Women

Hamideh Bahaoddini[1], Alireza Agha Yousefi[*2], Sohrab Abdi Zarrin[3]

1. Department of Psychology, Faculty of Humanities, Qom Branch, Islamic Azad University, Qom, Iran.
2. Department of Psychology, Faculty of Humanities, Payame Noor University, Tehran, Iran.
3. Department of Educational Sciences, Faculty of Humanities, Qom University, Qom, Iran.

Use your device to scan and read the article online

Please cite this article as Bahaoddini H, Agha Yousefi A, Abdi Zarrin S. The Effect of Coping Therapy on Blood Pressure of Under-stress Wome. Journal of Vessels and Circulation. 2022; 3(2):61-68. http://dx.doi.org/10.32598/JVC.3.2.117.1

http://dx.doi.org/10.32598/JVC.3.2.117.1

Article info:
Received: 07 May 2022
Accepted: 08 June 2022
Publish: 01 Apr 2022

Keywords:
Coping therapy, Blood Pressure, Women, Stress

ABSTRACT

Background and Aim: Blood pressure is a common problem in people exposed to stress and is an important part of the physiological science of the heart. The purpose of this study was to investigate the effect of coping therapy on blood pressure as an important indicator of the physiological function of the heart in women exposed to stress.

Materials and Methods: Blood pressure is a common problem in people exposed to stress and is an important part of the physiological science of the heart. The purpose of this study was to investigate the effect of coping therapy on blood pressure as an important indicator of the physiological function of the heart in women exposed to stress.

Results: In the post-test phase, coping therapy reduced systolic blood pressure ($P<0.05$ and $F=5.87$), but diastolic blood pressure ($P<0.05$ and $F=1.86$) had no effect. follow-up stage, treatment was not significant for systolic blood pressure ($P<0.05$ and $F=0.48$) and diastolic blood pressure ($P<0.05$ and $F=2.97$).

Conclusion: Coping therapy can be effective in improving blood pressure in women with stress in interpersonal relationships. As a result, this treatment can be a way to improve the physiological function of the heart, especially women's blood pressure.

*** Corresponding Author:**
Alireza Agha Yousefi, Associate Professor.
Address: *Department of Psychology, Faculty of Humanities, Payame Noor University, Tehran, Iran.*
Phone: *+98 (912) 1519023*
E-mail: *arayeh1100@gmail.com*

Journal of Vessels and Circulation
Qom University of Medical Sciences

1. Introduction

There is a close relationship between stress and chronic diseases [1]. The human body organism constantly responds to internal and external stresses, processes stressful information, and responds to them according to the perceived threat. The autonomic nervous system includes the sympathetic (SNS) and parasympathetic (PNS) systems. SNS is activated when a person is under stress. Responsibility for this reaction, whether the war or the escape response is directly related to SNS, triggers a range of hormonal and physiological responses [2].

One of the most common physical problems in people under stress is high blood pressure. Blood pressure is an important variable of the physiological function of the heart and is the force exerted by the blood on the walls of the arteries. This force includes the maximum or systolic blood pressure (SBP) that the heart inflicts on the arteries during each contraction, and the minimum or diastolic blood pressure (DBP) is the force remaining in the arteries when the heart muscle is resting between beats and at rest [3]. One of the heart problems is hypertension, which increases the risk of cardiovascular problems such as heart failure, stroke, kidney failure, and peripheral vascular disease [4].

Although stress is one of the risk factors for biomarkers, the more important factor is the method of coping (adapting) with stress [5] or "coping styles," i.e. relatively stable behaviors when people respond to stress [6]. Inconsistent coping reduces mental health and at higher levels, leads to mental disorders [7] such as anxiety, depression, and even physical symptoms [8]. People with high blood pressure have more inefficient coping mechanisms [9]; this means that more active behavioral styles increased DBP [10] and the use of a variety of coping approaches was able to help improve blood pressure in African Americans [11].

It was in 1994 that Wiedel 1st introduced a model in Germany called coping therapy to help schizophrenic patients. In 1999, Agha Yousefi also introduced a method called coping therapy [12], which is one of the cognitive-behavioral therapies and is based on the Folkman-Lazarus theory. This treatment is performed on various biomarkers and is used for primary and secondary prevention. Among them, we can mention the effect of therapeutic coping on the improvement of immunological biomarkers in patients with multiple sclerosis (MS) [13] and also in patients with rheumatoid arthritis (RA) [14]. In this treatment, the person is helped to deal with stressful situations, and give a more effective response, which includes 8 methods of confrontation, avoidance, self-restraint, responsibility, seeking social support, escape-avoidance, deliberate problem solving, and positive re-estimation [15].

