RESEARCH ARTICLE

Effect of Narration on Excited Self Efficacy in Children 7-12 Years Old with Thalassemia in Mashhad

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ABSTRACT

Children with chronic illnesses, the less interaction with their peers, their developmental skills delayed and subsequently compared to their peers, different feelings that make no sense of self-esteem and creativity is developed. While the complexity and difficulty of increasing self-efficacy will decrease. Narration is a method of observational learning, the promotion is effective.In this randomized clinical trial, 60 Thalassemia children Clinic Pediatrician server of Mashhad in 2014 were randomly divided into two groups of "control" and "Narration". In the intervention group, In Narration group, Narration was performed with 8 sessions of 60 minutes in the control group received no intervention. Efficacy of research tools Murris (2002) in three stages before the Narration, 8 sessions of Narration and Narration completed after 1 month. Data were analyzed by independent t-test and repeated measures ANOVA using SPSS version 16.Based on the analysis of variance with repeated measures, self-efficacy and its Excited dimension were significantly different between the two groups in the evaluation stage (P<001)**.**The results of research emphasized on effectiveness of Narration on general self-efficacy and emotional dimension in Thalassemia Children. This Study introduces Narration as interesting procedure to children for the Child Friendly Hospitals.

Key Words: Thalassemia, Self efficacy, Excited Self efficacy, Narration.

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INTRODUCTION

Thalassemia major, a genetically determined disorder, primarily appairent as a progressive hemolytic anemia (1). Thalassaemia is an increasingly serious public health problem throughout the Mediterranean region, the Middle East, the Indian subcontinent and South East Asia(2,3). The total annual incidence of symptomatic persons is estimated at 1 in 100,000 throughout the world (4).Nowadays, advances in technology has caused many chronic diseases such as thalassemia, better known and controlled. This issue has caused to increase numbers of children with this disease. nature of thalassemia Disease is such that, children who are suffering from It, frequently hospitalizations (5). Require regular blood transfusions, continuous medical care, hospitalization and illness, creates considerable constraints for school-age children and And impede their progress toward the development and competence. For example, absence from school for any reason, a cause for concern homework, unfair competition with classmates and disrupt the child's sense of creativity (5,6,7).

Children with chronic illnesses, the less interaction with their peers, their developmental skills delayed and subsequently compared to their peers, different feelings that make no sense of self-esteem and creativity is developed. While the complexity and difficulty of increasing self-efficacy will decrease (8, 9).Self-efficacy is the central construct of Banduras social cognitive theory and refers to the perceived ability to produce a desired action. Self-efficacy is more than telling ourselves that we can succeed; it is a strong conviction of competence that is based on our evaluation of various sources of information about our abilities (10).Children who Sense high Efficacy in social relationship, feel less alone, physical and psychological compatible with painful consequences, in terms of academic are worthy. In contrast, people with low self-efficacy, sense of emptiness, sadness and vulnerability. Therefore, in any situation, according to them beyond their abilities, even if they are willing to do it, it will avoid active (11, 12, 13, 14).

While self-efficacy pertains to beliefs about ones own competence, outcome expectancy refers to ones estimate that a given action will lead to a certain outcome (10). According to Bandura (1997), self-efficacy plays a pivotal role in the self-regulation of affective states. In his words, The [perceived] inability to influence events and social conditions that significantly affect ones life can give rise to feelings of futility and despondency as well as anxiety. Briefly, when people perceive themselves as inefficious to gain highly valued outcomes, they will be depressed. Otherwise, when people see themselves as ill equipped to cope with potentially threatening events, they will become anxious (12). self-efficacy is a judgment of capability to execute given types of performances; outcome expectations are judgments about the outcomes that are likely to flow from such performances (15).

Four main sources of self-efficacy judgments about their individual performance, including enhancements, verbal encouragement, encouragement from others, social modeling or alternative experience and also physical symptoms or conditions. Four main sources of self-efficacy including judgments about their individual performance, enhancements, verbal encouragement or encouragement from others, social modeling or alternative experience and also have physical symptoms or conditions (8,9).Narration and bibliotherapy is considered a Technique of Communication between Nurses and Children in the prossess of Care and Support (8). This will help Children to discover the processes same situation, But The Same Possess have Differences with Child(9).

Story approaches postulate that reality is not directly recognizable and that people live on the basis of meaning they attribute to their experiences of the world around them. Cultures shape people's perceptions of reality or narratives through their experiences and social interactions across time. People attempt to make sense of their lives by integrating their experiences into a sequence and relating them to available cultural discourses and thereby creating a coherent sense of self. It is assumed that we live "in" and "through" our stories (16, 17). Narratives reflect people's identities and how they live their lives. Some narratives have positive influences, while others have negative ones on the way people behave and manage themselves. Narratives that disempower and limit an individual's options for managing problems contribute to the development and maintenance of psychological dysfunction (18). Zarei and

colleagues (1392) showed Narration Affected on physiological anxiety, social anxiety in Hospitalization school-age children (19).The combination of Narration and group therapy can increase self-confidence, finding purpose, recreation, increase Problem Solving Skills and decrease loneliness (20). Kozlowska and Khan (2011) Showed using narrative therapy accompanied with cognitive-behavioral intervention to improve the Excited functioning and management of pain in children and adolescents with unexplained chronic pain was Effected (21).

Children with special needs because of limitations in cognitive functioning, emotion, motivation, and behavior unable to exploit effectively of direct training or treatment; Hence, use of indirect techniques such as Narration and narrative therapy can effectively, improve and repair faults of them (22).Regard to searches conducted by researchers at prestigious research base, much research on thalassemia , physical and psychological effects has been done; Unfortunately despite self efficacy in patients with thalassemia may be Compromised with nature and lifelong illness, attention and intervention researchers about it, was Limited. Researcher tried to Determine Effect of Narration on Emotional Self efficacy in School age children in Mashhad.

MATERIALS AND METHODS

The Present Study is a clinical Trial that Conducted On Thalassemia Children aged from 7 to 12 years. These Children had a health Records in Sarvar Clinic of Mashhad city. According to a Pilot Study and Based on (α= 0.05, β= 0.16, m_1= 23.4, m_2=20.8, S_1=3.7, S_2=2.3) the Sample Size of each group was Calculated as 60 Child.

Inclusion Criteria for Participants were Including: Children Aged 7- 12 years, Lack of Verbal and Auditory Problem, Lack of Mental and Physical Disabilities, No Participate in Psychotherapy Session, Not having chronic illnesses, Child and his legal guardian consent to participate in the study. Exclusion Criteria were including : aggressive in Session and Absences over a session.

The data collection tool was included demographic checklist, Muris Self efficacy Questionnaire (2002). The demographic checklist was included question about age, sex, level of graduation, Parents graduation level, Parents Job, number of family member.Muris Scale was originally developed in 2002 by Muris in Belgium and its reliability and validity have been approved in Studies (12). The Scale was used and approved in iran by Tahmasian (tahmasian). Muris scale include 23 items, that 7 last question measured Excited Self efficacy. The answer to each item is variable from 1 to 5. Score 1 is for Not at all; score 5 is for very well (Muris).

The average score of Muris scale ranges for self efficacy from 23 to 115 and for exciting self efficacy ranges from 5 to 35 that is calculated by adding up the scores for all items. The validity of the scale was confirmed by 10 member of Nursing and Midwiferies Mashhad faculty and reliability of the scale was confirmed by cronbachs alpha coefficient for self efficacy and exciting self efficacy respectively was (0.70, 0.80) (muris).

For data collection, the list of all thalassemia children aged from 7 to 12 years was extracted from sarvar clinic of mashhad city. Then the selected children and their parent were invited to attend in the briefing session with a phone call made made by the main researcher. In a briefing session, the pretest tool (including demographic checklist, Muris Self efficacy questionnaire) was filed out by all children with researcher help after explaining the aims and methods of the study. Then signed informed consent was taken from all legal guardian. Then participant were allocated into intervention and control group randomly and both group split to 3 group with 10 participants aged 7,8 years, 9,10 years and 11, 12 years. The intervention group program was conducted in 8 session 60 minutes twice a week. The sessions held in a class with circle arrangement of the chaires in order to the interaction of children with each other. At the beginning of session, the researcher investigate participants homework for 20 minutes. Then researchers read a story for children to main problem, Then request from children to discuss about topic. Finally researcher read the end of story. Assignment were given for the following session. After intervention and 1 month later participant complete

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questionnaire again. Stories selected by consultation with pediatric psychologist and Nurse Psychiatric. The topics of stories were around rage control, anxiety and fear control and I can. Data was analyzing using SPSS statistical software version 16. The normality of data was confirmed by using Kolmogorov- Smirnov Statistical test. The distributions of all demographic variable and total self efficacy score were normal. For comparision the score of variable among groups repeated measure ANOVA was used.

This project is a part of master thesis in nursing approved by Regional Ethics Committee at Mashhad University of Medical Science (code number= 3366234 and RCT code= 2015012914504N3).

RESULTS

In this study 60 child with thalassemia aged from 7 to 12 years were participated in each group. There were no difference between two groups intervention in age, sex, level of graduation, level of graduation and job in parents and number of member family (P> 0.05).Both group involve 45 percent Boy and 55 percent girl. The mean age of Narration group was approximately 9.4 and in control group were 9.5. A bout 65 percent of mothers and 63.3 percent of fathers were graduated lower than diploma and 35 percent of mothers and 36.7 percent of fathers were graduated higher diploma. Either 75 percent of mother was housewife, 1.7 percent of mother and 8.3 percent of father were employee, 14 percent of mother and 26 percent of father were free job and 45 percent of father were worker.

There were no statistical difference between two groups in total self efficacy score and subscale before intervention (P> 0.05). On the other hand, the mean of total self efficacy and Excited self efficacy in Narration group was statistically higher than control group after intervention and 1 month later (P< 0.001) (Table 1).

DISCUSSION

The results of this study about impact of Narration on self efficacy and excited self efficacy children 7 to 12 years with thalassemia showed; Average self efficacy after intervention and one month later in Narration groups was promoted.

In the study of latifi et al, the impact of cognitive restructuring was investigated on Social, excited and educational of children with learning difficulties in Esfahan. The result showed that cognitive restructuring as Narration was a cognitive behavioral have no impact on excited self efficacy. (23)The result of latifi study was different from this research finding; Maybe, Probably reason of this difference was different type of cognitive behavioral therapy. Cognitive restructuring is a active learning involve brainstorming, game, role play, assignment, discussion and debate. Although researchers use Narration and fun assignment that was more attractive for children.

Another probably reason were, duration of intervention in latifi study was 10 weekly session but this research was 8 session twice a week. type of problem of researchers unit was different; latifi investigated children with learning problem but this research surveyed thalassemia children with any problem in learning.Also, kind of used questionnaire in both studies was difeerent. Latifi measured self efficacy and dimensions with Bandura, Muris, Merser (2004) self efficacy scale involve 40 question, while researchers in this study use of Muris (2002) self efficacy scale involve 23 question.

In other studies, Zarei (1392), Yousefi. Lovie (1387) and Nasirzadeh (1388), found the effectiveness of narrative therapy on physiological anxiety, worry, anxiety and aggression. (19, 24, 25). Multiple Researches have shown that low levels of self-efficacy relation to high level of anxiety disorder, depression symptoms and trait anxiety / mental irritation and And self efficacy have a negative correlation with some components of mental health such as depression, anxiety, interpersonal sensitivity, hostility, aggression, physical complaints (12). Thus, these studies have

indirectly confirmed the findings of the current research on the positive impact of Narration on self efficacy and especially excited dimension.

Sheibani and Homayi studies examined the impact of Narration on compatibility of children and reported training given to children in the form of Narration can increase compatibility and behavioral exciting control in children (26, 27). Researchers such as Bandura and Sarti believe that excited self efficacy basis for emotional sufficiency and competence. Excited self-efficacy is a dynamic structure reflects emotions, self-esteem, social interaction and personality characters. self and emotional concept in multiple agriculture affect on formation of this structure. These studies confirm the findings of current research and Narration positive effect on self-efficacy and especially in excited aspects (28).

Kariminasab (2011) assess the effectiveness of narrative therapy on depression in children 9 to 13 with cancer in Mashhad hospitals. Findings from this study indicate the effectiveness of narrative therapy on depression (29). Sheibani et al (2007) found the Narration is an effective way to reduce the symptoms of depression in children (28). Regard to tahmasian study (2006) showed a negative correlation between depression and total self efficacy, social, excited, educational and physical self efficacy (30). Also Bandura (1999) Quotes from muris showed that a low level of social and academic self-efficacy, depression predicts long-term children (12). Either Dehghannayery et al in their study pointed to the existence of an inverse relationship between self-efficacy and depression(31). Therefore, these study confirm the efficacy of Narration to promote self-efficacy, social, excited and educational self efficacy.

Jelvegar(2013) investigated effect of self regulated learning with Narration way on problem solving skills in mashhad And findings of the study showed the positive effect of self-regulation on solving social problems of girls and boys (32). Since Sykally (2014) showed that the flexible cognitive and social, excited and educational was a positive relationship (33), we can consistent Jelvegar study with the findings of the current study.

Soltani et al (1392) found group Narration increased self esteem at second class girls. Self-esteem is one of the most important aspects of mental health and other personality variables affect other contexts such as mental health, social and education related (34). According to this connection between mental health, self efficacy and self-esteem(35) it can be concluded that the findings of the present study was consistent to soltani et al and Narration is an efficacy way to increase self efficacy

Seems this research introduce tell group Narration as a creative way and as a technical consulting and training children to the health sector. The way is more attractive than direct work for children. As a result, children are able to change glance to medical center as a limited environment and exclusively therapeutic to academic and fun environment. The limitations of this study can pointed to not perform some tasks at home, personality differences and the lack of room for children to play and Narration.

CONCLUSION

The result of present study showed that Narration increase the self efficacy and excited self efficacy in children aged 7 to 12 years with thalassemia. Narration is a cheap, easy and fantancy way to communicate and train children. So application of Narration as a suitable method for enhance children self efficacy and their coping with circumstances is recommended.

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Ethical issue

Non to be declared

Conflict of interests

The authors declare no conflict of intrest in this study

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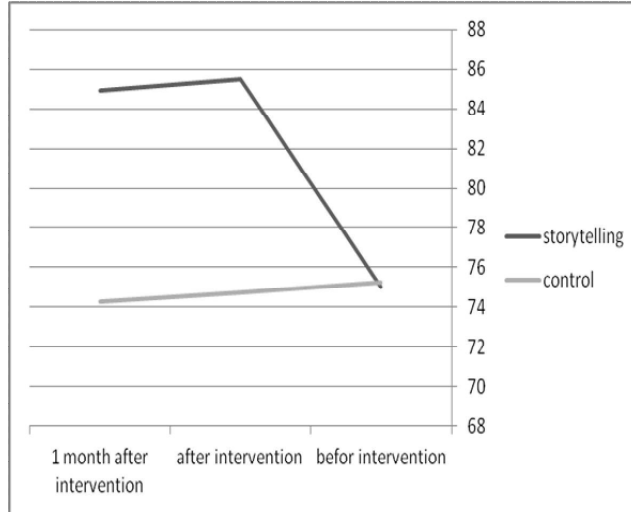
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Diagram 1: Comparison of the efficacy between both groups before, After Narration, and 1 month after Narration
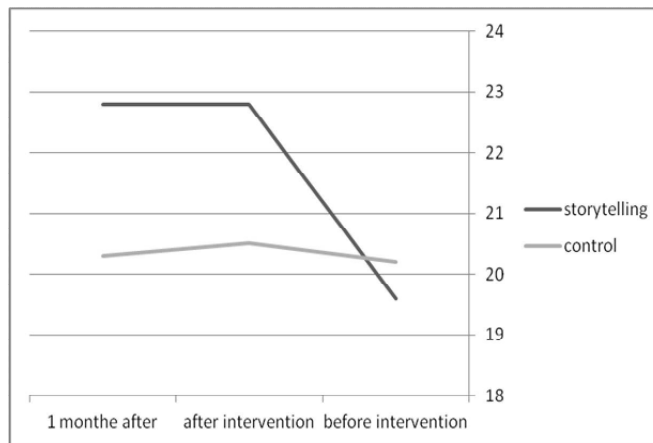

Diagram 2: Comparison of Excited self efficacy between both groups before, After Narration, and 1 month after Narration

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Table 1: Comparison of the efficacy And Excited Self efficacy between both groups before, After Narration, and 1 month after Narration

Self efficacy		Before Narration	After Narration	1 month after Narration	P Value
		SD ±Mean	SD ±Mean	SD ±Mean	
Self Efficacy	Narration	6.03±75	6.3±85.5	5/0±84.9	0/001 <0P
	control	7.78±75.23	4.0±74.76	4.0±74.3	
Exciting Self Efficacy	Narration	2.3±19.6	3.5±22.8	3.3±22.8	0/001 <0P
	control	2.2±20.2	1.9±20.5	2.2±20.3	

RESEARCH ARTICLE

The Relationship of Social Phobia with Anxiety in Nursing and Midwifery University Students.

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ABSTRACT

Students experience anxiety, stress and anxiety to some extend in the university. Social phobia is one of these problems. Social phobia usually leads to learning disorder, drop out, reduction of life quality and function and disorder in future job so this study was done with the aim of social phobia related to anxiety in nursing students.This study was correlation descriptive type and it was done on 144 nursing students of Arvanduniversity in Abadan by consensus sampling.The tools for collecting information was social phobia questionnaireand beck. The collected information was analyzed by spss18 by the help of spearman correlation coefficient, linear regression.In social phobia scale, social phobia (72%) had a slight (28%) and mean social phbia.In anxiety scale, slight anxiety (49%), slight anxiety (17%) mean anxiety, and serious anxiety (13%). A significant relationship was shown between social phobia and anxiety (P<0.001, r=0.6). Linear regression showed that if the social phobia increases one degree, the amount of anxiety becomes six times more.

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Using the strategies to decrease anxiety such as giving awareness and knowing, also supporting the students can reduce the anxieties and can improve the training function as well as promoting the students quality and life.

Key words: Social phobia, anxiety, university students, nursing.

INTRODUCTION

In general , social phobia is a fundamental destruction in the information processing, thoughts, attitudes and believes which causes the stimulation and preserving the emotions and behaviors (1).Social phobia is a certain and stable fearof being embarrassed to be evaluated negatively in doing social activities situations(2). The recent studies show that students experience anxiety, anxiety and stress in the university (3). Social phobia is an observed problem in university students (4). This disorder is seen in the university students in spite of being present in the university or in a social place(5).The existence of social phobia is an effective factor in learning disorder among the university students(6); and it should be pointed that the appearance of that in the university students can be the place in which the students are situated such as speaking in front of a group or being evaluated in front in front of the others and the little experience that they possess (5,7).This disorder has a weakening and chronicle movement and usually drifts the person towards anxiety(8,9). Done meta-analysis on 30 studies showed that there is a negative connection between the amount of social anxiety and positive experiment and its decrease causes the appearance of anxiety(10). The students who have creativity, social behavior and group activities become less depressed than the other ones. In fact there is a significant relationship between a positive social behavior and the reduction of anxiety(11), the appearance of this disorder in the university studentscauses disorder in their studies, learning, professional problems, imperfection in the relationship with the others, reduction of life quality and the intensity disorder in adulthood time (12); in spite of this, the social phobia in university students is different and it can be related to the cultural cases, educational methods, and evaluating the students(5). Considering the negative influence of anxiety and anxiety in all aspects of life ,such as educational development, studying these factors and trying to reduce them has a very important role(13), but unfortunately less studies have been done not only in the world but in Iran so the researcher and his coworkers decided to do a study based on studying the relationship between social phobia and anxiety according to their experiences.