So far, little research has been done in this field, and if similar research supports the results, this treatment can be used to prevent the occurrence of stress-related physical problems; that is why it is important to do this research. Coping therapy can be effective for women in stressful situations to be able to manage stress. Given the above, the purpose of this study was to estimate the effect of coping therapy on blood pressure in under-stress women.

2. Material and Methods

The research method was experimentally done with a pre-test/post-test/follow-up design with a control group and sampling method. The independent variable was coping therapy and its effect on blood pressure was evaluated as a dependent variable. The statistical population consisted of all under-stress women having teenage children who were studying in the 2nd district of Qom City in the academic year 2021-2022. The available sampling method and subjects included mothers of students of Assiye Girls' High School in District 2 of Qom city, Iran. A total of 100 people were selected by the available method and screened by a stressful life events questionnaire. Then, 34 people who had a higher score in the screening were selected and randomly assigned to two experimental and control groups of 17 people [16]. The criteria for entering the research included the age group between 25 and 50 years and being married, and the criteria for exiting were having an education below the tenth grade or higher than a diploma. The presence of physical and mental illnesses hindered participation in treatment and training sessions.

The coping therapy protocol was implemented in the experimental group and the neutral protocol was implemented in the control group. To examine the results of the intervention over time, the targets' blood pressure was measured in three stages: pre-test, post-test, and two-month follow-up [17, 18]. Finally, the results were analyzed. The general physician excluded people involved in diseases that hindered participation in the research, by examination and background check of the history of diseases such as lupus, AIDS, taking heart medications, etc. The clinical psychologist used a diagnostic interview to

eliminate people involved in disruptive disorders from participating in the research (group 1 and 2 disorders). The 1st tool used in this research was life events and changes (FILE), which measures life events and family stress with 71 questions. In this questionnaire, a yes answer to each item has one mark and a no answer has zero marks, and the range of numerical scores is between 0 and 72. Higher scores mean higher family stress. A score between 0 and 20 means the existence of stressful events in a small amount, a score between 20 and 36 means the presence of stressful events in an average amount, and a score higher than 36 means the presence of stressful events in a large amount. The people studied in this research scored higher than 36 on this questionnaire [19].

The validity and reliability of the appropriate tool based on the Cronbach alpha is 0.73 [16]. Cronbach's alpha is 0.69-0.87 [20] and its reliability is 0.72 and its concurrent validity is suitable with the list of symptoms of chronic psychological stress, automatic thoughts, and mental well-being indicator [21]. The 2nd tool in this study was blood pressure measured by an Alcatel sphygmomanometer, which was indicated by two numbers. The larger figure is the systolic pressure and the smaller figure is the diastolic pressure [22]. Because the increase in blood pressure occurs in the early hours of the morning [23], blood pressure was measured at 8-9 am by two nurses from the right arm of the people (targets) on two consecutive days (one day of the experimental group and the other day of the control group). It should be noted that to control a variable such as physical activity [23], before measuring blood pressure, subjects were placed in a resting sitting position for 10 minutes. The 3rd tool in this study was a coping strategies questionnaire including 50 questions with answers on a 4-point Likert scale (0=not at all, 1=sometimes, 2=most of the time, 3=always). This questionnaire is a part of the therapist's coping protocol only answered by the experimental group in the 1st session (according to Table 1 and 2) to familiarize themselves with their eight strategies [22]. This tool has 8 subscales of confrontational coping, avoiding, restrained, seeking social support, responsible, escape-avoidance, thoughtful problem-solving, and positive re-estimation. Reliability through internal consistency is 0.75 and the reliability of its subscales is from 0.61 (avoidant coping) to 0.79 (reappraisal) [24]. The summary of the treatment sessions implemented in the experimental group is given in Table 1.

The results were analyzed using descriptive statistics and inferential statistics by analysis of covariance (ANCOVA) using SPSS software version 26. Ethical considerations included informed consent, the possibility of withdrawal, the confidentiality of information and identity of the subjects, respectful and humanitarian treatment, the possibility of knowing their results, and having the researcher's information at their disposal.

According to Table 3, the number in each group is 17 people. The Mean±SD age in the experimental (test) group are 35.88 and 6.29, and in the control group, 36.76 and 6.43. The Mean±SD stressful events of the experimental group were 36.94 and 8.04 and the control group was 37.58 and 9.41. The Mean±SD systolic blood pressure of the experimental and control groups in the pre-test were 11.29(2.26) and 12.88(1.46), respectively, in the post-test 11.52(1.17) and 12.79(2.21), and follow-up, it was 11.44(1.45) and 12.38(1.58). The Mean±SD of diastolic blood pressure for the experimental and control groups in the pre-exam 6.70(1.68) and 7.70(1.04), in the post-exam 7.32(1.70) and 8.23(1.43), and follow-up 6.94(1.02) and 8.05(1.02).

Examining the assumptions of the ANCOVA test

The dependent variable of blood pressure and the covariate variable including age and pre-test were all continuous. Due to the existence of two experimental and control groups, the independent variable had at least two levels. The outlier data was not displayed. Due to the lack of correlation between observations in each group, as well as between groups and the lack of possibility of membership in more than one group, the assumption of independence of observations was respected.

According to Table 4, the normality of the distribution of scores in the pre-test, post-test, and control of the two groups was confirmed. Table 5 shows the homogeneity of variance ($P<0.05$) and the lack of significance of Levene's test. In multiple co-linearity analyses, the pre-test SBP covariate was considered. Correlation coefficient $r=0.66$, as a result of multiple non-co-linearity between auxiliary variables (covariates), was observed. Also, in examining the homogeneity of the pre-test and post-test regression slopes, the F group×pre-test SBP results show that the pre-test and post-test regression slopes were not significant in the experimental and control groups ($F=0.96$ and $P<0.05$); Therefore, the interaction of variable regression slope with the group is not significant and the assumption of regression slope homogeneity is confirmed. The univariate covariance analysis was used to test the research hypothesis that coping therapy improves blood pressure.

According to the information in Table 6, in the post-test, the F-value of systolic pressure was 5.87 (signifi-

Journal of Vessels and Circulation
Qom University of Medical Sciences

Table 1. Summary of treatment sessions

Sessions	Aims	Tasks
1	Familiarity with stress and its effects, coping, and eight strategies	Recording stressful events and actions, thoughts, and feelings
2	Examining and reforming thoughts, feelings, actions, and how to evaluate stress	Recording stressful situations (table: Thought, feeling, behavior, and primary and secondary evaluation)
3	Investigating cognitive assessment and ways to cope. Explanation of 4 methods of confrontation, responsibility, avoidance, and escape-avoidance	Accurate assessment of stressful events and the use of appropriate coping methods, recording the results
4	Continuation of evaluations - explanation of 4 methods of self-control, seeking social support, thoughtful problem solving, and positive re-evaluation.	Accurate assessment of stressful events and the use of appropriate coping methods, recording the results
5-14	Correcting evaluation and ineffective coping methods, encouraging modify it. Continuing this process until you gain the ability to use coping methods	Recording stressful situations, correcting assessment and coping methods, and reporting cases in the next session.

Journal of Vessels and Circulation
Qom University of Medical Sciences

Table 2. Summary of control group sessions

Sessions	Contents	Tasks
1	Introduction and survey need assessment on health and medical issues	A note on the medical history of yourself and your family
2	BMI: BMI and obesity, how to calculate BMI, measure height and weight of variables	Calculate the BMI of yourself and your family members
3	BMI: Food required and proportional to weight and age	A note on your full day's nutrition
4	Menstruation: Introduction, types of menstruation, and suitable sanitary pad	Write your and your children's menstrual cycle
5	Menstruation: Types of pain and its home control, risks, and visiting a doctor	Announcing people's readiness to refer to a doctor
6	Menstruation: Proper exercises, supplements, and prevention of common diseases caused by vitamin deficiencies in women	Summary notes and sending handouts
7	Women's health: How to care, wash, and clean during menstruation, etc., dos and don'ts	
8, 9	Gynecological infections: Types, risks, prevention, and control	
10	Sexually transmitted diseases: Types, prevention, control, and early diagnosis of diseases such as herpes and AIDS, warning signs	
11	Women's diseases: Prevention, explanation of pap smear test, and breast examination and mammography	
12	Fatty liver: Symptoms, prevention and nutrition, risk factors, and when to see a doctor	
13	Corona: Prevention, treatment protocols, surface, and hand disinfection, nutrition	
14	Blood sugar: Control, signs of increase, risks, and ways of prevention	

BMI: Body mass index.