METHODS

The present study is correlational descriptive study. The subjects were nursing and midwife students of Abadan Arvanduniversity of medical science. This study was done on 150 university students of nursing and midwife and the method of studying was census and the sample of this study was finally 144 students. Inclusion criteria was all the nursing and midwife students of medical science university of Arvand in Abadan . They all had passed one year of their studies in that university at the time of study; andneither of the participants had ever been hospitalized in a hospital because of a chronic mental and emotional problem such as serious anxiety, bipolar disorder,skineropheron and other chronic disorders. The other inclusion criteria were not being addicted to opium or alcohol, amphetamine and other things such as cannabis.Some exclusion criteria were deleted from this study such as students who were guest for one subject to study, the B.A and PHD students who had lost one of their close relatives in the last past year such as father, mother spouse and their child. Collecting the demographic questionnaire was based on age, gender, marital status, birth order, being native or not, parents separation. Questionnaire is in the form of social phobia questionnaire, it contains 17 self-report and is based on 5 linkert scale and the grades were put in the range of 0 for not at all, 1 for little, 2 to somehow, 3 for a lot and 4 for the most. According to the obtained results 40 was considered for cutoff point with the sensitivity of 80%and cutoff point 50 for specificity 89%which distinguishes the people who have social phobia from none social phobia .This questionnaire was confirmed by content validity ,psychometric

expert, psychiatric nursing of Arvand medical science university of Ahvaz Jundishapurand Ahvaz ShahidChamranuniversity. Tillfors in Sweden used this questionnaire in its study in 2007 and said this questionnaire is used iv a vast range of studies that its reliability in his study cronbach alpha coefficient 85% and with the test retest its correlation coefficient was r=71% was shown(14). The reliability of this study was shown and reported by Fatahee in Iran in 1387 through test retest with the correlational coefficient89% and (ICC) 94% . The third section of the anxiety questionnaire is Beck, this questionnaire has 21 items that measures the physical, treatment and knowing anxiety.marking this questionnaire was based on Likert 4 and it was marked from 0 to 3 and at most the trivial anxiety was (0-13) slight anxiety (14-19), mean anxiety (20-28)and serious anxiety (29-63) . Beck, Stever Brown informed internal consistency for a patient group up to 73% to 92% with the mean of 86% and correlation alpha 86% and 80% for the people who r not patient(15). The content of this content validity has been used in many studies both in Iran and in abroad .

This study was done after getting the approval from the authorities of the Arvand university, all the faculty, then the researcher went into the classes and explained the students the purpose of his entrance to the class and told them how to fill in the questionnaire and also explained them that they are free, they can fill it in or not and told them there is no need to write their names on the questionnaires and assured them that everything will be kept as a secret. So the questionnaires were given to any one who wished and during filling in the questionnaires, the researcher would answer if any student had any question related to them, the next day the researcher entered to the class again to see if any last session absent student who was present wanted to fill in the questionnaire, finally, 6 students didn't fill in the questionnaire as they didn't like to. The study process was approved by the university Ethics Committee.The collected data was given to the software SPSS 18and after being confirmed that it is normal by Kolmogorov Smirnov ,descriptive statistical and inferential statistic , spearman correlation coefficient, linear regression was analyzed.The significant meaning all the above tests were assumed as 0.01, The statistical significance was set at p<0.05.

RESULTS

Their age was between 21 and 22 years old of that, there were 115 girls (80%) percent and 20% boys, 130students were single (90%) and 14 students (10%) were married; 103 students were native to Kozestan (71%) and 49 students were not native (41%) , 139 students (96%) were living with their parents and 5 students((4%) were living alone because of the death of a parent. Social phobia among the nursing students 16±11 , the majority percentage 104 students(72%) showed slight social phobia and 40 students (28%) had mean social phobia . At cutoff point with sensitivity and specificity89% and none of the subjects had social phobia. And no significant relationship was shown between the social phobia marks with gender, age, being native, and marriage status.

Anxietywith mean and standard deviation 16±11 was shown that the most percentage were 70%(49%) slight anxiety, 31% (21%) mean anxiety, 24(17%) trivial anxiety and 19 students (13%) had serious anxiety. There was no significant relationship between any of the anxiety mark with the gender, marital status, being native.

There was a positive significant relationship between social phobia and anxiety(P<0/001 , r=0/6). It means the amount of anxiety increases if we increase social phobia (table number 1). A significant relationship was shown between social phobia and anxiety (P<0/001, %95 CI=3/6-8/9,)1 degree increase in social phobia increases 0.6 anxiety .

DISCUSSION

The result of the study shows that there is a slight social phobia among the nursing students. Baptista(2012) shows the social phobia among the Brazilian student 11% (5). Tilphores did a study in Sweden in 2007 and reported the social phobia as 16% (14).Carterr did an study in 2010 and reported slight social phobia (16), all the studies show a

related connection to each other but unfortunately no study with the same result has been done in Iran. Social phobia might be little in university students and may have a balance with the other disorders but having it may have negative effect in the future of the students (17). Social fear causes anxiety disorder and inactiveness in their learning and can have bad effect on their future jobs (5). Considering the social phobia in students , using suitable programs to prevent disorders(4). So it is necessary to support the students at the time of their studies because it causes them to be more successful and cause them to have better function (6). The result of this studying that there is a slight anxiety among the students. Ilderabadee (1383) showed the amount of anxiety among the nursing students as 16 ± 10 and consider it as slight anxiety and this finding has a similarity with the present study (19). Karamee, in his study in 1388 showed that only 19% of the students have different degree of anxiety and anxiety(20). Mansoorghanaatee reported that 10% of the nursing students suffer serious anxiety, and 14% suffer mean anxiety(21). Samaranayake(2011) reported the prevalence of anxiety (16.9%) among the Newzelandstudents (22). Estrella (2005) reported the result of his study as 82% of the students had no anxiety , 7% slight anxiety,6% mean anxiety, and 1% had serious anxiety (23). According to the similar studies , and considering to the result of them both in Iran and abroad , we understand that there is a similarity between them. Therefore the reduction of positive experiments in the university students leads to showing symptoms of anxiety in them and the most important of them is to have communication with the society (24) because anxiety is a prevalent disorder and it can affect anybody but some people in the society such as the medical university students are more vulnerable to it (25). The university students of nursing and midwife are the witness of the other people who mourn for their relatives or close member of their family so it causes them not to be that happy when they see such things and it causes them anxiety and that anxiety has some direct affect on their lives and studies (26). The existence of such anxiety in such age group who is supposed to have a happy life is so saddening so this problem has to be considered more and some suitable and good solutions should be found for that. This study showed a significant meaning between anxiety and social phobia so that the ones who are entangled with social phobia have more chance to be involved with anxiety because social phobia is followed by more anxiety and has the reduction of social support that are related to the symptoms of anxiety (27-28).

Ahadee (1385), Ohayon (2010) showed in their studies that there is a significant relationship between social phobia and anxiety disorder so as the social phobia increases when anxiety and negative experiences increase, this results have connectivity with the present study(29, 30). The Finland and Holland researchers also found that there is a significant relationship between social phobia and anxiety , they also found that social phobia can be a factor risk for anxiety (31). Kashdan (2011) said that there is a reverse connection between positive experiences and anxiety that is , the experiences of the negative feelings and failure in the society leads to standing away from the society and it will cause disorder in learning as well as shortage causes the student not to be decisive and make a good decision about their jobs in future (10). Anxiety in the society is something common but they can not be seen till the time they become serious and destructive. They can not be seen till they lead to disorder in mental and society function, sometimes they are covered by the other mental disorders (5). Based on this, one of the limitations of this study is the possibility covering society phobia disorder with the other mental disorders because the researcher didn't have a precise knowledge about the background of the subjects he also didn't know if they were under treatment or not, the researcher didn't know either if the subjects used to take any medicine or not so the researcher trusted the subjects and relied on what they told him

CONCLUSION

Since the prevalence of social phobia and anxiety in the university students was same as the inner and abroad studies and according to the relationship between the social phobia and anxiety , more knowledge is required to know and to recognize this disorder in order to cure it faster and we also need to react promptly to present some preventive ways such as recognizing treatment and supporting the university students during the time they study because this

support can help them to develop and get better therefore it will lead to the promotion of their life quality and to their future job and it also prevents the appearance of long term problems in them .

ACKNOWLEDGEMENTS

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Table:1 The relationship between social phobia and anxiety in the nursing students of Arvand University of Medical Science is as follow:

Total	Moderate	Slight	Social phobia, / anxiety
(%49) 70	(%6) 8	(%43) 62	little
(%17) 24	(%4) 5	(%13) 19	slight
(%21) 31	(%8) 12	(%13) 19	moderate
(%13) 19	(%10) 15	(%3) 4	serious
(%100) 144	(%28) 40	(%72) 104	total
(P<0/01 , r=0/6)			Statistical test

RESEARCH ARTICLE

Comparison of the Service Quality between Public and Private Sports Facilities

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ABSTRACT

The purpose of the present study was to compareofthe service quality betweenpublic and private sport facilitiesin the Sanandaj city. It was a descriptive- surveyresearch. The statistical populations werepeople used public and private sports facilities in Sanandaj cityat2013. This number was considered as the population size. The stratified random sampling was used and the sample size was determined 375 using the Morgan table. According to the purpose of the study, service quality section of the standard question applied by Yi Chin Liu was used (2008). The questionnaire reliability was confirmed by experts. In previous studies as well as its validity was confirmedusing Cronbach's alpha test (α=0.92). The data were analyzed using descriptive statistics and inferential statistics including Kolmogorov-Smirnov, t-independent and Friedman rank tests.The results showed that service quality in public and private sports facilities in Sanandajhas no significant difference. In comparison of the five dimensions of service quality,it was found that only the empathy dimension has a significant difference among public and privatefacilities, and there is no significant difference between the tangible quality, trust, confidence and accountability dimensions.

Key words: service quality, public and private sports facilities

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INTRODUCTION

Service and manufacturing industry/ organizations must match their offerings and products with their regular customers and focus on customer satisfaction (Bavarsad, 1979). In the today's business world, due to the importance of service industry compared to other industries, techniques for managing service organizations have recently been introduced; as a result the quality of products has improved due to competition. This issue has been raised about services, anda fierce competition is underway. Therefore, if service industries are not well managed, they will lose their competitive advantage (Haghighi, 2003). Service management is a new management discussionthat has been considered in recent decades. As competition emerges between institutions, they study various ways to revitalize their organizations and apply innovations to attract customers. Providing high quality services may be one of the most important elements, leading to customer satisfaction (Mohammadi, 2002). In current competitive conditions, the real mission of organizations is to understandcustomers' needs and wants and provides solutions for customer satisfaction. Success inmarket can be only achievedby customer satisfaction, innovation and high quality services (Purashraf, 2004). Customer service isthe oldest and still the most recent issue for organizations (Aguayo, 2000). Every successful organization is willing to provide services for gaining customer satisfaction. Companies and institutions cannot ignore their important goals such as profitability or gaining a competitive advantage. Customer satisfaction creates many advantages for companies and higher levels of customer satisfaction leads to customer loyalty (Bakhtiari, 2000).

Managers of sports organizations should also select the business motto of "Customer First" or "the customer is always right" and provide their services alittle beyond the expectations of their stakeholders so that this attitude becomes part of their organizationalculture and encourages people to sports and sport services. Therefore any successful organization is willing to provide servicesfor gaining customer satisfaction. Today, deep respect for the customer and customer focus are the key elements of sports industry. Today, this idea is considered the driving force in all sports organizations (Bavarsad, 1979).

The industrialization of sports and recreation is one of the major events of the last century. Molin first used the term sportsindustry. He noted that any amateur and professional sport activities leading to value-added of sports goods and service is considered as the sports industry (Mullin, 20007). In Molin's definition, Pitts, Fielding, and Mailer (1996) introduced all products, commodities, services, places and people associated with sports as components of the sports industry (KianMarz, 2007). One component of this industry is professional sports services which include sports venues and clubs. There are four distinct characteristics for quality of service. Services are intangible; in fact, they are not visible unless they are used. They are inseparable; they are produced at the same time they are used. Services are perishable; they cannot be stored. Finally, services are variable; they depends on many factors (skills, training, and personality of the service provider, and needs, opinions, experience, skills and personality of the service recipient) which determine the quality experienced by the client during the reception or transmission of services (Szabó, 2010). Service quality is defined as "the difference between expectations of different qualitydimensions and what the customer perceives of the service(s)"(Byon, 2010). Numerous studies have found that service quality has an important contribution in the customer satisfaction level (Gronroos, 1990;Shonk, 2008). The service quality in sports has been investigated in various fields including health and fitness clubs, sports venues, golf, leisure and recreation facilities, sports fans and sports tourism (Papadimitriou, 2000; Szabó, 2010). It cannot be realized without identifying important aspects of quality. Researchers have proposed different dimensions for service quality and many tools in a wide range of service areas such as tourism industries, banks, libraries, and training centers for its assessment (Haghighi, 2003). In the sports industry, Yi Chin Liu (2008), in a multi-dimension model,proposed five dimensions (tangible quality, trust, accountability, confidence and empathy) to assess the service quality of sports facilities (Yi-Chin, 2008).

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The first and most important marketing principle is to pay attention to customer demands. Organizationswill fail if they ignore customer demands. Paying attention to customer demands and improving service lead to customer satisfaction and loyalty, thus increased reputation and profitability for the organization (Ranjbaran, 2002).

Research on sports facilities will help administrators and planners better plan to create opportunities for sports activities for community members and will help the private-sector investors invest safely in this sector with a reasonable profitability. Therefore, this study aims to examine and compare the service quality in public and private sports facilities in Sanandaj, and provide information for authorities of public and private sports facilitiesto increase the quality of sport services.

Methodology

This is a descriptive research in which the data were collected through questionnaires.

Statistical Population: According to the General Department of Sports and Youth of Kurdistan Province, over 10,000 people used public and private sports facilities in Sanandaj in 2013. This number was considered as the population size (over 5,000 people used private sports facilities and over 5,000 people used public sports facilities).

Statistical Sample: The sample size of public and private facilities was calculated 375 using Morgan's formula according to the population size. The stratified random sampling method was used. Thus, 187 people were selected in public sports facilities and 188 people in private sports facilities as the sample, according to their proportion in the total population.

Measurement Tool: For data analysis, Yi Chin Liu'squestionnaire (2008) was used. To investigate its validity, ten professorsreviewed and evaluated it and confirmed its formal and content validity. It should be noted that the questionnaire validity had also been confirmed in previous similar studies. Then the questionnaire was distributed among 30 users of public and private sports facilities, who did not participate in the original planand were randomly selected, and its ambiguities were resolved. Then the questionnaire reliability (0.92) was calculated using Cronbach's alpha coefficient. Table 1 shows the reliability of each of the five dimensions of the research tool.

Descriptive and inferential statistical methods were used for data analysis. Descriptive statistics include frequency tables and percentages, mean and standard deviation. Ininferential statistics, the Kolmogorov-Smirnov test was used to test data normality, and the independent t-test was used to compare the service quality in public and private sports facilities. For rating dimensions of service quality in public and private sports facilities, the Friedman test was used. All statistical calculations were performed at $P < 0.05$ level using SPSS-18.

RESULTS

After collecting data from questionnaires and data analysis, the following results were obtained. In terms of sex, 67.4% of users of public and private sports facilities were male and 32.6% female. In terms of marital status, 56.5% of users were single and 43.5% married. In terms of age, 5.8% of users were under 20 years, 45.8%between 21 and 25 years, 44.3%between 26 and 30 years and 4%were 36 years and older.. In terms of the used sport places, 45.9% of users mostly used multipurpose facilities, 39.2% pools, 7.5% martial facilities, 3.4% grass fields and 3% gyms. In terms of the frequency of using sport facilities, 23.1% of users exercised once a week, 46.0 percent 2 to 3 times, 25.6 percent 4 to 7 times and 3.5 percent more than 7 times a week. Moreover, 12.6% of users declared the purposeof using sports facilities waschampionship, 28.1%physical power, 29.1%health, 0.8% communication, 13.1% fitness, 1.0% weight control and 15.3% recreation.

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After analyzing the data obtained by questionnaireindependent t-test was applied. Resultsshowed that there is no significant difference between service quality in public and private sports facilities (P>0.05). Comparing the five service quality dimensions in public and private sportfacilities showed that there is a significant differenceonly in the empathy dimension between the two location types (P<0.05). There is no significant difference in the tangible quality, confidence, accountability and trust dimensions between the two location types (P>0.05) (Table 2).

About rating the service quality dimensions in public and private sports facilities,the Friedman test results showed that the rating of the five dimensions in both cases are significant (P<0.05). The Friedman test results showed that the trust dimension in public facilities ranked first with an average rating of 4.25followed by the empathy, confidence, accountability and tangible quality dimensions with average ranks of 3.92, 2.70, 2.61, 1.90, respectively (Table 3). About private facilities, the empathy dimension ranked first with an average rating of 4.33followed by trust with an average rank of 4.02, confidence with an average rank of 2.88, accountability with an average rank of 2.46, and tangible quality with an average rank of 1.63 (Table 4).

The obtained score for service quality in private sports facilities is 55.30 Given that the maximum score of service quality in Yi ChinLiu's tool is 105, this value is slightly higher than 52.5. But if we consider the cutoff point as 0.6 which is common in researches, this value is lower than 63 (equivalent of the 6.0 cutoff point). The score obtained for the service quality dimensions (tangible quality, trust, accountability, confidence and empathy) 9.58outof 15, 14.48out of 25, and 10.95out of 20, 11.98out of 20, and 12.75out of 25, respectively. All of these scores are slightly higher than the averages of dimensionswhich are 7.5, 12.5, 10, 10 and 12.5, respectively (equivalentsof the 0.5 cutoff points). Table 5 shows the mean and standard deviation of the service quality criterion and its five dimensions for public and private sports facilities.

DISCUSSION

In recent years, due to the relative improvement in the role of sports among the general population, the service quality management has become one of the main concerns of sports managers. The quality of sportsservices is an important factor in improving and developing sports organizations (Zeithaml, 1990). The perception of service quality contributes to people's satisfaction, repurchase, positive attitude and strategic benefits (Anderson, 1984). When organizational efforts are directed towards exploring important factors for customers, understanding the customer perception of quality is critical (Jao-Chuan, 2008). Service quality is the extent to which servicesmatch with customer expectations (Alen, 2004). It is one of the most important tools for assessing customer satisfaction and is closely related to satisfaction. In fact, customer satisfaction is realized with high quality products and service (Abdul Kadir, 2011). Athanasopoulouet al. (2012) stated that among the four dimensions of space design, employees, safety and quick and easy access dimensions, employees and access are more importance in the satisfaction of football fans (Athanasopoulou, 2012). Lee et al. (2011) concluded that tangible quality and empathy are two basic dimensions inservice quality for determining satisfaction (Lee, 2011). Wu et al. (2012) consider interaction quality, physical environment of service delivery and the quality of products as three main elements of quality of service, and state thatone can meet customers' needs and expectations according to these three elements (Wu, 2012).