Journal of Vessels and Circulation
Qom University of Medical Sciences

Table 3. Descriptive findings (n=17)

Groups	Mean±SD		Stage	Mean±SD	
	Age	Stressful Events		Systolic Blood Pressure	Diastolic Blood Pressure
Test	35.88±6.29	36.94±8.04	Pre-test	11.29±2.26	6.70±1.68
			Post-test	11.52±1.17	7.23±1.70
			Follow-up	11.44±1.45	6.94±1.02
Control	36.76±6.43	37.58±9.41	Pre-test	12.88±1.46	7.70±1.04
			Post-test	12.79±2.21	8.23±1.43
			Follow-up	12.38±1.58	8.05±1.02

Table 4. Normality of distribution of variables in two groups with Kolmogorov-Smirnov test

Variables	Pre-test		Post-test		Follow-up	
	Statistic	Sig.	Statistic	Sig.	Statistic	Sig.
Systolic blood pressure	0.16	0.08	0.15	0.10	0.18	0.08
Diastolic blood pressure	0.17	0.09	0.22	0.10	0.19	0.20

Table 5. Levene's homogeneity of variances results

Variables/Stage	F	Degree of Freedom 1	Degree of Freedom 2	Sig.
SBP1	4.87	1	32	0.13
SBP2	4.95			0.13
SBP3	0.24			0.62

SBP: Systolic blood pressure

Table 6. Univariate covariance analysis

Source/Stage	Variables	Sum of Squares	Degree of Freedom	Mean of Squares	F	Sig.	Eta Squared	Statistical power
Group/Post-test	Systolic	1643.73	1	1643.73	5.87	0.02	0.16	0.45
	Diastolic	201.49	1	201.49	1.86	0.18	0.06	0
Group/Follow up	Systolic	77.44	1	77.44	0.48	0.50	0.01	0
	Diastolic	179.42	1	179.42	2.97	0.09	0.08	0

Journal of Vessels and Circulation
Qom University of Medical Sciences

cant at the P<0.01 level) and diastolic pressure was 1.86 (non-significant). Also, in the follow-up, the F-value of SBP was 0.48 (significant P<0.01), and the F-value of DBP was 2.97 (non-significant). These results show that coping therapy changed SBP in the post-test phase but did not affect DBP. Also, there was no change in the follow-up phase compared to the post-test, so it can be inferred that the treatment of the experimental group was stable compared to the control group in the follow-up phase.

4. Discussion

This research was conducted to investigate the effectiveness of coping therapy on the blood pressure of women under stress. The results show the confirmation of the hypothesis and the coping therapy was effective on the blood pressure of these women. This result is consistent with the findings of similar studies. For example, in research, the relationship between disorders such as high blood pressure and heart disease and the use of incompatible coping strategies was confirmed [9]. Mindfulness [25] and cognitive-behavioral therapy together with positive visualization [26] reduced blood pressure. Also, stress-coping strategies lowered interleukin-β levels and consequently reduced heart-related problems in heart patients [27]. In a more general framework, other researchers have also shown findings consistent with the results of the present study, including meta-analyses that showed that moderate-intensity exercise reduced blood pressure in people with high blood pressure [28]. Eight to 40 weeks of aerobic exercise reduced blood pressure in hypertensive patients [29].

In this study, the coping therapy was able to increase women's empowerment in the areas such as self-knowledge, investigating and discovering the root of problems, and getting familiar with the concept of stress and how to reduce it by adopting appropriate coping methods. During the treatment sessions based on this intervention, women conceptualized their stress and discovered more effective ways. These women paid attention to investigating and finding the root of their problems. It seems that this group learned during therapy sessions to reduce the stress and mental tension caused by expectations by using effective coping strategies when facing stress and psychological pressure and trying to break the chain of previous ineffective strategies.

These women were able to stop repeating their ineffective coping strategies by correctly evaluating and applying proper and calculated coping strategies when faced with stress and finding correct solutions for their problems and thus have better stress management. Also, by correctly evaluating the tensions and observing the effect of their method of dealing with the tensions, they obtained a toolbox to effectively use the 8 tools in future tensions. Such changes ultimately reduced stress to the extent that they affected important biomarkers such as heartbeat. As researchers have emphasized, stress control improves blood pressure [30].

One of the limitations of this research was the concern about the end-of-year holidays and their effect on the results, which caused the follow-up phase to be conducted two months after the pre-test instead of three months. Another limitation was that the post-test stage was carried out under Coronavirus red conditions, which may have been effective in the obtained results. It is suggested that such research be conducted in a comparative form on both men and women and the results of the two groups should be compared.

5. Conclusion

According to the above content, coping therapy can be used as an efficient method in the field of psychological well-being of women under stress in today's society.

Ethical Considerations

Compliance with ethical guidelines

The Islamic Azad University, Qom branch approved this study (Code: IR.IAU.QOM.REC.1400.057.

Funding

This research did not receive any grant from funding agencies in the public, commercial, or non-profit sectors.

Authors' contributions

All authors equally contributed to preparing this article.

Conflict of interest

All authors declare no conflict of interest.

References:

[1] Gaines J, Vgontzas AN, Fernandez-Mendoza J, Bixler EO. 0852 stress and objective short sleep duration predict higher blood pressure in adolescents. Sleep. 2018; 41(1):A316. [DOI:10.1093/sleep/zsy061.851]

[2] Hakamata Y, Komi S, Moriguchi Y, Izawa SH, Motomura Y, Sato E, et al. Amygdala-centred functional connectivity affects daily cortisol concentrations: A putative link with anxiety. Sci Rep. 2017; 7(1):8313. [DOI:10.1038/s41598-017-08918-7] [PMID] [PMCID]

[3] The group of specialized nursing authors and lecturers. [Comprehensive textbook of senior nursing [Persian)]. Tehran: Jameenegar; 2021. [Link]

[4] Lakka T, Laaksonen DE. Physical activity in prevention and treatment of metabolic syndrome. Appl Physiol Nutr Metab. 2007; 32(1):76-88. [DOI:10.1139/h06-113] [PMID]

[5] Lazarus RS, Folkman S. Stress, appraisal, and coping. New York: Springer Publishing Company; 1984. [Link]

[6] de Boer SF, Buwalda B, Koolhaas JM. Untangling the neurobiology of coping styles in rodents: Towards neural mechanisms underlying individual differences in disease susceptibility. Neurosci Biobehav Rev. 2017; 74(Pt B):401-22. [DOI:10.1016/j.neubiorev.2016.07.008] [PMID]

[7] Compas BE, Jaser SS, Bettis AH, Watson KH, Gruhn MA, Dunbar JP, et al. Coping, emotion regulation, and psychopathology in childhood and adolescence: A meta-analysis and narrative review. Psychol Bull. 2017; 143(9):939-91. [DOI:10.1037/bul0000110] [PMID] [PMCID]

[8] Santarnecchi E, Sprugnoli G, Tatti E, Mencarelli L, Neri F, Momi D, et al. Brain functional connectivity correlates of coping styles. Cogn Affect Behav Neurosci. 2018; 18(3):495-508. [DOI:10.3758/s13415-018-0583-7] [PMID]

[9] Casagrande M, Boncompagni I, Mingarelli A, Favieri F, Forte G, Germanò R, et al. Coping styles in individuals with hypertension of varying severity. Stress Health. 2019; 35(4):560-8. [DOI:10.1002/smi.2889] [PMID]

[10] Wright ML, Lim S, Sales A, Rajagopal S, Nzegwu D, Crusto CA, et al. The influence of discrimination and coping style on blood pressure among Black/African American women in the intergen study. Health Equity. 2020; 4(1):272-9. [DOI:10.1089/heq.2019.0122] [PMID] [PMCID]

[11] Williams SH. Coping style and blood pressure in African Americans: The Jackson heart study [PhD dissertation]. Knoxville: University of Tennessee; 2010. [DOI:10.21007/etd.cghs.2010.0352]

[12] Agha Yousefi A. The role of personality and coping strategies in depression and the application of coping therapy in personality and depression (Persian)] [PhD thesis]. Tehran: Trabiat Modares University; 2001. [Link]