Probably when organizations consider different dimensions of quality of service, customers feel respected and more satisfied. Equipping clubs with modern tools and creating a beautiful environment with decent and polite staff make clients feel comfort, convenience and satisfied. Crampton et al. (1991) argue that successful management of recreational organizations depends on the quality of clients' experiences, so providing high quality experiences must be their main goal (Crampton, 1991). Barber (1990) states that high quality servicescreate a competitive marginal for the organization which can lead to the growth (Barber, 1990). This study aimed to evaluate and compare service quality in public and private sports facilities in Sanandaj. The results of this comparison showed that there is no significant difference between the service quality in public and private sports facilities. Comparing the

fivedimensionsof service quality (empathy, confidence, trust, tangible quality and accountability) showed that there is no significant difference between the two types of locations except for the empathy dimension. On the other hand, the obtained score for service quality in private sports facilities is 55.30. Given that the maximum score of service quality in Yi Chin Liu's tool is 105, it means that service quality in private sports facilities is far from the ideal situation. Results showed that all of its dimensions are in a relatively good status but away from the desired level. Next, according to the findings, somepractical suggestions are made for authorities of public and private facilities in order to provide better services.

Rating of five service quality dimensions in public sports facilities showed that the tangible quality dimension is ranked last. Lee et al. (2011) concluded that tangible quality and empathy are two basic dimensions ofservice quality in determining satisfaction. According to this rating and the immense importance of the tangible quality dimension in providing qualityservices which is essential in organizational success and user satisfaction, it is necessary for managers of public sports facilities to pay most attention to this dimension and plan for it from the beginning and provide suitable tools, spaces and sports equipment for users. According to this rating, afterthe tangible quality dimension, authorities must consider accountability, confidence, empathy and trust, respectively. In private sports facilities, authoritiesmust pay special attention to tangible quality as the weakest dimension.

Although the mean and standard deviation of the service quality criterion and its dimensions in public and private sports facilities wereabove the 0.5 cutoff point, the scores for each of the five dimensions were very close to the corresponding averages (below the 0.6 cutoff point). Thus, authorities and practitioners of public and private sports facilities should note that apart from the rating of five dimensions, the service quality and its dimensions are not in a very good status and it is necessary to attempt and plan for improving them.

Privatization is associated with competition, and private sports clubs compete with each other to attract customers and thus profits, and the competition increases the qualityofservicesin clubs,and thus customer satisfaction. However, comparing the service quality in public and private sports facilities showed that there is no significant difference between the two types of locations except for the empathy dimension. This is a warning for private clubs topromote their quality of service. The managers of public facilities should pay special attention to the empathy dimension.

Understanding the needs and demands of users is among the measures that should be at top of the priority tasks of managers in order to provide optimal quality of service. As the results showed the most important goal of users of sports facilities is health and physical power. The authorities must consider this in their planning.

Due to the fact that users use multi-purpose halls and pools more than other sport spaces, the authorities are recommendedto pay special attention to them, and in case of renovating or building new facilities, they must give priority to these two places. By providing sufficient space to use, one of the most important needs of the people,namely access to sporting venues for doing exercisesand physical activities is met.

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Table 1.Reliability of questionnaire	
Factors	α
service quality	0.92
tangible quality	0.82
trust	0.88
accountability	0.85
confidence	0.85
empathy	0.83

Table 2.Comparison of service quality between public and private sports facilities

	public sports facilities		private sports facilities		T	P
	mean	SD	mean	SD		
service quality	57.68	12.54	55.30	14.12	1.654	0.154
tangible quality	9.44	3.28	9.58	3.01	-0.261	0.699
trust	14.50	3.76	14.48	3.34	0.085	0.937
accountability	11.51	3.43	10.95	3.82	1.244	0.128
confidence	12.20	2.88	11.98	3.03	1.090	0.098
empathy	13.65	2.99	12.75	3.99	4.020	0.001

Table 3.Rating the service quality dimensions in public sports facilities

N	**service quality dimensions**	Mean Ranking	X^2	df	sig
187	trust	4.25	474.465	4	0.0001
	empathy	3.92			
	confidence	2.70			
	accountability	2.61			
	tangible quality	1.90			

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Table 4.Rating the service quality dimensions in private sports facilities

N	service quality dimensions	Mean Ranking	X²	df	sig
188	empathy	4.33	375.630	4	0.0001
	trust	4.02			
	confidence	2.88			
	accountability	2.46			
	tangible quality	1.63			

Table 5.mean and standard deviation of the service quality and its five dimensions for public and private sports facilities

	Public sports facilities		Private sports facilities	
	Mean	SD	Mean	SD
Tangible quality	9.44	3.28	9.58	3.01
Trust	14.50	3.76	14.48	3.34
Accountability	11.51	3.43	10.95	3.82
Confidence	12.20	2.88	11.98	3.03
Empathy	13.65	2.99	12.75	3.99
Service quality	57.68	12.54	55.30	14.12

RESEARCH ARTICLE

Investigation of E-Marketing Situation in Kurdistan of Iraq and Providing a Model to Improve the E-Marketing Situation in this Area

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ABSTRACT

E-marketing has had a significant growth in the world. This remarkable growth has caused many transactions to be performed on the internet. However, on-line trading does not have an appropriate situation in Kurdistan of Iraq. In the present study, the required conditions for e-marketing and the necessary conditions to prepare it in the area are investigated and subsequently, in order to improve the e-marketing situation in Iran, a model which is consisted of three institutions of government, on-line service providers and people is provided and afterwards, the mentioned model is validated. Finally, it is observed that the government has not provided the necessary situation for e-marketing in Kurdistan of Iraq and a situation for on-line trading in the area should be appropriately created. The suggested model in the present research is suitable to improve the e-marketing situation in the country.

Key words: e-marketing, Government, On-line Service Providers, People

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INTRODUCTION

E-marketing situation in the country of Iran was discussed. Undoubtedly, e-marketing has had a positive impact on the modern society, particularly, the consuming society. E-marketing has eliminated the monopolization of commodities that it can support the consumer. As it is expected, on-line purchases are enhancing and this has resulted in the increased interest in the study of on-line buying and also customers' on-line behavior. Use of the internet for the purpose of e-commerce that offers trading, transaction, services and information transfer through the computer networks has excessively increased. The positive impact of the internet on organizations has been confirmed in many studies. According to the fact that many researchers have emphasized on the application of the internet as a marketing instrument and additionally, since trading and business on the internet has increased and also the effects of internet on the business has been shown to be positive, the present study was performed in order to provide a conceptual model for e-marketing in Kurdistan of Iraq. The reason why e-marketing in this area does not have a good situation will be eventually explained. It is hoped that according to the factors stated in this model, e-marketing condition in Kurdistan of Iraq can be improved and selling of the Kurdistan products would be expanded on the internet.

Conceptual Model

The conceptual model presented in this section has been developed based on the country's requirements. Since the government provides the necessary conditions for on-line trading and also people visit the on-line service providers and then do their purchases, in this model three institutions have been specified: government, on-line service providers (OSP), and people. In order to create the appropriate on-line trading situation in the country, three factors should be established in the country:

Appropriate infrastructure
Security in payment
Explanation of Legal Issues

It is assumed that if these three factors are established in Iran, the required conditions for internet trading will be provided by the government in the country. On the other hand, the institution of service provider is placed on the internet and it represents an organization or company which sells its products or services through the internet. The factors that OSP should observe include the followings:

Respect for customers
Providing the support for the customers
Appropriate website
Adherence to legal issues

Another factor which should be observed by OSP is respect. As Toyota Company declares, respects means to pay the most attention to individuals, mutual understanding as honestly as possible and perfect fulfillment of duties by individuals. As the first Toyota's sales manager has stated in this regard: "Customers are always first, sellers are the next, and the factory is the last" [11]. One of the other factors which should be observed by OSP is providing supports for the customers because today transformations in e-commerce are performed in a way in which mediators have now employed their science of e-commerce as a reciprocal movement against the process needing non-brokering (dismissing mediators) in the market [12,13]. This can indicate a reason for the existence of support providing factor for OSP that as it will be clarified later, presence of this factor contributes to customer loyalty. Another factor which should be possessed by OSP is having an appropriate website. As it is said, if use of a website is difficult, people would abandon it [3]. The next factor which has been considered for OSP is adherence to legal issues;

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unfortunately, as it can be observed in surveys, legal issues have not been appropriately explained in the country which itself causes OSP not to be able to adhere to its commitments, for example, a product which must be delivered within 3 days, would be delivered within 15 days.

Another institution in this model is people. People themselves become as visitors and customers under some transformations, but they must have the necessary conditions. It is assumed that people in order to become visitors should hold 3 conditions: increased penetration coefficient, easy access to the internet and culture building. For example according to the statements of the Statistical Center of Iran, data collection results related to the internet users have been as follows: in the year 2008, the internet penetration coefficient was 11.1% and in 2010 it has been 14.7%. In 2011, the penetration coefficient was 43% and in 2012 it was 60% . This indicates the upswing of the internet penetration among the Iranians. With respect to these data, we observe the increased penetration coefficient among the Iranians and all the world. Reports related to the year 2012 suggest that Iraq and area of Kurdistan is not among the countries of the world . According to this report, it can be perceived that the Iraqinot have agood access to the internet. On the other hand, respecting the different impacts of culture on trading, the culture condition is also has been involved in this section, because until people do not have any interest in visiting the trading sites, they would not turn into customers.

Another transformation which will take place is changing from a visitor to a customer. Also, for this transformation, four conditions are required including site attractiveness, easy purchase, trust in sellers, and reasonable price. Since if the payment cycle is long, it can be considered as a challenge in internet trading, customers should be able to easily purchase on the site; however, it must be noted that companies wish to maintain their customers and the internet can cause the advancement in customer maintenance [18]; but this customer maintenance on the site should not take place in the purchase cycle. The condition of trust in sellers refers back to explanation of appropriate law in the country, which will be discussed later. For example, until a visitor does not trust an on-line seller, he would not buy anything; as it has been observed, one of the reasons why Singaporeans did not purchase on-line was their lack of trust in the sellers. The fourth condition is reasonable price. On-line purchasing power was increased since it offered a wide range choices and commodity prices on the internet, this factor can cause the sellers to lower their prices as much as possible and consequently, shoppers would purchase those products which have reasonable prices.

The next transformation which takes place is changing from a customer to customer loyalty. Sargeant and West describe loyalty as the customer's willing to return and purchase with support in anytime. Since on-line and off-line support affects customer loyalty, these two kinds of support have been placed among the required conditions. On the other hand, the issue of providing feedback is posed here, for example, EBay has developed trust and safety for buyers and sellers through some forums for feedback, that this itself can contribute to the customer's confidence in trading. In Fig. 1 the provided model has been schemed.

As it can be seen in Fig. 1, each of the transitions in the institution of people is performed through a series of conditions which are influenced by the government and OSP factors. People in order to turn into visitors require three conditions that increased penetration coefficient and access are influenced by D1 factor or appropriate infrastructure. It means that in order to have the penetration coefficient and easy access in the country, appropriate infrastructure should be provided. Four necessary conditions for a visitor to become a customer have been demonstrated where attractiveness is influenced by A1 factor or appropriate website, which is among the OSP factors. Easy purchase is affected by A1 and D2 factors. Reasonable price and trust in sellers are influenced by A4 and D3 factors. In order that a customer changes into customer loyalty, receiving on-line and off-line services are influenced by A2 factor and feedback providing is affected by A3 factor.

Model Validation

In order to perform the model validation, a questionnaire was prepared and 50 professionals in this field were provided with the mentioned questionnaire. Likert scale in which 1 means the least degree of importance and 5 means the highest degree of importance was used in order to determine the importance of the responses. The questionnaire has been prepared in three sections of government, OSP, and people that in each section, questions related to that section are asked.

Questionnaire Analysis

In the present research, validity of the questionnaire has been confirmed by the authorities of the related field. Among the most common methods to assess the reliability, one measurement instrument is application of Cronbach's alpha. Using SPSS software, this value was determined to be 0.814 which is an acceptable value for reliability.

In this test, all the questions whose answers were from 1 to 5 have been segregated based on the question and for each section a question is considered in SPSS. In order to evaluate the hypothesis claiming for high significance of the questions in this questionnaire, single-sample t-test was used. In single-sample t-test, mean variable is compared to a default value (here is the average choice i.e., 3). Statistical hypotheses of this test are as follows:

$$\begin{cases} H_0 = \mu \leq 3 \\ H_1 = \mu > 3 \end{cases}$$

Null hypothesis means that the mean of importance for each specific question is less than 3 and it means the non-significance of the intended question. Therefore, here, it is desirable to reject the null hypothesis and accept the opposite hypothesis. In order make judgment about the t-test result, Sig column in t-test output is applied. In this column, if the Sig value is less than 0.05 (0.05 is the significance level of the test or type-one error of the test), then the null hypothesis will be rejected. According to Table 1, it is observed that for all the questions the null hypothesis is rejected and as a result, all the questions are regarded to be important.

According to the Sig value for the 25 presented factors, all the factors are shown to be reliable; hence, it can be concluded that all the factors for each three institutions of government, on-line service providers and people are acceptable.

In the survey performed with 50 people in the related field on the e-marketing situation in the area of Kurdistan, whose responses were in the form of yes/no answers, the following results were obtained which are displayed in Graphs 1 and 2.

CONCLUSION

Since the results of the questionnaire were performed by t-test, acceptable results were obtained suggesting that all the conditions and effects had been properly considered. In Kurdistan of Iraq, there is neither an appropriate infrastructure, nor safety of payment and explanation of legal issues, that according to the experts' views, these three factors are among the necessities to provide the required conditions in the area; then, the government must take steps in order to realize these three important goals. Afterwards, service providers should move in the direction of rules and respecting the customers. As it was mentioned, in the present paper it is concluded that here the problem is not only the infrastructure, but also the people's attitude towards e-buying and their use of the internet are very important; and if the internet environment in this area is created in a way that there is no chance for fraud or scams,

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purchase is easy, people's access to the internet is easily possible, and support in the internet is available, then people could be interested in online purchase. This model contributes to coordinate the three institutions in the area and believes that the executive requirement is in the hands of the government and then OSP and people. This coordination can be beneficial in the application of the internet as an instrument in marketing.

Suggestions for further Studies

Factors and conditions which are considered in this model are limited. It is suggested that this model reaches to the final evolution by considering more factors.

Moreover, factor analysis can be used for the validity of the results, and consequently, it will provide better results and confidence.

Validation of this model has been performed by single-sample t-test which has been carried out through SPSS software. It is suggested to perform this validation using other tests and more precise software.

Also, it is suggested to implement this model on the sales of a product or service such as hotel management.

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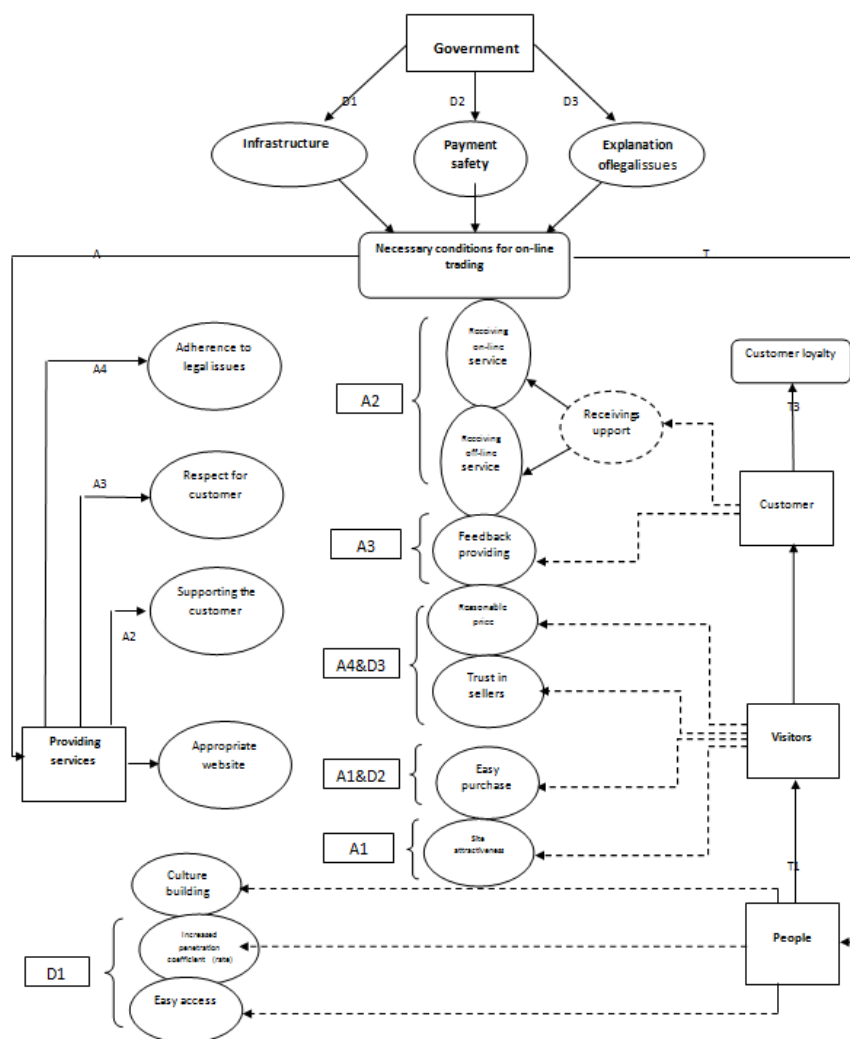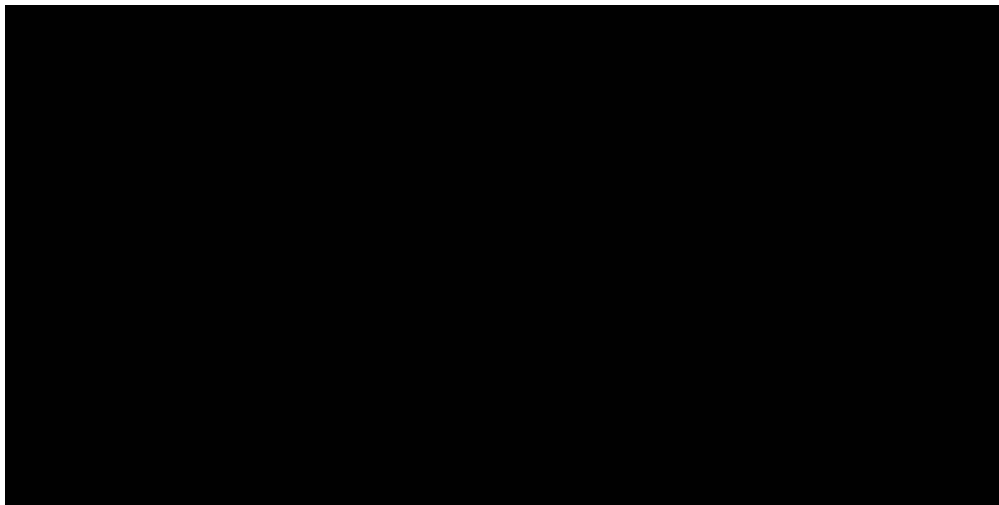
Fig. 1 E-Marketing Conceptual Model

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Graph 1. Survey Results of Question No. 12 in the Questionnaire

Graph 2:Survey Results of Question No. 13 in the Questionnaire

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Table 1. Single-sample t-test

	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	95% Confidence Interval of the Difference
Test Value = 3						
					Lower	Upper
Appropriate infrastructure	13.895	49	.000	1.390	1.33	1.64
Payment safety	33.332	49	.000	1.543	1.66	1.89
Explanation of legal issues	19.111	49	.000	1.648	1.53	1.76
Increased internet penetration coefficient in the country	19.102	49	.000	1.499	1.48	1.82
People's easy access to the internet	10.838	49	.000	1.380	1.08	1.53
e-payment safety	10.777	49	.000	1.196	.99	1.53
Reasonable price	8.081	49	.000	1.101	.88	1.39
Trust in sellers	13.987	49	.000	1.543	1.34	1.86
Easy attraction	7.102	49	.000	.974	.71	1.23
Easy purchase	11.998	49	.000	1.432	1.10	1.76
People's trust in on-line sellers	8.762	49	.000	1.109	.98	1.46
Reasonable price of on-line products	8.367	49	.000	1.043	.82	1.87
Providing feedback by customers	15.763	49	.000	1.380	1.25	1.44
Receiving on-line service by the customer	8.090	49	.000	.889	.73	1.43

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Receiving off-line service by the customer	11.888	49	.000	1.300	.93	1.57
Easy access	13.903	49	.000	1.490	1.28	1.73
Increase penetration coefficient (rate)	13.332	49	.000	1.480	1.09	1.78
Culture building	21.113	49	.000	1.860	1.76	1.66
Site attractiveness	5.788	49	.000	.870	.31	.98
Visitors will certainly purchase	8.965	49	.000	1.050	.98	1.46
Trust in sellers	13.444	49	.000	1.490	1.54	1.72
Reasonable price	16.113	49	.000	1.761	1.66	1.59
Respect for customers	22.874	49	.000	1.871	1.53	1.83
Providing support	22.378	49	.000	1.760	1.76	1.97

RESEARCH ARTICLE

Evaluation of Pollutant Level and People Exposed to CO in the Urmia City, Iran.

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ABSTRACT

Carbon monoxide is the most important pollutant emitted from vehicles in terms of weight and volume. This pollutant results in important neurological and cardiovascular effects   on people's health during long-term exposure. The purpose of this analytical-descriptive study is to investigate emissions of carbon monoxide in different Passages of Urmia city and to determine time length of exposure of people at different hours of the day. 53 sampling points across the city with a diverse application were. Sampling was performed by electro chemical portable device from beginning of traffic   (6 am) until end of traffic (1 am) at each of the stations. Total of 96 concentration data for each station were collected in the entire period. Also in this research, while measuring gas concentration,   traffic degree was obtained by counting average number of vehicles passing through a each passage.   And using linear regression analysis through EXCEL software, linear correlation coefficient between concentration of carbon monoxide and traffic was obtained. results of the study show that , compared to the standard 8-hour exposure to carbon monoxide gas (9 ppm), shift 3 of measurement (30/15 - 30/20) in summer with average peak concentration (27 ppm) in the most contaminated station, and shift 4 measurement (21-1 am) in autumn with a mean peak concentration of 6.4 (ppm) in the most contaminated station are

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respectively the most contaminated and the cleanest shifts of one-year measurement period. The results show that even in the most polluted main Thoroughfares , by moving towards the side streets, at intervals of (40-30 meters) from the main passage , concentration of carbon monoxide drops sharply and reaches (2-0 ppm). Also passages with Business-Workshop uses are the most polluted Thoroughfares of Urmia city. Also, meaningful direct relationship between concentration of carbon monoxide gas and the number of passing vehicles at each measurement station has been obtained. This study showed that vehicles have important role in carbon monoxide emission in Urmia city and control of emission from vehicles should be a as measures of priority.

Key words: Carbon monoxide, Urmia city, standard 8-hour exposure

INTRODUCTION

Increasing urbanization in developing countries, despite the general welfare, exposes a lot of health and environmental problems to communities(1). In the meantime by development of research, public and environmental health, air pollution, health and the potential effects of that are more known. So that, according to the World Health Organization report , air pollution is one of the ten leading causes of death in the world and in 2010, 1.3 million people have died as a result of urban air pollution worldwide(2, 3). And Iran is not an exception from this situation.

According to the committee (program) of public health and environment of World Health Organization (PHE) 11,129 cases have died due to illness from air external pollution (outside air) in Iran country in 2004, and in 2008 this figure has reached 17,947 people by 61 percent of increase. Results of the previous studies state that transportation is the major source of air pollution in urban areas(4, 5). Also reports of experiments conducted by the Environmental Protection Agency America (EPA) in relation to emitted pollutant from vehicles suggest that from the standpoint of weight and volume, carbon monoxide is considered an outputs pollutant in all forms of vehicle movement(6). carbon monoxide is colorless, odorless, flavorless, gas which comes mainly from incomplete combustion of hydrocarbon fuels. Another source of its emission is oxidation of anthropogenic hydrocarbons (human born) and Biogenic (environment born) (7, 8). Field concentration of this gas in air of urban areas is averagely 90 ppm (PPB), that is variable depending on daily ,seasonal changes and latitude in different cities (9, 10). Combination of this gas with hemoglobin of blood creates a compound named carboxyhemoglobin whose combinative affinity with hemoglobin of blood is 210-220 folds of oxygen. As a result, by reduction of capacity to carry oxygen, it interferes with the oxygen transport to the tissues of the body; that its acute effects in concentrations above 2% of this compounds in blood leads to death in concentration about 80% (8, 11, 12). But the most important effects of exposure to it in long term include cardiovascular diseases, neurological diseases, effects on fetus and Fibrinolysis effects(13, 14). Standard exposure with this gas in the ambient, in Iran and America is 9 ppm (8-hour contact) and 35 ppm (for 1 hour contact).(10, 15).

Different studies conducted in the world and Iran shows lack of considering standard of carbon monoxide in Thoroughfares and streets and as a result likelihood of health threats resultant from this pollutant is high.

In the study by Olajire et al(2011),emissions of several pollutants of the air such as carbon monoxide has been studied, measurement has been carried out by a electrochemical portable and the results of measurement indicates that the average concentration of carbon monoxide in sidewalks of this street has been 19.27 (ppm) concentration of this gas is directly related with amount of traffic(16). Ahmadi et al (2009), studied air pollutant emissions in 4 points of Sabzevar city. The results show that average concentration of carbon monoxide in all months of the year in each of measurement points has been above the one-hour standard (35 ppm)(17). Also in the study performed by

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Heidarnazhad et al(2004)at Tabriz, Iran, annual average concentrations of carbon monoxide in the city is 15.6 (ppm), which is higher than the standard 8-hour exposure(6).

Urmia city with a population of 680,992 persons (according to the latest census figures) is the most populated city in Western Azerbaijan. The proportion of vehicles to population in this city is 3.2 that is 1.5 times the national average (traffic police of West Azarbaijan province). On the other hand, most large factories and workshops in this city are located in industrial estates at a distance of several kilometers from the city and do not have significant effect on pollution of city air. Therefore, vehicle are considered main air pollutant emission factors in this city. In the city of Urmia, there are three fixed stations and one mobile station to measure air pollutants by the Environmental Protection Agency of Iran. But none of these three stations are located on the main and crowded thoroughfares of the city. Therefore, these stations do not report actual concentration of pollutants emitted from vehicles on the main thoroughfares of the city. Several studies conducted in other world cities have found that fixed stations can not show the actual amount of exposure with carbon monoxide by people on the streets and sidewalks(18-20). Since The maximum exposure to gaseous pollutants, especially carbon monoxide emission occurs in the nearest distance to the emission sourcse , that is streets(21-23). And pedestrians, shopkeepers, police officers and public transport drivers have the highest exposure to this gas(24-26). Therefore, in this study it has been tried to have tried , over a period of one year and in the interval from the beginning to the end of the traffic, to obtain actual concentration of people exposure to carbon monoxide pollutant by considering multiple locations with different applications as measurement station in the entire city. Also, in this study, the effect of increasing distance from the main thoroughfares in reducing concentration has been investigated.

MATERIALS AND METHODS

This descriptive – analytic study has been performed over one year (from the summer 2011 to summer 2012), to assess exposure degree of Urmia city residents with carbon monoxide gas outdoor and at various thoroughfare. For sampling 53 points with different applications were selected to represent exposure degree in the entire city. (Fig. 1a). The device used to measure the concentration of carbon monoxide is electrochemical portable device (QRAE II, RAE Systems , USA) capable of measuring gas with adsorption mechanisms both at close and open work environment. The device was calibrated by the manufacturer and zero concentration has been defined for it every day before sampling in an environment free from any source of emissions.

Sampling order as two days in month with different distribution (first, middle, and end of the week) and by considering meteorological conditions and social and cultural factors. Sampling was performed four times each station (10: 30- 6:30 am, 12 -11 am,12-16 pm, 20: 30- 16:30pm and 1-21am) for 3-2 minutes at any turn. A total of 8 times per month and a total of 96 times , sampling was done from each of the 53 stations. During the measurements at each station within 2 to 3 minutes, two concentration including mean average concentration during measurement and average peak concentrations were recorded during the measurement for the amount of gas.

In choosing the location of device it was tried to consider the least standards required for selecting the most crowded pedestrians crossing points, locations downstream of the wind, and farness from high buildings. The height of measurement has been the breathing height (160 cm above the ground). When measuring gas concentrations at every crossing or intersection by taking the imaginary line in width of street or diameter of intersection, the average number of passing vehicles per minute, after 2 to 3 minutes of counting was obtained. A total of 10.176 data related to concentration have been collected from the city during one year. This study also examined the effects of increasing distance from main thoroughfares towards side streets in amount of the carbon monoxide concentration. Therefore, measuring gas concentrations in sidewalk of main street was performed over one year during 24 days of measurement at 7 points in 4 shifts. And then by moving to by lane and measurement of gas concentrations at intervals of 10, 15 and 20 meters to reach the least I gas concentrations, mean concentrations

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was recorded. After data collection, the mean of average concentration, mean of peak concentration, and mean of traffic per season for each of the 53 stations per shift were obtained.

To determine the coefficient of linear correlation between mean of average concentration and mean of peak concentration for each shift in each season with mean of traffic in the same shift and season EXCEL MS software has been used.

RESULTS

Statistical analysis of the mean concentrations measured is based on mean of average concentrations and mean of peak concentrations, and mean of traffic per shift and per season in each of the 53 stations. The Results show that in shift 3 of Summer the highest mean of average concentrations and peak have been recorded at stations of 4, 3, 32 and 31. And the highest mean of peak concentration in station of 4 has been 27 ppm. (Fig. 2a) and the lowest mean of average peak and concentration in shift 4 has been recorded in winter. (Fig. 2b).

Investigating Correlation between mean of average concentration and mean of peak concentration with mean of traffic for all shifts in all seasons show that this coefficient is in range of $R^2 > 0.8$ in three seasons of spring, autumn, and winter; in summer season in different shifts it is in range $(0.6 < R^2 < 0.88)$.

 Thus, the lowest correlation coefficient between the mean of peak concentration of carbon monoxide and traffic in the summer shift 3 is $R^2 = 0.604$, which is the most polluted shift in the entire period of measurement (Fig. 3a). The highest correlation coefficient between the mean of average concentration and traffic is in the winter shift 3 $R^2 = 0.938$, which is the cleanest shift in the entire period of measurement (Fig. 3b).

By considering the maximum concentration recorded and the highest frequency recorded, stations of 3, 4, 32, the stations located in city ring, 31 and 14 are the most polluted points of the urmia city in terms of concentrations carbon monoxide (Fig. 1b). Investigation of the results related to measuring the impact of distance from the main thoroughfares of the city with various concentrations in the main thoroughfare shows that even in the most polluted streets and thoroughfare, by moving towards by lanes and streets concentration of carbon monoxide was extremely diluted and at a distance of approximately 30-40 meters and in breathing height gets to range of (0-2) ppm(Fig. 4). This result is true even in the most polluted shifts and season (Tables 1).

DISCUSSION

Carbon monoxide is considered as an important indicator in monitoring urban air pollutants (4, 27). This pollutant has the highest effect on occupations such as taxi drivers, pedestrians and drivers of public vehicles(28, 29). As shown in the results, in the areas with higher traffic (Stations 3, 4, 32 and 31) have the highest average of concentration and average peak. The field study also confirms the validity of this subject. The results of this study demonstrated that high concentrations of carbon monoxide in squares and centers with high population can affect for short term pedestrians and occupations commuting in this area and affect permanent jobs for long-term. A study by Marco et al (2005) in the city of Helsinki, Finland, confirms this subject(4).

By observing the results of measuring the impact of distance from the main thoroughfares on the concentration of carbon monoxide, and the results obtained from the most polluted stations , it is found clearly that the maximum exposure to carbon monoxide occurs in the main streets , thoroughfares and sidewalks; and pedestrians , shopkeepers around the streets, police officers and vehicle drivers , especially public transportation have the highest exposure to this gas. Therefore, comparison of the concentrations obtained must be with 8-hour mean of

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concentration (9 ppm) because most of the groups mentioned have exposure to this gas at long terms and even more than 8 hours.

Since in this study points with different uses have been considered and the results also indicated that concentration of gas in residential areas and by lanes where most houses are located is feom 0 to 2 ppm and also regarding location of factories and industrial towns which are in distance of several kilometers from the city, It can be concluded that traffic is the main cause of creating carbon monoxide in city. The results of this study correspond with other studies conducted in Iran(6, 17). And static sources of emissions have minor role in emission of carbon monoxide.

This study demonstrated that the major source of carbon monoxide emission as a indicator of urban air pollution is mainly transportation and can have serious effects on the health of people especially vulnerable individuals and in close contact. The results of this study can be the basis for future studies, particularly in relation to the position of fixed stations. also, relationship between the concentration and traffic can be useful appropriate design of Thoroughfares and traffic management.

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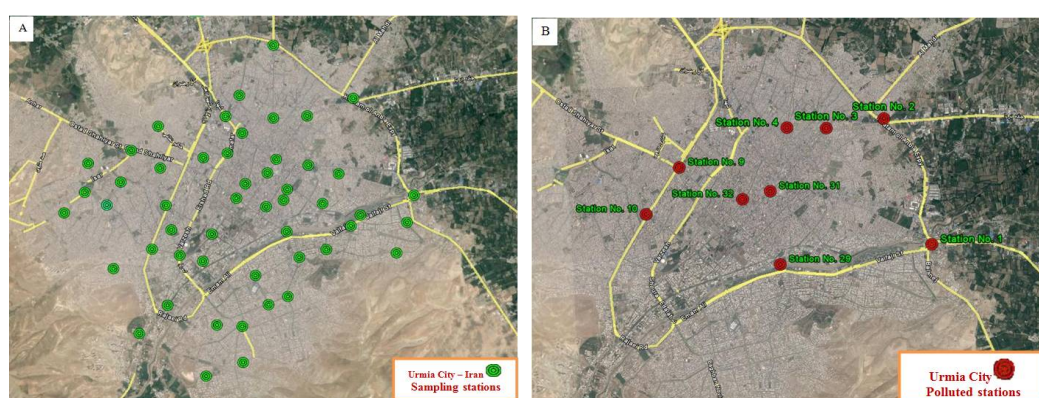
Figure 1. Location of sampling places (a) and the most polluted stations(b) in Urmia city

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a)

(b)
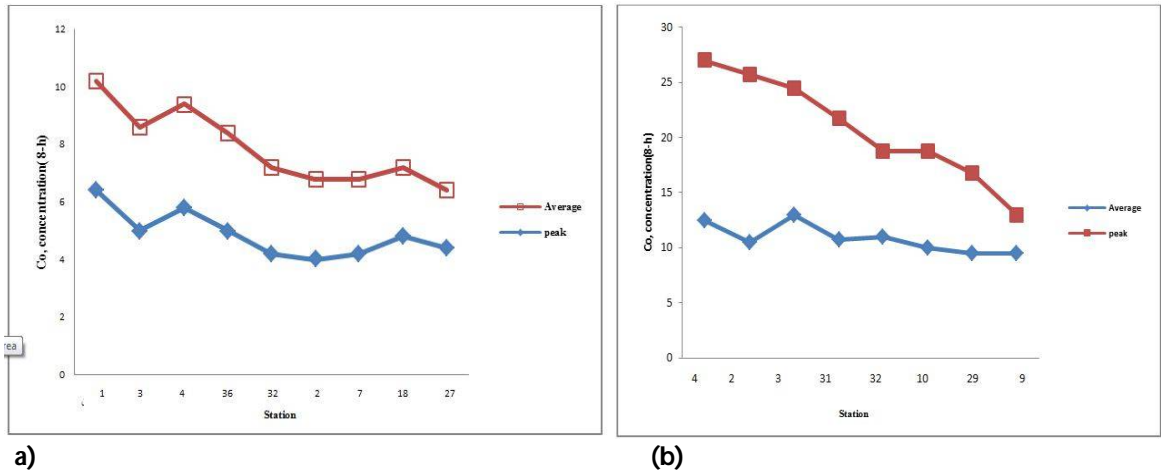
Figure 2. Mean of average and peak concentrations of carbon monoxide in the most polluted stations of summer shift 3 (a), shift 4 of winter (b). The plotted have standard deviation .

(a)

(b)
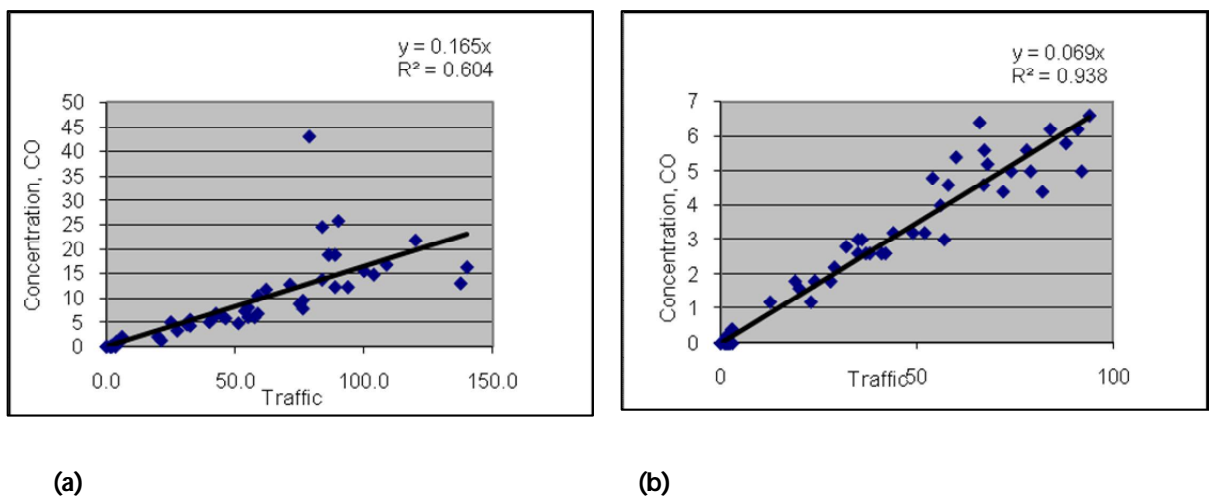
Figure 3. Correlation between the mean of peak concentration of carbon monoxide and traffic in the summer shift 3 (a), Correlation between the mean of peak concentration of carbon monoxide and traffic in winter shifts 1 (b).