[13] Amini F, Aghayousefi A, Alipour A, Farzad VA. [Investigatinon the effects of coping-therapy on immunological biomarkers among multiple sclerosis patients (Persian)]. Q J Health Psychol. 2021; 9(4)169-83. [DOI:10.30473/HPJ.2021.54522.4903]

[14] Saadat Momeni N, Aghayousefi A, Khajevand Khoshli A, Rostamian A. [Comparison of the effectiveness of coping therapy and cognitive-behavioral therapy in cognitive immunity and psychological well-being indicators of patients with rheumatoid arthritis referring to Imam Khomeini Hospital, Tehran, Iran (Persian)]. Qom Univ Med Sci J. 2020; 14(8):39-49. [DOI:10.29252/qums.14.8.39]

[15] Agha Yousefi A. [Effects of coping-therapy on primary personality factors (Persian)]. J Peyke Noor. 2005; 3(2):16-32. [Link]

[16] Hassanzadeh R. [Applied research method (Persian)]. Tehran: Ravan; 2021. [Link]

[17] Sadipour E. [Research methods in psychology and educational sciences (Persian)]. Tehran: Doran; 2021. [Link]

[18] Rahimi K, Hosseinsabet F, Sohrabi F. [Effectiveness of stress management and resiliency training (SMART) on perceived stress and attitude toward drug use among addicted men prisoners (Persian)]. Clin Psychol Stud. 2016, 6(22):47-65. [DOI:10.22054/JCPS.2016.3890]

[19] McCubbin HI, Thompson AI, McCubbin MA. Family assessment inventories for research and practice. Madison: University of Wisconsin Publishers; 1996. [Link]

[20] Vafaee M, Roshan M. [Pathology of behavioral and emotional problems of female adolescents in deprived families (Persian)]. J Psychol Relig. 2008; 1(1):39-54. [Link]

[21] Agha Yousefi A, Zare H. [Effect of coping-therapy on stress reduction of females with coronary artery disease (Persian)]. J Behav Sci. 2009; 3(24):187-93. [Link]

[22] Sarafino EP. Health psychology, biopsychosocial interactions. Hoboken: John Wiley & Sons; 2002. [Link]

[23] Ford ES, Giles WH, Mokdad AH. Increasing prevalence of the metabolic syndrome among US adults. Diabetes Care. 2004; 27(10):2444-9. [DOI:10.2337/diacare.27.10.2444] [PMID]

[24] Folkman S, Lazarus RS. Stress process and depressive sympthomology. J Abnorm Psychol. 1986; 95(2):107-13. [DOI:10.1037//0021-843X.95.2.107] [PMID]

[25] Fakhri MK, Bahar A, Amini F. [Efficacy of mindfulness on perceived stress and blood pressure control in patients with type 2 diabetes (Persian)]. J Mazandaran Univ Med Sci. 2019; 28(170):186-93. [Link]

[26] Hamid N. [Cognitive behavior therapy with positive imagination of health on dysfunctional attitudes (Persian)]. Jundishapur Sci Med J. 2020; 19(2):137-46. [DOI:10.22118/JSMJ.2020.217539.1966]

[27] Agha Yousefi A, Alipour A, Shaghaghi F, Shatif N. [Relationship between coping ways with stress and levels of IL-1β and cortisol in coronary heart disease patients (Persian)]. J Birjand Univ Med Sci. 2012; 19(2):182-90. [Link]

[28] Ghadieh AS, Saab B. Evidence for exercise training in the management of hypertension in adults. Can Fam Physician. 2016; 61(3):233-9. [PMID] [PMICD]

[29] Rohani H, Azali-Alamdari K. [Effect of aerobic training on blood pressure in hypertensive patients: A meta-analysis study (Persian)]. J Appl Exerc Physiol. 2019; 15(30):77-102. [DOI:10.22080/JAEP.2019.15074.1817]

[30] Sharafkhani N, Mirzaei H, Rezaei H, Eslami AA. [Survey and predicting the balancing aspects of life style in relation with the blood pressure in urban population has over 30 years in Buin Miandasht/Esfahan (Persian)]. Nurs Midwifery J. 2018; 16(1):22-9. [Link]

This Page Intentionally Left Blank