(0)   **(a)**

(b)   **(c)**

(d)   **(e)**

(f)   **(g)**
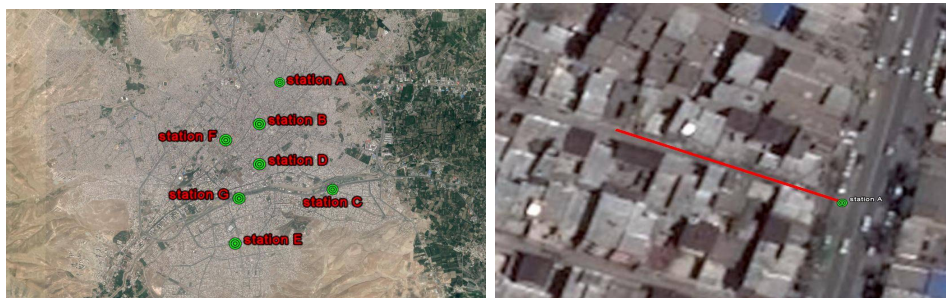
Fig 4. Impact of distance from the main thoroughfares and moving towards by lanes and streets on concentration of carbon monoxide. Location of station(0), Sampling points(a-g).

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Table 1.Results of measurements with in thorough fares, men of shift 1 to shift 4

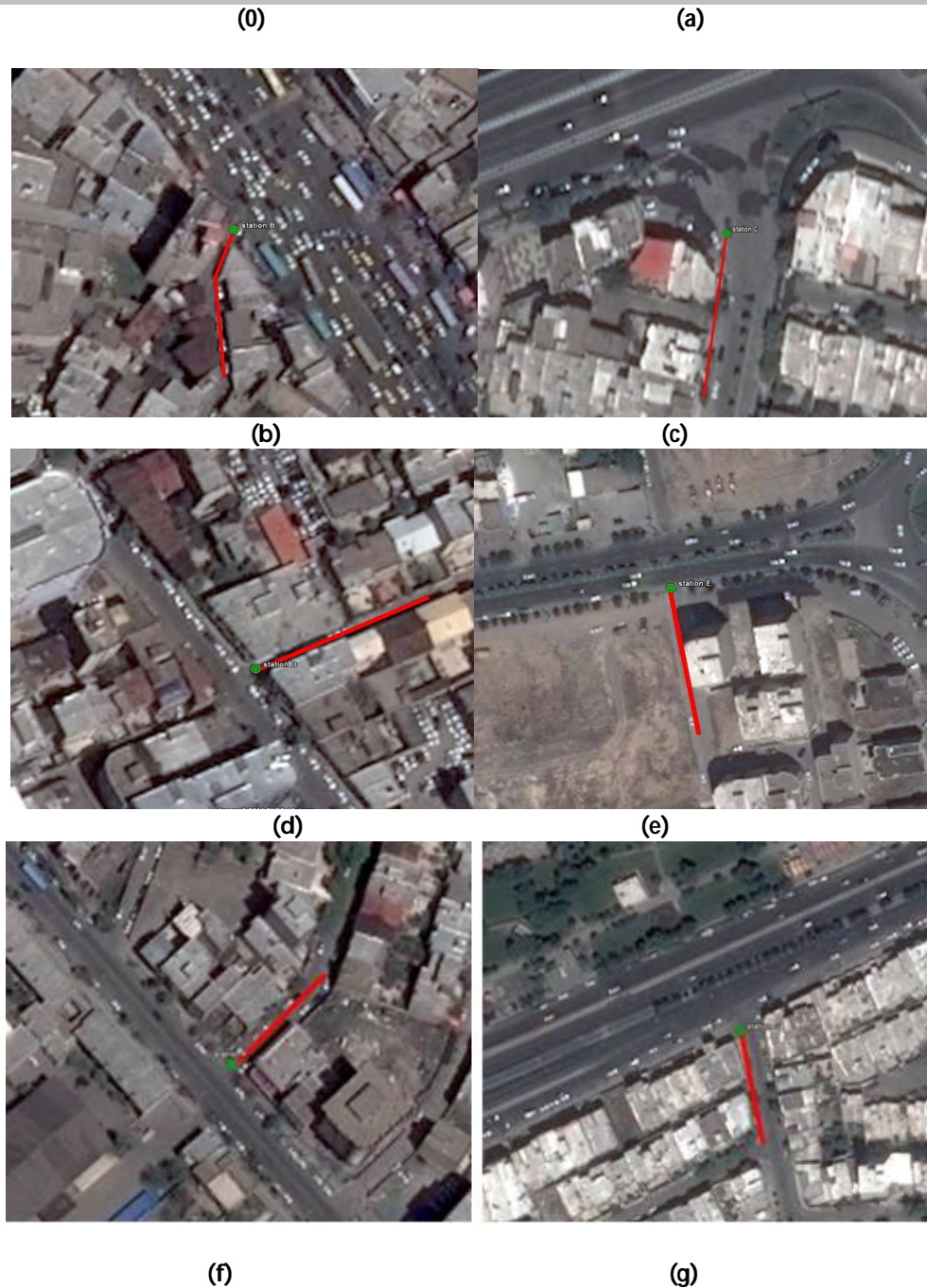| Co (ppm)	Distance from main street (meter)	CO (ppm) In main street Shift 4	Co (ppm)	Distance from main street (meter)	CO (ppm) In main street Shift 3	Co (ppm)	Distance from main street (meter)	CO (ppm) In main street Shift 2	Co (ppm)	Distance from main street (meter)	CO (ppm) In main street Shift 1	Station
2	10 meter	4	8	10 meter	13	5	10 meter	9	4	10 meter	7	Station A
0	20 meter		3	20 meter		2	20 meter		1	20 meter		
0	30 meter		0	30 meter		0	30 meter		0	30 meter		
13 M	Co = 0 ppm		25 M	Co = 0 ppm		23 M	Co= 0 ppm		23 M	Co = 0 ppm		
1	10 meter	3	3	10 meter	7	4	10 meter	7	2	10 meter	6	Station B
0	20 meter		2	20 meter		1	20 meter		0	20 meter		
0	30 meter		0	30 meter		0	30 meter		0	30 meter		
11 M	Co = 0 ppm		23 M	Co = 0 ppm		21 M	Co = 0 ppm		14 M	Co= 0 ppm		
2	10 meter	3	5	10 meter	5	1	10 meter	4	3	10 meter	4	Station C
0	20 meter		2	20 meter		0	20 meter		0	20 meter		
0	30 meter		0	30 meter		0	30 meter		0	30 meter		
13 M	Co = 0 ppm		22 M	Co = 0 ppm		13 M	Co = 0 ppm		16 M	Co= o ppm		
0	10 meter	1	2	10 meter	5	3	10 meter	5	2	10 meter	4	Station D
0	20 meter		0	20 meter		0	20 meter		0	20 meter		
0	30 meter		0	30 meter		0	30 meter		0	30 meter		
4 M	Co = 0 ppm		13 M	Co = 0 ppm		14 M	Co= 0 ppm		12 M	Co = 0 ppm		
0	10 meter	2	1	10 meter	3	0	10 meter	3	0	10 meter	2	Station E
0	20 meter		0	20 meter		0	20 meter		0	20 meter		
0	30 meter		0	30 meter		0	30 meter		0	30 meter		
5 M	Co = 0 ppm		6 M	Co = 0 ppm		8 M	Co = 0 ppm		6 M	Co = 0 ppm		
2	10 meter	2	4	10 meter	6	2	10 meter	6	1	10 meter	4	Station F
0	20 meter		1	20 meter		0	20 meter		0	20 meter		
0	30 meter		0	30 meter		0	30 meter		0	30 meter		
12 M	Co = 0 ppm		21	Co = 0 ppm		13 M	Co= 0 ppm		11 M	Co = 0 ppm		
1	10 meter	3	3	10 meter	5	3	10 meter	6	2	10 meter	5	Station G
0	20 meter		0	20 meter		1	20 meter		0	20 meter		
0	30 meter		0	30 meter		0	30 meter		0	30 meter		
12 M	Co = 0 ppm		16	Co = 0 ppm		22	Co = 0 ppm		13	Co = 0 ppm		

M = distance from the main thorough fares to zero concentration

RESEARCH ARTICLE

Investigating the Relationship between the Managers Time Management and their Job Satisfaction in Sirjan&Najafshahr Municipalities

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ABSTRACT

This research designed to investigate the relationship between the managers time management and their job satisfaction in Sirjan&Najafshahr municipalities .This inquiry is an applied-base objectiveand a correlative-base nature/ methodology. The population comprises all the above enterprise managers (Supper-Middle-Operational),the number of them adds up to 129 in 2015.Due to the population limitation ,all of them chosen as sample, then studied in census manner.The data gatheringtools have been 2 standard questionnaires .The findings show that the managers time management(also its components) are not positively and significantly related to their job satisfaction. Meanwhile in order to improve the managers time management and promoting their job satisfaction, some constructive recommendations offered to the relevant authorities.

Key words: Time management, Goal-setling& prioritizing them ,Time management mechanics, Establishing discipline and organizing , Managers job satisfaction

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INTRODUCTION

Today, experts and involvers in the field of management are introducing a new subject, entitled   "effective management", so that in our time efficiency and productivity are the highest goals and the most important destinations for all managers. In the other words, all are in search of greater efficiency and higher productivity of the result, and their efforts are formed in these directions. (Alvani, 1991:66) According to the new expert's view, applying "time management is one of the main terms and Conditions for the effectiveness of managers ", in a way that Locket (2000) explained time Management is the key to self-directing and effectiveness. He considered time controlling is vital for any manager who wants to reach the main results. Also other experts who particularly work in the field of time management and study are as follows: Mackenzie (2003), and Farast (2002) who presented their theoretical foundations in "Time Trap" and Time Management "books. They believe employees are the most important and the most valuable assets of an organization .So, time is one of the rare resources that if used correctly, creates time changes in all organizational elements. (Moein,2004 : 29). In addition to the aforementioned experts, Experts such as Mintzberg, Katter and Carlson have provided researches and studies about time management but previous scholars' research have been more comprehensive. Time management organizational skill issue is dedicated to those who are responsible for the management of an organization. Those kinds of skills that a manager does to use time favorably to develop goals in an organization and goals which are in relation with professional task of his own. And also an environment that this kind of skill is used is the organizational and management administrative environment (Farast, 1978;45). One leading theory related to time management is Macan model (1994). The main aspects of time management in aforementioned models are: 1. The objectives and priorities determination in the other words ,determination of business needs and the most important tasks to perform properly. 2. Mechanics of time management or planning, scheduling and providing a list that is going to be done.3. Time control that means the ability to remove the waste of time elements in the work environment.4. Organizing or arranging of the office and having everything in its place. Time management is recognized as an important factor for productivity measurement. When productivity rises, a person feels happy. Job satisfaction is a feeling that people have about their jobs. When we say that a person has a high job satisfaction, it means that the person generally likes his job and he serves a good value for the job and he has a positive feeling about it. Several factors influence job satisfactions which are indoor environment, outdoor environment and job duties. Keynes Berg and colleagues divided job satisfaction into two types. Inner satisfaction comes from two sources. One is the joy feeling of humans which is gained from activity involvement and employment as well as the joy of viewing or doing some social responsibilities and displaying individual's abilities and tendency. Other is external satisfaction which is related to the conditions of employment and work environment and job satisfactions and every moment is changing. These include the work environment, wages and bonuses and the type of work and the relations between workers and employers. Meanwhile, the inner satisfaction is stabler than outer satisfaction. (Shafiabadi, 1993: 124).People who work in the organization play an important role in organizational performance, and also the consent of the people of the organization, plays a considerable role in efficiency and performance of the organization, It seems the positive feelings and attitudes of people in relation to the organization and their job can opens doors to many of the current problems in the organization. Also, when a person has high job satisfaction, this means that the person feels well about his job and the job has great value for him. The results show that employees with higher job satisfaction are in good condition both physically and mentally (Zomorodian, 2003:82).Besides ,Smith, Kendall and Hulin argue that job satisfaction is the introduction of several interrelatedtrends: the job itself, wage, opportunities for promotion, supervision and colleagues .Following listed aspects individuals should have positive interactions and good human relationships and mental health.They should think that existence of every one cause other's growth. In this case they are satisfied with their jobs (Mohammad Zadeh and Mehrvarzan ,1996:85).

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Research Literature

Time is the most precious and the most valuable resource and no lost time can be returned (Zali, 1996:20). Time is the most valuable resource which is available for organization managers andcomparing to other resources it has specific features. Its main features are the ability to use itcontinuously and irreversibly and also it is possible to be saved. With the existence of this source, the other sources can be useable and when there is time the other sources gain value. Therefore, organizations need managers so that they can plan to make the best use of their time (Nazem and GhaedMohammadi, 2007: 11). One of the most important uses of valuable limited time is the constant and conscious application of time management. Time management is a formof selfmanagement with an emphasis on individual or group discipline and optimum efficiency of time; In order to allow an individual to apply his creativity and capture time in the best way and minimize lack of time stress with regular planning and calculating (Soosani, 2008:83).Time is a unique resource that will not be replaced if it is lost .Paying attention to time and using time efficiently has a long history. In traditional societies, movement of sun and moon was the base of time perception. The further societies developed, the more complex concept of time became. In the world of living creatures, only human being understands time and tries to control it. Perception of time concept is influenced by our culture. This influence originates from the fact that time is a subjective concept, not a physical reality (HesumiSarikhany, 2010:3).Although time is a valuable asset, but is exhaustible. Only those people use every moment of this asset to gain happiness and perfection; In the future and in the end they will not regret about their past.

Among all the available resources, time is the most precious one but it does not have the dignity which deserves .Cause of the most irreparable failure of an individual's life, work, and social is the result of lack of proper use of time .In the human world, nothing is more important and more valuable than time. Time is the only asset that an individual can achieve everything through it, but an individual cannot achieve time through anything. Have you ever thought that the time is limited and every moment becomes less and less with ticking of the clock? It is only in light of the optimal management of time that you can reach your dreams and desires .Success and failure are due to the use of time (MalekAra, 2009: 85). If what said in the above is managed, we feel satisfied with ourselves and also our job. Job satisfaction means one likes terms and conditions of job which work is done in that condition and the rewards are received for that (Mirdarykondi, 2010:64). Job satisfaction has a complex conception the same as motivation, which manifests itself in different ways in different people. Job satisfaction that is a major achievement of organizational and also is in connection with motivation can be an emotional response to various aspects of work (such as wage, supervision and benefits) or is construed to the work spirit which is often used interchangeably with the satisfaction of a group or organization, but most of the time suggests connotation of group or organizational dependence (Jazani, 2001:152). Based on the above, we can say "job satisfaction" means a person feels happy of the work he does and consequently finds encouragement for the jobs and becomes dependent on it. "Job satisfaction is a favorable, emotional and positive condition which is result of the job assessment with the job experience (Mir Drikondy, 2010: 74) .Scholars presented various definitions of job satisfaction that some of them are listed below: Fischer and Hanna consider job satisfaction as internal factors and know it as an adaptation with job and employment conditions, if the job provides favorable enjoyment; an individual will be satisfied with his job. In contrast, if the person's job is not desirable for him, he will not enjoy his job and change his job. Happock: He defines Job satisfaction as a complex and multidimensional concept that is in relation with the psychological, physical and social factors. Job satisfaction is not only cause of a factor but also is a combination of variety of factors that an individual feels satisfied in a specific moment of his job and tell himself that he is satisfied with his job and he enjoys it.An individual emphasizes on factors such as income, social value, working conditions and employment products in different times. Through this emphasis he feels satisfied with his job in different ways. The above mentioned writer compared job consideration and job satisfaction. One's job consideration attitude is defined as one's reaction towards an aspect of his job and one's consideration attitude towards different aspects of his career form job satisfaction (Shafiabadi, 1993:124).

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Research History

(1)In a research, BabayiNadinloyi et al (2013) examined the effectiveness of time management training in MohagheghArdebili University. In this study, 70 students were randomly selected from MohagheghArdebili University in Iran then divided into witness and experimental groups. Witness group received 10 sessions of time management training classes but experimental group did not receive any training classes. The results showed that the time management skills of experimental group are much better than the control group.(2) Ojokuku and ObasanKehinde (2011) studies showed the impact of management on organizational performance over 1500 employees in South West Nigeria. Time management is a very important inner factor in management which affects on the ability to guide behavior, thought, effective communication with colleagues, supervisors, customers and the use of time in order to promote results. This factor is represented as a good tool to achieve any organizational goal. (3) Kamil Erkan Kabak et al (2014) in a research entitled "Strategies for Job satisfaction "studiedTurkey service sectors. The purpose of this study was to measure the impact of TQM activities on job satisfaction for small and medium enterprises. In this study five methods of TQM is studied which are (Training of employees and training and education, employee relations and teamwork, employee rewards and recognition, quality culture and employee empowerment). The results show that employee training, education and training, employee relations and teamwork are the dominant factors in job satisfaction.(4) Gayathiri and Ramakrishnan (2013) did a research entitled "The quality of work life and relation with job satisfaction and performance" in Indian hospitals.In this paper an attempt has been made to verify information on the quality of life; in order to identify the concept and measurement of variables and their relationship with job satisfaction and job performance.The findings show that the job satisfaction is influenced by quality of work life.Also,Increasing of performance and efficiency are influenced by job satisfaction.

Research Purposes

The Main Research Purpose

The study of relationship between job satisfaction and time management of managers in Sirjanand Najafshahr municipalities.

The Secondary Objectives

1. Description of time management status in Sirjan and Najafshahr municipalities
2. Description of the managers' job satisfaction status in Sirjan and Najafshahr municipalities
3. Determination of the relationship between time management components and the Managers job satisfaction in SirjanandNajafshahr municipalities

Research Hypotheses

Main Hypothesis

There is relationship between time management and the managers job satisfaction inSirjanandNajafshahr municipalities.

Secondary hypotheses

1. There is a relationship between determining objectives and prioritizing them withthe managers' job satisfaction in Sirjan and Najafshahr municipalities.

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2. There is a relationship between time management mechanics and the managers' job Satisfaction in Sirjan and Najafshahr municipalities.
3. There is a relationship between control over time and the managers satisfactioninSirjanandNajafshahr municipalities.
4. There is a relationship between establishment of organization and order andthe manages' job Satisfaction in Sirjan and Najafshahr municipalities.

METHODOLOGY

This research purpose is applied and the nature and method of it is correlation. Applied researches are those that use the background, cognitive fields and information which are provided through basic researches to meet human needs and improve and optimize the tools, objects and patterns for developing human welfare and promoting human's life level. In other words, because the result of this search is used for an organization (the questioned municipalities).It is an applied research. Also in the correlation research, its main purpose is to determine whether between two or more quantitative variables (measurable) relationship exist and if there is, how much is it? (Khaki,2004 : 121).In other words, as in this study, the relationship between two variants (time management and job satisfaction) is studied, the research is a correlation.

DEMOGRAPHICS RESULTS

(1)121 subjects were studied, 79 % (94) were male and 20% (25) were female. In addition, 2 subjects did not specify their gender.
(2) The education level of 121 subjects were studied, 14% (17 cases) diploma, 12.3% (15) AA.52% (63) BA, 18.1% (22) MA, and 1.6% (2) PhD. In addition, 2 subjects did not specify their education.
(3) 121 subjects were studied, 14 percent (17) less than 30 years, 34% (41) between 30-35 years, 12% (14) between36-40 years, 16% (19) 41-45 years, 12% (15), 46-50 years, and 9% (11) 50 years and older.
(4)121 subjects who were studied, marital status of 13.2% (16) were single and 86% (104) were married. In addition, 1 subject did not determine his marital status.
(5) 121 subjects who were studied, work experience of 24% (29) was less than 5 years, 27% (32) of 10.6 years, 22% (27) between 11-15 years, 12% (14) between 16-20years and 3% (4) between 21-25 years and 10% (12) between 26-30 years and 2% (3) over 30 years.

Check the Assumption of Normality for Variables

Kolmogorov - Smirnov one sample test is used to check the normality assumption of the variable aspects of studied time management. The results indicate that the assumption of normality is rejected for all variable aspects of time management and job satisfaction. ($P < 0.05$).

The Analytical Data and Test Research Hypotheses

The Main Hypothesis of this Study

There is a significant relationship between time management and job satisfaction in Sirjan and Najafshahr municipalities.
H0: There is no significant relationship between time management and job satisfaction in Sirjan and Najafshahr municipalities.

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H1: There is a significant relationship between time management and job satisfaction in Sirjan and Najafshahr municipalities.

Spearman correlation coefficient was used to investigate the relationship between time management and job satisfaction.

Spearman correlation test results show that there is no significant relationship between time management and job satisfaction (significance level greater than 0.05).

Secondary Research Hypotheses

1. There is a significant relationship between determining goals and prioritizing them and job satisfaction in Sirjan and Najafshahr municipalities.

H0: there is no significant relationship between determining goals and prioritizing them and job satisfaction in Sirjan and Najafshahr municipalities.
H1: There is a significant relationship between determining goals and prioritizing them and job satisfaction in Sirjan and Najafshahr municipalities.Spearman correlation coefficient was used to investigate the relationship between job satisfaction and goals setting and goals prioritization.
Spearman correlation test results show that there is no significant relationship between determining goals and prioritizing them and job satisfaction (significance level greater than 0.05).

2. There is significant relationship between time management mechanics and job satisfaction in Sirjan and Najafshahr municipalities.

H0: there is no significant relationship between time management mechanics and job satisfaction in Sirjan and Najafshahr municipalities.
H1: There is significant relationship between mechanics of working hours and job satisfaction in
Sirjan and Najafshahr municipalities.
Spearman correlation coefficient was used to investigate the relationship between job satisfaction and time management mechanics.
Spearman correlation test results show that there is no significant relationship betweenmechanics of working hours and job satisfaction (significance level greater than 0.05).

3. There is significant relationship between control over time and job satisfaction in Sirjan and Najafshahr municipalities.

H0: There is no significant relation between job satisfaction and control over time in Sirjan and Najafshahr municipalities.
H1: There is significant relationship between control over time and job satisfaction in Sirjan and Najafshahr municipalities.
Spearman correlation coefficient was used to investigate the relationship between job satisfaction and control over time.
Spearman correlation test results show that there is no significant relationship between job satisfaction and control over time (significance level greater than 0.05).

4. There is significant relationship between discipline / organization and job satisfaction in Sirjan and Najafshahr municipalities.

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H0: there is no relationship between discipline / organization and job satisfaction in Sirjan and Najafshahr municipalities.

H1: There is significant relationship between discipline / organization and job satisfaction in Sirjan and Najafshahr municipalities. Spearman correlation coefficient was used to study the relationship between discipline /organization and job satisfaction.

Spearman correlation test results show that there is no significant relationship between discipline /organization and job satisfaction (significance level greater than 0.05).

Finally, to check the status of job satisfaction and time management, a question arosethat how is the prioritization of different aspects of questioner? Duncan's test was used to answer the above question. Duncan is a post hoc test. That is a subdirectory of the variants analysis test which prioritizes aspects of a variable according to their effects, after comparison of both averages and their interactions.

According to the obtained amounts, time management aspects are prioritized as follows:

1. Control over time.
2. Discipline / organization and time management mechanics.
3. goals- Setting and prioritizing

According to the obtained amounts, job satisfaction dimensions are prioritized as follows:

1. Job satisfaction and promotion satisfaction
2. Satisfaction with Superiors
3. The rights and benefits satisfaction and satisfaction with colleagues

Data Collection Tools

In this study two standard questionnaires were used as follows
(1) Time Management Questionnaire, Macan's standard questionnaire (1994), which consists of 20 questions.
(2) Job Satisfaction Questionnaire, of Wisoky and Crum's standard questionnaire (1994)which is containing 32 questions.

Validity and Reliability of Data Collection Tools

Any research can be made worthless through wrong and insufficient measurement.So, validity test of data collection is very important. Validity is a term that refers to the goal which the test is made to achieve it. The determination of validity of a test is defined as the experts' judgment regarding how much the questions of research represents the content and purpose of study (Arefi, 2009:33).Validity or reliability of the measurement tools of study refers to the precision of the tools .A test tool is valid if in a short distance , two sets of questionnaires are distributed among subjects and the subjects' responses are close to each other.Otherwise, the data collection tools don't have a high validity. (Arefi, 2009: 34).

Validity

The ideas of five faculty members of management Department of Islamic Azad University were used in order to determine the validity of time management and job satisfaction questionnaires. The questionnaires were sent to them and they were asked to express their opinions regarding the appropriateness of the questions related to the aspects, and based upon the options: quite good, good, fair, poor and very poor. After collecting the questionnaires, necessary structural reforms were applied.

Reliability or Credibility

The Cronbach's alpha method used in order to test the reliability of the questionnaire. According to this method, a preliminary study on 30 subjects done and Spss statistical software used and according to it, reliability levels were derived 93 percent for time management and 85 percent for job satisfaction respectively. The amounts of this parameter indicate that the questionnaires are of high reliability.

DISCUSSION AND CONCLUSION

The result of this study shows that in general there is no significant relationship between managers' time management and job satisfaction in Sirjan and Najafshahr municipalities. The main hypothesis test results showed that time management doesn't have significant effect on managers' job satisfaction in Sirjan and Najafshahr municipalities. These findings suggest that if managers strengthen their time management skills at various levels of management, undoubtedly better job satisfaction will be provided. The test results are generally different from the findings of Mansoori's study (2009) which is entitled the study of relationship between time management and Teachers' job satisfaction in Marvdasht. Because Mansooris' population is teachers but this study's population is managers. It looks like another variable as a mediator adjusts the relationship between the two variables. For example, it is possible that this study has different results from the studies in governmental organizations of Kerman province or other organizations. The first sub-hypothesis test results showed that determination and prioritizing goals has no significant effect on job satisfaction in Sirjan and Najafshahr municipalities. The results indicate that managers achieve effective and useful results from determining and prioritizing the goals. The results of Mansoori study (2009) entitled "The relationship between job satisfaction and time management of Marvdasht high school teachers in aspects of setting goals and prioritizing them ". This study is in line with the outcome of this research and it confirms the result of this research. The second sub-hypothesis test results showed that job satisfaction mechanics has no significant effect on job satisfaction in Sirjan and Najafshahr municipalities. The core of (time management) is planning. Undoubtedly managers will be more successful with planning, scheduling and providing list of the works that is going to be done. The results were compared with findings of Mansooris'study(2009)entitled " The study of the relationship between job satisfaction and high school teachers' time management of Marvdasht" and the result of two studies are completely different because Mansoori's research population is employees but the present study population is managers. It looks like another variable as a mediator adjusts the relationship between these two variables. The third sub-hypothesis test results showed that the control over time has no significant effect on job satisfaction in Sirjan and Najafshahr municipalities. Managers need to omit time wasting factors in work environment to raise their performance. The results of present study were different from Mansoori's findings (2009) entitled" The study of relationship between time management and job satisfaction of high school teachers of Marvdasht, becauseMansoori'spopulation is employees but present research population is managers. It seems there is another variable as a mediator that adjusts the relationship between the two variables. The fourth sub-hypothesis test results showed that the discipline and organization has no significant effect on job satisfaction in Sirjan and Najafshahr municipalities. In order to work effectively, one should regularly make sure of having everything in its place and schedule everything of the office. Just defining important tasks cannot be a reason for an urgency matter. The results of this study are different from the findings of Mansoori's research (2009) entitiled "The study of

relationship between time management and job satisfaction of high school teacher in Marvdasht. Because Mansoori'spopulationis employees but the present research population is managers .It seems there is another variable as a mediator which adjusts the relationship between the two variables.

Limitations of the Study

There are problems and limitations in the process of doing any research. In other words, it is possible that terms and conditions cannot be provided to do this study. In this study, the researcher is faced with restrictions that the most important are pointed as follows:

1. Lack of sufficient awareness of managers and employees about the importance of research that led to the non-cooperation of a number of respondents (8) in the questionnaire.
2. Popularly it is believed that studies are ineffective which may reduce the accuracy in responding the questionnaire.

Recommendations Based on the Results

Regards to this study results, the following recommendations are provided to improve time management and job satisfaction for all in Sirjan and Najafshahr municipalities:

1. According to the amount of descriptive indicators and being the average time management at high amount (4.18) to in Sirjan and Najafshahrmunicipalities is recommended:

A) All the managers and employees should be justified about the correct operation of the time through holding workshops.
B) In weekly or monthly public meetings, determine their strengths and weaknesses.
C) Substructures in need should be provided.
D) Classes should be held to raise awareness among managers
E) Classes should be held which aimed at promoting the objectives and priorities of the respective municipalities managers.

2. According to the amounts of describing parameters and the managers' moderate job satisfaction (3/53) is recommended Sirjan and Najafshahr municipalities:

A) An individual's competence should be taken in to account to promote employees.
B) Training classes should be held to create communication between colleagues and to create an intimidate atmosphere.
C) Wage payments and benefits should be revised to increase job satisfaction among managers.
D) Necessary cultural context should be provided to creat diversification in the work for job enrichment.

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Table 1: Correlation between job satisfaction and Time Management

Variable	Job satisfaction			Relation existence
Time management	Spearman correlation coefficient			Nothing
	Correlation coefficient	Significant level	amount	
	%22	*0/829*	*121*	

Table No.2-A Correlation between job satisfaction and their objectives and priorities

Variable	Job satisfaction			Relation existence
Determining aims and prioritizing them	Spearman correlation coefficient			Nothing
	Correlation coefficient	Significant level	amount	
	%126	*0/213*	*121*	

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Table No.3-ACorrelation between job satisfaction and time management mechanics

Variable	Job satisfaction			Relation existence
Time management mechanics	Spearman correlation coefficient			Nothing
	Correlation coefficient	Significant level	amount	
	0/048	*0/636*	*121*	

Table No.4-Corroletion coefficient between job satisfaction and control over time

Variable	Job satisfaction			Relation existence
control over Time	Spearman correlation coefficient			Nothing
	Correlation coefficient	Significant level	amount	
	0/098	0/365	*121*	

Table No. 5-Correlation coefficient between job satisfaction / discipline and organization

Variable	Job satisfaction			Relation existence
Discipline and organization	Spearman correlation coefficient			Nothing
	Correlation coefficient	Significant level	amount	
	-/011	0/913	*121*	

Table No.6-Study of prioritization the managerstime management components

Time management components	1	2	3
Control over time	4.0000		
Discipline and organization		4.1999	
Time management mechanics		4.1560	
Determining aims and prioritizing them			4.3864

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Table 7: Study of prioritization the managers Job satisfaction components.

Job satisfaction components	1	2	3
Satisfaction with job	3.2052		
Satisfaction with promotions	3.3743		
Satisfaction with superiors		3.5896	
Satisfaction with rights and benefits			3.8188
Satisfaction with communication with colleagues			3.9524

RESEARCH ARTICLE

Nationalist Emotions in Akhavan Sales's Poetry

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ABSTRACT

Mehdi Akhavan Sales, as one of the greatest contemporary poets of Persia, has a strong influence on contemporary Persian poetry.
A distinguishing feature of his poetic style is much attention to the country and its culture and history so that his verses are enriched with national elements and a variety of linguistic archaism.
His great interest in the country and its spiritual and material resources results from several factors; this article discusses the most important factors, as follows:

1- Need to rely on something sacred (in their own words: rooted in human land)
2- Familiarity with literature and history and frustration of lies and deceptions
3- Inconsistencies in historical, social, and national areas
4- Addressing the national culture and history as a rational reaction to avoid cultural metamorphosis and transformation
5- Compensating past ignorance and shouting a historical innocence

Key words: Country and national emotions, archaism, nationalism, Westernization, national elements and symbols.

INTRODUCTION

Nationalist Emotions in Akhavan Sales's poetry

"Loving Iran, love of the Iranian manifestations, and representation of local and national symbols", as one of the important features of Akhavan Sales' poetry, are results of several factors, the most important of which are:

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1. Need to rely on something sacred (in their own words: rooted in human soil)

Akhavan believes that poetry should be filled with human being, his environment and their reflections as he says, "I believe it is important to hold on the land and people, and being rooted in the soil, earthy man, that's all." He argues that one should not abandon its brilliant past and be satisfied with temporal affairs: "we should have faith in something sacred and great; I think we may have a sublime and humanistic faith. The faith is flowing like a sea or spring in which I am a moving fish." He insists, "In the world of art, safe steps are related to persons who are aware of their previous positions and their next steps" (Kakhi, 1991: 744).

Love to Iran and its symbols accompanied Akhavan in lifetime. His famous lyric, "O You Ancient Land, I Love Thee" published in a collection by the same name, is indeed a sign and sample of his commitment to Iran:

Your artistic thought shines, and I

Love both your thought and art,

If it is fiction or history,

Or criticism and praise, I love all (Akhavan, 1991: 224).

He says in the following of the poem, "In fact, it will pass, and the universe is the place of passing facts and it is a pathway … All I mean is I love the past and present situation of Iran, I love my homeland, I praise my mother, my land, and its great sons."

Among all his contemporary intellectuals, Akhavan was one of the first ones who condemned Saddam attack to Iran and his war with Iran by his poems; it is an undeniable proof for his love of homeland. Baha'eddin Khorramshahi writes about it:

"I believe that he had broken the collective silence and expected or unexpected negligence of intellectuals against aggressive an imposing war of Iraq on Iran; he reveals his nationalist affection in the most unintellectual way." (Kakhi, 1991: 221)

2. Familiarity with literature and history and frustration of lies and deceptions

On the one hand his familiarity with previous texts, on the other hand his frustration and sterilization of his yelling and dreams among thousands lousy white collars lead his toward the ancient culture and civilization and pure persons like Zoroaster, Mazdak, Maniand Buddha. This past element, which its representations in minds are goodness, light and truth, becomes a pretext to remit current failures and duplicities easily. Thus, he becomes a moving fish in the light of such a faith that is like a pure sea and well:

I am from Toos and love Zoroaster,

Not Arab, not Turkish, and so on (Akhavan, 1988: 126).

3. Inconsistencies in historical, social, and national areas

Every great artist has inevitable contradictions in the center of his existence; if one of the contradictions overcomes the others, the artist will be over; in this case, the only remaining will be the skills ao making an artistic work … artistic creativity is merely the casual emergence of this contradiction. This contradicts can come from the artists' individual and private matters and can be revealed in historical, social, and national areas … Akhavan Sales is also a great sample in this regard. He had some contradictions in his lifetime and he had never released himself from the contradictions (Kakhi, 1991: 271).

He was always caught in a contradiction in relation to the present and the past of Iran; he had at the same time love, affection, hatred and dislike about history, culture and civilization of the country that its different manifestations lead to the emergence of such senses. Moreover, they provide motivation for the composition of poems about national symbols, glorious past mythologies and their reconciliation with the current situation. The subject of "Mazdasht" was the result of this contradiction. In this regard, he tries to reconcile Mazdak with Zoroaster to release himself from the contradiction:

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"In short, my dear, I reconcile Mazdak with Zoroaster. I integrated the Mazdakian economy, sociology and the underlying foundation of society, the Zoroasterian morality, beliefs in the underlying, beautiful and mythological world (Ohrmazd Dadar, deities and Amshaspndan etc.) and the Manichaean and Buddhist piety, righteousness and ethics." (Akhavan, 1988: 155).

4. Addressing the national culture and history as a rational reaction to avoid cultural metamorphosis and transformation

The ideology of Iran Constitutional Revolution, with all its positive and negative points, was rooted in the West. It causes many inevitably results in Iran including "penetration of various schools of Western literature, Westernization and alienation after the constitutional revolution (Azhand, 1984: 9).
Therefore, logical reaction to the invasion of Eastern and Western ideas (left, right, and alienation) to avoid being mesmerized and cultural transformation is one of the key reasons for Akhavan's much attention to history and national symbols that might be ideal, unattainable and unrealistic in some cases.
"Oh, the tribe who is grown in the Eastern cradles,
West lovers, why you do this worse than curving tombs?" (Akhavan, 1991: 185)
He also says,
"As I say it is the invasion of the westerners,
Thanks to Arabs and Tatars for their attack" (Akhavan, 1988: 185)
Apart from having been afraid of fictitious, suspicious and apparently progressive fashion of internationalism, Akhavan was in favor of old love and faith in the style of "love to country is faith (Kakhi, 1991: 220).
He did not deceive and cheat and he was not looking for a world of illusion and holism and holistic thinking to show himself somone familiar with pain and salvation, escape from responsibilities, and shout hollow philanthropy. On the contrary, Akhavan represents his own ideal person and says, "According to Qaeli, the most national works are the most universal ones." He adds, "I am unfortunately, or perhaps fortunately, not a universal person (Tahbaz, 1991: 58). The notable issue n this regard is the fact that Akhavan did not reject the West or the East in the case of having healthy and fair relationships. He even suggests cultural trade:
"I do not know culture a discrete thing. Our present is in relation to the past, like water going under the earth and hide in a place, then, it comes up as a well in another place. Therefore, culture is not interrupted and there is always a sort of cultural clash; it means cultural trades shed the light on human relations. Nowadays, since the relationships are close, the integration is high. We should both take the cultural advantages of other civilizations and praise our culture. However, culture is not interrupted; the more it is integrated, the logical it is. World's culture belongs to all human beings and every person can take its advantages if originality does not distorted and the person do not lose his identity" (Ahmad Poor, 2009: 98).
Akhavan disagree the Ease, the West, Westernization, and the arrogance of violators:
Not Easternization, not Westernization, not Arabization,
I love for thee, the old land" (Akhavan, 1991: 229)
Mehdi Akhavan Sales wanted provide a better future by following his masters and ancestors through addressing history, past characters, and loving the country -not worshiping the country. In other words, doing so, he tried to inspire pride, magnitude and glory in the "metamorphosed bodies". He talks about Ferdowsi in this way:
Although he says about the gone persons,
But talk about those who can construct future…" (Akhavan, 1991: 136)
In "Tales of the Sangstan City", he introduces self-purification from depression and inferiority complex as the way of salvation for the prince:
"The prince should wash his body in the well,
To clean dust of centuries of his dejection,
 Ahura and the the deities and Amshaspandan,
Should be praised with elegant old songs" (Akhavan, 1988: 23)

5. Compensating past ignorance and shouting a historical innocence

Mehdi Akhavan Sales writes on the subject, "Most of the thousand-year-old poem of Iran and national language (Persian) are under the influence of Sami and Arabic and Islamic stories in terms of myths and legends. Not only stories about Imams and prophets but also stories about Al-majanin and Al-bahail (new and old persons) are unconsciously under the influence of this heritage. When one speaks of bergamot and Zilēḵā's hand cut, all know the tale, but when he speaks of Siavash and Sudabeh, Bahram and Varjavand, or one says, "the everlasting snowfall has converted Sam to a black stone," nobody knows the story.

"One may think what sort of prejudice this is; there is no difference; it is rooted either in Torah and the Bible or in the Avesta and Khwadāy-Nāmag (Book of Kings). Although all stories and their background, all myths and fictions, are the "cultural heritage of mankind" and rigidity and intolerance are irrational, I believe we can safe a history of oppression and exclusion for compensating past ignorance to help that huge world full of grace and beauty. It is a forgotten, big, strange and beautiful world of legendary heritage of our Aryan ancestors; it is not bias, but it is assistance. In this regard, I regard release from the bondage of Semitic and Arabic myths and legends, which has been repeated and trited during thousand years, as aspects and characteristics of today poetry." (Akhavan, 1988: 222).

Because of the considering and interest of the nation and national traditions and ancient history, Mehdi Akhavan Sales' poetry is replete with various national and natural elements including the name of persons and places, too many allusions to various stories and myths, and employing Persian innuendo and proverbs and folk beliefs. In this respect, some scholars like Shafi'i Kadkani consider Akhavan in the forefront of all contemporary poets. Poems such as dandelion, song of wolf, swamp, winter, Nader or Alexander, heritage, sunrise, the Shahnameh, men and ink, inscription, and the story of Sangestan represent the originality of his poems. The latter poem is a perfect example in this regard; it contains many features of Iranian life including proverbs, specific interpretations of the language ancient mythology from the ancient Iranian religion to stories told by pigeons, which is based on popular stories (Qasemzadeh, 1991: 63). Many of his new (Shere No) and Nimaian poems are in fact new and re-interpretation of the old myths. (Baraheni, 1987: 123).

For further investigations, more evidences from Akhavan's allusions to mythological-historical stories and characters or national symbols and signs are available in "Organ (*Arghanoon*, 1951, p. 13, 21, and 48)", "From This Avesta (*Az In Avestā*, 1965: p. 17, 20, 22, and 23)", "O You Ancient Land, I Love Thee (*Torā Ay Kohan Boom o Bar Doost Dāram*, 1989, p. 144 and 228)", "The Ending of Shahnameh (*Ākhare Shāhnāmeh*, 1959, p. 84) and "Hell, but Cold (*Duzakh Amma Sard*, 1978, p. 280)".

CONCLUSION

Mehdi Akhavan Sales is one of the greatest poets of contemporary Persian language and Iranian poets whose books have been published many times. Nationalism (more specifically archaism) and reflection national elements and symbols are one of the important features of style in his poetry. This article discusses the main reasons for his love leading to the emergence of his style.

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RESEARCH ARTICLE

Effectiveness of Collaborative Education of Cognitive- Behavioral Skills on Decreasing Stress, Anxiety and Depression in Women Having Undergone Hysterectomy Surgery

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ABSTRACT

The present study was conducted with aim of investigating the effectiveness of collaborative education of cognitive- behavioral skills on decreasing stress, anxiety and depression in women experienced hysterectomy surgery in Kermanshah city. 30 people were selected as experimental samples according to scientific principles using accessible random sampling and DASS questionnaires containing 21 four-choice entries investigating 3 variations consisting of stress, anxiety and depression were used for gathering data. This semi-experimental research is a pre - post testing one with a control. The descriptive and perceptive statistics (co-variance analysis) were used for analysis purposes. Results showed that:1. The collaborative education of cognitive- behavioral skills is effective on the decrease in stress.2. The collaborative education of cognitive- behavioral skills is effective on the decrease in anxiety.3. The collaborative education of cognitive- behavioral skills is effective on the decrease in depression.

Key words: cognitive- behavioral, stress, anxiety, depression, women undergoing hysterectomy surgery

INTRODUCTION

Most people believe that stress and anxiety originate from external factors, enforcers such as family problems, injustices and defeats, deprivations, conflicts and distresses which may be caused by both internal and external factors (Rajer, cited by Najarian&Davoudi, 2000: 162).

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People are affected by high physical- emotional pressures due to pre-surgery stresses. Lifelong side effects by such damages and the resultant injuries can contribute in all different news of the affected individual's life and lead to the change in lifestyle, self subjectivity and family actions and decrease in the individual's capabilities for life long term purposes and finally cause a stressful life for her/him (Saki, 2000).

All therapeutic approaches consider a place for cognition. A cognitive therapy model is based on the fact that the pressure-inducing states such as depression, anxiety and anger are continued or accelerated mostly due to the beneficial or exaggerated thinking procedures: the role of therapist is to help the patient in achieving the understanding of her/his own special thought and change it using the evidence and logic. The cognitive therapy is therefore the sequel to the long valid path of the deduction-based patterns like talking on the basis of Socrates' logic and the Aristotle procedure of gathering and classification of the information about the real world. The cognitive length is on the crucial role of 1) the excitatory cognition and 2) processing an outline as a determinant factor in data processing and the reflection of the cognitive revolution in the psychology domain during 1970s (Lihi, 1996).

The present study has functioned on the particular vulnerable class of the society. If their health functions are improved and maintained, then the family and society health is guaranteed as women are the centers of the family affection and if they are injured, then the family, particularly the spouse and children, are hurt and as a result a disabled vulnerable society will be created.Women having undergone hysterectomy surgery may be exposed to the physical and mental symptoms. The physical - mental conditions of some women improve following hysterectomy surgery (Bruner, Thodart, 2011).

People are affected by high physical- emotional pressures due to pre-surgery stresses. Lifelong side effects by such damages and the resultant injuries can contribute in all different news of the affected individual's life and lead to the change in lifestyle, self subjective image and family actions and decrease in the individual's capabilities for life long term purposes and finally cause a stressful life for her/him (Saki, 2000).

Hysterectomy is the removal of womb through surgical operation which is done to cure womb cancer, womb abnormal bleeding, endometriosis, non-cancerous tumor growth (myomas), continual pain of womb, problems relevant to loosening of the pelvic floor muscles, pelvic injuries, womb loosening following Caesarean section (Hecker&Mour: cited by Arianpour, 2005: 41). In the United States, almost 5.5 individuals of 1000 are undergone hysterectomy surgery annually (Bruner &Thodart: cited by Saeedi, 2011: 137). The mean age of women undergone hysterectomy surgery is 42.7 and the average age of 40.9 during 1940s has remained unchanged (A. D. cited by Khoshzaban, Ardehali, 2000: 94). Hysterectomy can be operated through vagina (TVH) or abdomen (TAH) or Laparoscopy (LAVH) (JanatanBerk, (2007), cited by Veldan, Guran, Rafiee, 2007). The prominent problem related to these women is anxiety which is rooted in the genital system function disorder, the feeling of shame and worry about the genital area being exposed, having an ill subjectivity on one's body and losing one's life, spouse and the fertility (Bruner &Thodart: cited by Saeedi, 2011: 137).

According to the studies and ideas by authorities, the appearance of such an anxiety can determine the amount of problems these people experience in coping with the life routine events, even during or after surgical operation, and the quality of their lives in general. The studied issue in this society is to answer to this question that whether the behavioral- cognitive team education of skills is effective on decreasing stress, anxiety and depression in women having undergone hysterectomy surgery.

Three assumptions are included in the present study

1. The behavioral- cognitive team education of skills is effective on the decrease in stress.
2. The behavioral- cognitive team education of skills is effective on the decrease in anxiety.

3. The behavioral- cognitive team education of skills is effective on the decrease in depression.

In a study by Dr. Brigez et al., (1980-82) in most hospitals in southern Australia, the results were not able to show that the hysterectomy surgery was operated due to medical or sterility reasons. In that study, 83% of women undergone hysterectomy surgeries were married and 45% of them aged less than 45. The mean age of women undergone hysterectomy surgery was 44 and that of those undergone tubectomy was 32. The most hysterectomy incidents occurred in age group of 45-49 and the maximum femalesterilization occurred in age group of 30-34.

The results of a control study by D. Aryana&Jou et al., (2003) on 273 Brazilian women in the age group of 30-54 subjected to elective hysterectomy (non- emergency) due to the pelvic benign conditions indicated that the higher hysterectomy at-risk women were among those with higher per capita household income, 0 to 3 children, medical consulting record due to femininity, menstruation problems or tubectomy under 30 years old.

In their studies, Vandik et al., investigated the depression symptoms before and after non- emergency hysterectomy surgery. This was a longitudinal study which lasted four years from 2006 to 2010. The studied people were 384 above 18 years old Englishwomen subjected to elective hysterectomy (non- emergency). The depression self-evaluating questionnaires were used as measurement tools. Results suggested that the younger women experienced higher levels of anxiety and pain following hysterectomy surgery with more risky depression symptoms. The independent variable of the therapy procedure in this study was the contractual behavioral activation of a group spending a 2 month educational course that investigated its effect on depression, stress and anxiety in matrimony relationships of people with heart problems. A number of 56 people with heart problems including 26 men and 30 women were studied divided in two experimental and one control groups using random sampling. The methodology was quasi-experimental containing pre- and post- test with control. The measurement tools included two demographic questionnaires, hospital depression- matrimony stress and anxiety criterion in which co-variance method was used.

Post-testing conducted two months later and pursued after 4 months. The results indicated that the anxiety and stress decreased after 4 months but depression did not show any decrease. A two month therapy was not sufficient for decreasing the depression symptoms in patients with heart disorders and those suffering from anxiety and stress which are exposed to depression need therapy in order to health improvement.

In a study by Bernner et al., (2011) the effectiveness of the influential factors on depression was investigated before and after hysterectomy surgery. These studies were conducted in a hospital in Southeastern Spain for 4 years (2006-2010). A number of 384 Spain Englishwomen above 18 years old were selected and evaluated using questionnaires. According to the results, 36% of individuals showed symptoms of depression before surgery, 22% after operation, 15% before and after surgery and the rest 6% showed vast symptoms. According to these findings, younger women stated the symptoms of stress, anxiety and depression more than the older ones.

METHODOLOGY

The statistical community of the present study consisted of all female patients between 35 to 55 years old bedridden in the whole maternity hospitals in Kermanshah city in 2012 being undergone hysterectomy surgery with no difference in base attributes (gender, culture and literacy).

In most cases the complete investigation of the community as census was failed due to the used accessible sampling. Selecting the sampling method is therefore necessary for conducting the study. The statistical sample is a subset of the statistical community, i.e. a part of the statistical community selected matchlessly according to one of valid sampling methods having all common traits of the statistical community individuals in certain fields (Khorshidi, 2006: 86).

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On the basis of the above, the sample volume of 30 patients was selected and classified randomly in two experimental and control 15 individual groups. Questionnaires were used for gathering the required data such that pre-test, independent variable and post-test were conducted. Each test was measured in 2 repetitions. The first measurement was conducted through a pre-testing method, then the educations of behavioral cognitive skills were presented collaboratively to the subjects 8 times for two months. The second measurement was done by a post testing two months after receiving educations of behavioral cognitive skills, and finally the effectiveness of the educations was evaluated. But there was no education in control group (table 3).

In the present study, the standardized stress, anxiety and depression criteria questionnaires were used for data gathering (DASS, Labivand, 1995). A set of three self-reporting criteria was used to evaluate the negative emotional moods in stress, anxiety and depression. The important application of this measurement criterion is to determine the intensity of the major symptoms of depression, stress and anxiety. To complete the questionnaire, one should specify the state of a symptom during last week.

Each of small criteria of Dass-21 consists of 7 questions the final score of which is obtained through the sum of scores (table 1). Each question is scored from 0 (does not apply to me at all) to 3 (applies to me thoroughly). Science Dass-21 is the shortened form of the major criterion (42 questions), the final score of each small criteria should be doubled. The intensities of the symptoms can therefore be determined through referring to table 2 (Labivand and Labivand, 1995).

The depression questions consisted of 3, 5, 10, 13, 16, 17, 21, and the choices of almost never were classified by negative score, sometimes by score 1, mostly by 2 and almost always by 3.The anxiety questions consisted of 2, 4, 7, 9, 15, 19 and 20, and the choices of almost never were classified by score 0, sometimes by score 1, mostly by 2 and almost always by 3.

The stress questions consisted of 1, 6, 8, 11, 12, 14, 18, and the choices of almost never were classified by negative score, sometimes by score 1, mostly by 2 and almost always by 3. The final score of each small criterion should be doubled and the intensities of the symptoms can then be determined through referring to table 2.

Each small criterion of DASS-21 contains 7 questions the final score of which is obtained through the sum of scores of corresponding questions (table 1). Each question is scored from 0 (does not apply to me at all) to 3 (applies to me thoroughly). Science Dass-21 is the shortened form of the major criterion (42 questions), the final score of each small criteria should be doubled. The intensities of the symptoms can therefore be determined through referring to table 2 (Labivand and Labivand, 1995).

The experimental group was educated one session a week for 8 weeks, and totally eight 60-120 minute (1-2 hours) sessions were held. A preliminary session was also considered for acquaintanceship, so total of 9 sessions were held. According to the formulated program in the given book, at least one happiness message (sms) corresponding to the conditions of the patient subjected to hysterectomy was send every night, also one message about the assignments relevant to the last session was sent to the patients every day. Furthermore, the methods of doing exercises were presented as educational packages including educational papers and CD.

Two descriptive and perceptive statistical methods were used for analyzing data. In order to do the mean comparisons of pre- and post tests of depression, anxiety and stress of the individuals in experimental group, Covariance method was applied. Also, SPSS software was used to analyze data.

RESULTS

According to the results of data analysis it can be observed that the mean age of the studied patients was 48.53 for experimental group and 45.27 for control.

Study of the distribution of the abundance and percentage of depression (pre-test) of patients in experimental groups

Results indicated that among 30 studied individuals one was with low depression, 12 with moderate depression, 11 with high and 6 were with very high depression.According to the Table 5 results it is observed that the average scores of depression in patients during pretest are 21.33 and 22.67 in experimental and control groups respectively.

Study of the distributions of the abundance and percentage of anxiety (pre-test) of patients in experimental groups

On the basis of the results it is observed that among 30 studied individuals 4 were with high and 26 were with very high anxiety.According to the Table 6 results it is observed that the average scores of anxiety in patients during pretest are 26 and 24.80 in experimental and control groups respectively

Study of the distribution of the abundance and percentage of stress (pre-test) of patients in experimental groups

Results indicated that among 30 studied individuals 2 were with normal stress, 3 with low stress, 12 with moderate stress, 11 with high and 2 were with very high stress.According to the Table 7 results it is observed that the average scores of stress in patients during pretest are 22.93 and 25.20 in experimental and control groups respectively.

Study of the distribution of the abundance and percentage of depression (post-test) of patients in experimental groups

Results indicated that among 30 studied individuals one was with low depression, 15 with moderate depression, 11 with high and 3 were with very high depression.According to the Table 8 results it is observed that the average scores of depression in patients during posttest are 19.13 and 23.80 in experimental and control groups respectively.

Study of the distributions of the abundance and percentage of anxiety (post-test) of patients in experimental groups

On the basis of the results it is observed that among 30 studied individuals 6 with moderate anxiety, 7 were with high and 17 were with very high anxiety.According to the Table 9 results it is observed that the average scores of anxiety in patients during posttest are 17.80 and 23.27 in experimental and control groups respectively.

Study of the distribution of the abundance and percentage of stress (post-test) of patients in experimental groups

Results indicated that among 30 studied individuals 6 were with normal stress, 6 with low stress, 11 with moderate stress, 6 with high and 1 was with very high stress.According to the Table 10 results it is observed that the average scores of stress in patients during posttest are 18.27 and 23.07in experimental and control groups respectively.

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Data normality test

In order to investigate the normality of variable distribution, Kolmogorov-Smirnov test was used. The null hypothesis in the present study was the normality of the variable distribution. If the confidence level of tests is less than 0.05, then the null hypothesis is rejected and it is concluded that the distribution of data is not normal. According to the above table 11 it is concluded that all variables of depression, anxiety and stress in both pre- and post-tests have normal distributions as the confidence level is more than 0.05.

Hypothesis number 1- Education of cognitive- behavioral skills causes the decrease in depression in women undergone hysterectomy surgery. According to the values of the above table 12 it is observed that the average values of depression in the studied patients of the experimental group were 19.13 and 19.41before and after adjusting respectively. The mean values of depression in the studied patients of the control were 23.80 and 23.5241 before and after adjusting respectively.

The equality of variance hypothesis using Levin test for depression in the studied patients is presented in table 9-4.On the basis of the table13, the equality of variance pre-hypothesis of depression scores of the two experimental and control groups is confirmed (p = 0.100).

As it is seen in table 14 , the score of depression during pre-test has a relationship of 17.7% with depression (p < 0.05). By controlling the effect of this variable on the basis of the calculated coefficient (F = 5.927), it is observed that there is a significant difference between the adjusted averages of depression in the experimental and the control groups (p < 0.05), therefore the above hypothesis is confirmed. Education of cognitive- behavioral skills causes the decrease in depression in women undergone hysterectomy surgery through control the pretest. The difference is the indicative of the effectiveness of 18% on decrease in depression.

Hypothesis number 2- Education of cognitive- behavioral skills causes the decrease in anxiety in women undergone hysterectomy surgery. According to the values of the above table 15 it is observed that the average values of anxiety in the studied patients of the experimental group were 17.80 and 17.49 before and after adjusting respectively. The mean values of anxiety in the studied patients of the control were 23.27 and 23.57 before and after adjusting respectively.

The equality of variance hypothesis using Levin test for anxiety in the studied patients is presented in table 12-4.On the basis of the table 16 , the equality of variance pre-hypothesis of anxiety scores of the two experimental and control groups is confirmed (p = 0.154).

As it is seen in table 14 , the score of anxiety during pre-test has a relationship of 21.2% with anxiety (p < 0.05). By controlling the effect of this variable on the basis of the calculated coefficient (F = 12.755), it is observed that there is a significant difference between the adjusted averages of anxiety in the experimental and the control groups (p < 0.05), therefore the above hypothesis is confirmed. Education of cognitive- behavioral skills causes the decrease in anxiety in women undergone hysterectomy surgery through control the pretest. The difference is the indicative of the effectiveness of 32% on decrease in anxiety.

Hypothesis number 3- Education of cognitive- behavioral skills causes the decrease in stress in women undergone hysterectomy surgery. According to the values of the table 18 it is observed that the average values of stress in the studied patients of the experimental group were 18.27 and 18.49 before and after adjusting respectively. The mean values of stress in the studied patients of the control were 23.07 and 23.39 before and after adjusting respectively.

The equality of variance hypothesis using Levin test for stress in the studied patients is presented in table 15-4.

On the basis of the table 19, the equality of variance pre-hypothesis of stress scores of the two experimental and control groups is confirmed (p = 0.701).As it is seen in table 16-4, the score of stress during pre-test has a relationship of 45.3% with stress (p < 0.05). By controlling the effect of this variable on the basis of the calculated coefficient (F = 4.830), it is observed that there is a significant difference between the adjusted averages of stress in the experimental and the control groups (p < 0.05), therefore the above hypothesis is confirmed. Education of cognitive- behavioral skills causes the decrease in stress in women undergone hysterectomy surgery through control the pretest. The difference is the indicative of the effectiveness of 1.2% on decrease in stress.

DISCUSSION AND CONCLUSION

Study of the first hypothesis- Education of cognitive- behavioral skills causes the decrease in depression in women undergone hysterectomy surgery.

From the descriptive analysis of view according to table 4-2, there is no significant difference between the mean value of depression and its small criteria in the pre test collaborative education of cognitive- behavioral skills of the two experimental and the control groups. And the mean scores of the mentioned components are almost the same. On the basis of data in table 4-5 and considering the variations in total average of depression among individuals of the experimental group at the post test collaborative education of cognitive- behavioral skills, the mean scores of the individuals decreased from 21.33 to 19.13 suggesting the positive effectiveness of collaborative education of cognitive- behavioral skills on individuals of the experiment group.

From the perceptive analysis of view on the basis of data in table 10-4, it can be concluded that the collaborative education of cognitive- behavioral skills has a significant effect on decrease in depression among the studied subjects. Therefore, the effectiveness of the collaborative education of cognitive- behavioral skills on the decrease in depression is confirmed.

Ebrahimi (1371). Study of the effect of therapeutic communication on the decrease in tenseness in patients undergone open heart surgery in educational hospitals dependent on ministry of health, medical care and education of Tehran in 1371; the results showed that the effect of therapeutic communication was more on the women than men. There was no significant correlation between the effect of therapeutic communication and demographic traits of the patients. The results from the hypothesis of the study showed that the therapeutic communication affected the decrease in tenseness in patients with the confidence level of more than 99.9% meaning the hypothesis of the test was confirmed with the confidence level of more than % 99.9. Bakhtavar (2007) studied the collaborative education of cognitive-behavioral therapy on the symptoms of PTSD and depression in devotees of the Iran-Iraq war and concluded following the calculation of the mean scores that the symptoms of PTSD and depression had a significant effect; therefore the hypothesis of the test was confirmed with the confidence level of more than %99.

Rasuli and Borjali (2011) indicated that the collaborative education of cognitive- behavioral therapy is effective on the decrease in anxiety and the increase in self confidence in patients with Multiple sclerosis (MS). The t- test was used in the study indicating a significant difference at p ≤ 0.05 which means that the hypothesis of the test was confirmed. Selegi, Hashemian and Saeedipour (2007) investigated the effect of collaborative-cognitive therapy on decreasing the depression in male patients with HIV. According to the obtained results the difference between the two experimental and control groups was significant at p ≤ 0.01.

Also, the results of the present study correspond with those of other foreign authors on the effectiveness of cognitive – behavioral collaborative therapy on decrease in depression among which are Stiven et al., (2004), Hapriche et al., (2004) and Blair (2004).

Study of the second hypothesis

Education of cognitive- behavioral skills causes the decrease in anxiety in women undergone hysterectomy surgery. From the descriptive analysis of view according to table 4-3, there is no significant difference between the mean value of anxiety and its small criteria in the pre test collaborative education of cognitive- behavioral skills of the two experimental and the control groups. Considering the variations in total average of depression among individuals of the experimental group at the post test collaborative education of cognitive- behavioral skills, the mean scores of the individuals decreased from 26 to 17.80 suggesting the positive effectiveness of collaborative education of cognitive- behavioral skills on individuals of the experiment group. From the perceptive analysis of view on the basis of data in table 13-4, it can be concluded that there is a significant difference in the scores of anxiety between the adjusted average of the experimental group and the control ($p < 0.05$). Therefore, the above hypothesis is confirmed which corresponds with other studies as following

In a study, Sadatpour (2002) investigated the effect of pre-surgery education on the anxiety of patients subjected to open heart operation and concluded that there is not a significant difference between the two studied groups in the mean value of anxiety at the beginning of the adaptation. The mean value of anxiety decreased significantly following the presentation of educations to the given group (patients subjected to open heart operation). While there was not a significant difference between the mean values of anxiety in the control. Also, the anxiety in the group with the open heart operation decreased significantly in comparison with the control after surgical operation while the level of anxiety in the first group following the operation had decreased significantly even more than pre-surgery.

Study of the third hypothesis

Education of cognitive- behavioral skills causes the decrease in stress in women undergone hysterectomy surgery.

From the descriptive analysis of view according to table 4-4, there is no significant difference between the mean value of stress and its small criteria in the pre test collaborative education of cognitive- behavioral skills of the two experimental and the control groups. And the mean scores of the mentioned components are almost the same. On the basis of data in table 4-7 and considering the variations in total average of stress among individuals of the experimental group at the post test collaborative education of cognitive- behavioral skills, the mean scores of the individuals decreased from 22.93 to 18.27 suggesting the positive effectiveness of collaborative education of cognitive- behavioral skills on individuals of the experiment group. From the perceptive analysis of view on the basis of data in table 16-4, it can be concluded that the collaborative education of cognitive- behavioral skills has a significant effect ($p < 0.05$) on decrease in stress among the studied subjects. Therefore, hypothesis of the effectiveness of the collaborative education of cognitive- behavioral skills on the decrease in stress is confirmed. These results are in agreement with those by other authors including:

Moradi (2009) showed a significant difference between supportive behavioral therapy and the improvement of PTSD. There is also a significant relationship between supportive behavioral therapy and the improvement of PTSD. Hazavei, Hasanzade and Rabiee showed that there was a significant difference in scores of depression between the experimental group and the control through the effect of health educational program on the depression in patients following the bypass operation of coronary artery. The health educational planning in the increase in preventative behaviors is very effective on the decrease in depression in patients undergone the bypass operation of coronary artery.

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The results of the present study correspond with those by foreign authors on the effectiveness of the cognitive-behavioral collaborative therapy.

The study by JouliBoro, MargaretteCampni, ShilieyFilor and John L. Fai (1998) the study by Thamson, Cocker, Kruiz and Hanri (2003) on the goal determination of life and the adaptation of people following the studies by Akaji and Boss (2001), Dayer (1999), Francle (1967), Rajerz (1986) indicated the effectiveness of cognitive- behavioral collaborative therapy on the decrease in aggressiveness, anxiety and depression (cited by: Hedayati, 2006). To explicate the results of the present study, it can be stated that the cognitive- behavioral therapy (CBT) or cognitive therapy (CT) is used for curing many psychological problems and psychiatry disorders from control of the temper anger and anxiety to the therapy of schizophrenia.

Numerous scientific findings obtained throughout these years have debated the cognitive therapy as an efficient procedure in curing many psychological problems and psychiatry disorders, and as the major therapy in some cases such as agoraphobia and depression. According to the scientific findings, cognitive therapy (CT) is considered as an evidence-based psychotherapy approach which is effective in decreasing the mental pains of people (Fri, Michele, 1999). In order to achieve the re-test of the finding in cognitive-behavioral approach, the therapy procedure should be determine according to the operational definitions and its effects should be evaluated by lasting objective criteria. The major goal of therapy is the emphasis on therapy, providing opportunities for new comparable learning, and also making changes in outside of clinical domain (clinic or office). Solving problem is an integrated part of the therapy. All aspects of therapy are explained for the patient. The therapist and patient try to have a mutual relationship and establish strategies to cope with precisely determined issues. In Lihie (2002) opinion, it is more than 20 years that the cognitive model has received an extensive popularity and it seems that the model has influenced in this domain more than others. According to Lihie, the popularity of the approach is due to:

This approach is effective on therapy, it is a way of concentration and operations on particular disorders, it is not mysterious and complicated, so that facilitates the knowledge transfer from therapist to the patient. This kind of therapy is cost- effective. The cognitive- behavioral therapy (CBT) is a kind of psychotherapy which helps patients to perceive the thoughts and emotions that affect their behaviors.

Today, the cognitive- behavioral therapy is used to cure a large number of disorders including phobia, addiction, depression and anxiety. The cognitive- behavioral therapy (CBT) is generally short-term and emphasizes on helping the patients engage in a special problem. One learns how to identify and change the destructive or troublesome thoughts with negative effects on the behavior during therapy periods.

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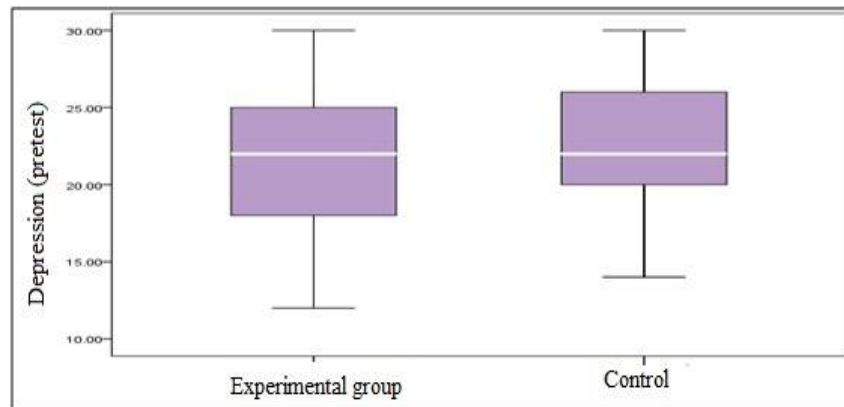
Figure 1- Depression score plot (pretest) of patients in experimental and control groups

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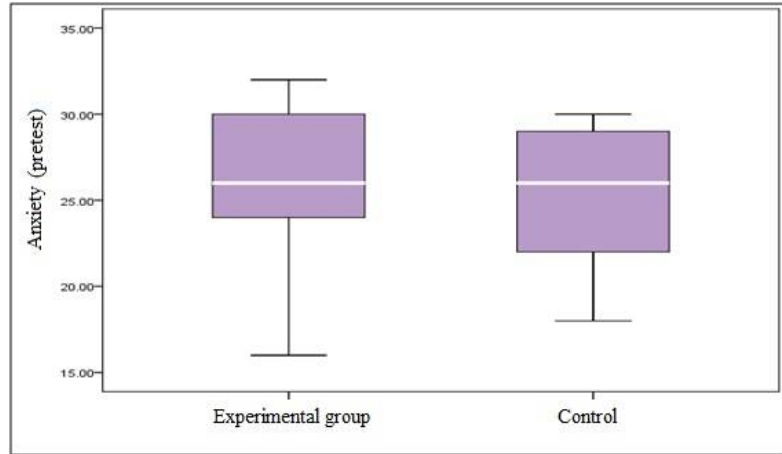
Figure 2- Anxiety score plot (pretest) of patients in experimental and control groups
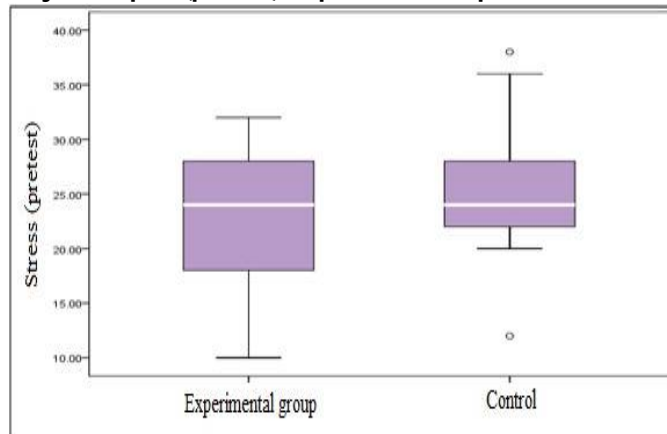
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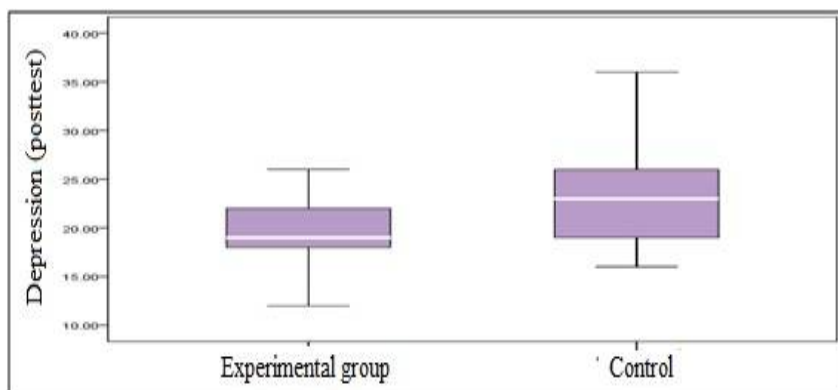
Figure 4. Depression score plot (posttest) of patients in experimental and control groups

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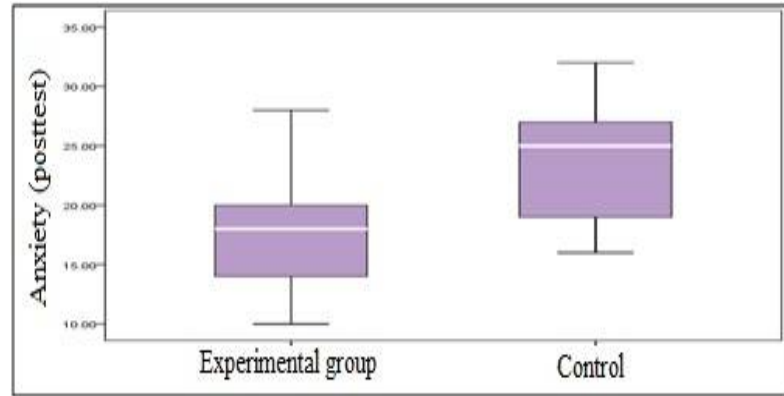
Figure 5. Anxiety score plot (posttest) of patients in experimental and control groups
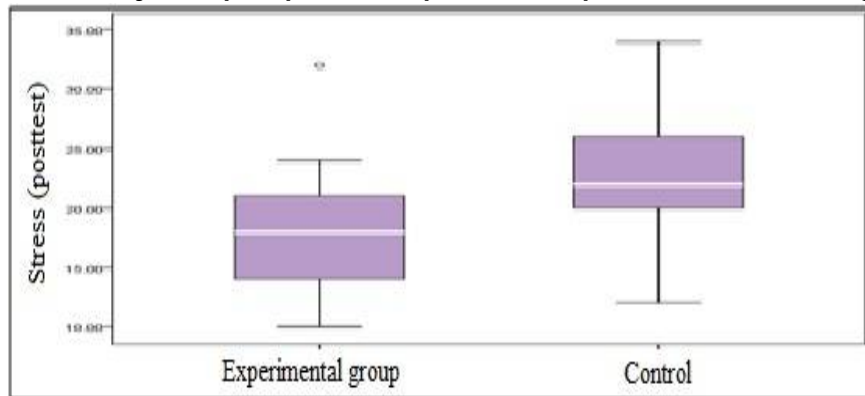
Figure 6. Stress score plot (posttest) of patients in experimental and control groups

Table 1-3. Small criteria and the corresponding questions

Small criteria	Questions
Depression	3, 5, 10, 13, 16, 17, 21
Anxiety	2, 4, 7, 9, 15, 19, 20
stress	1, 6, 8, 11, 12, 14, 18

Table 2. Intensities of small criteria

Intensities	Depression	Anxiety	stress
Normal	0-9	0-7	0-14
Low	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
High	21-27	15-19	26-33
Very High	+28	+20	+33

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Table 3-Experimental design

Pursuing stage	Post-test	Independent variable	Pre-testing	Group
-	TA	X	TB	Experiment
-	TA	-	TB	Control

A: after B: before

Table 4. Distribution of age abundance and percentage of the studied patients in experimental groups

	Experimental group			control		
Age (years) cumulative	abundance	percentage	cumulative	abundance	percentage	
			percentage			
35-40	1	6.7	6.7	4	26.7	26.7
40-45	4	26.7	33.3	3	20	46.7
45-50	5	33.3	66.7	4	26.7	73.3
50-55	5	33.3	100	4	26.7	100
Total	15	100		15	100	
Average age	48.53			45.27		
Median	49			48		
Variance	25.124			50.495		
Minimum	40			35		
Maximum	55			54		

Table 5. Distribution of the abundance and percentage of depression (pre-test) of patients in experimental groups

		Experimental group			control	
Depression cumulative		abundance	percentage	cumulative	abundance	percentage
percentage			percentage			
Low 0	13-19	1	6.7	6.7	0	0
Moderate	14-20	6	40	46.7	6	40

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40						
High	21-27	5	33.3	80	6	40
80						
Very high	> 28	3	20	100	3	20
100						
Total		15	100		15	100
Average age		21.33			22.67	
Median		22			22	
Variance		27.810			23.238	
Minimum		12			14	
Maximum		30			30	

Table 6. Distribution of the abundance and percentage of anxiety (pre-test) of patients in experimental groups

		Experimental group			control	
Anxiety cumulative percentage		abundance	percentage	cumulative percentage	abundance	percentage
High	15-19	1	6.7	6.7	3	20
20						
Very high	> 20	14	93.3	100	12	80
100						
Total		15	100		15	100
Average age		26			24.80	
Median		26			26	
Variance		21.714			21.029	
Minimum		16			18	
Maximum		32			30	

Table 7. Distribution of the abundance and percentage of stress (pre-test) of patients in experimental groups

		Experimental group			control	
Stress cumulative percentage		abundance	percentage	cumulative percentage	abundance	percentage
Normal	0-14	1	6.7	6.7	1	6.7
6.7						

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Low 6.7	15-18	3	20	26.7	0	0
Moderate 60	19-25	4	26.7	53.3	8	53.3
High 86.7	26-33	7	46.7	100	4	26.7
Very high 100	> 33	0	0	100	2	13.3
Total		15	100		15	100
Average age		22.93			25.20	
Median		24			24	
Variance		41.067			40.457	
Minimum		10			12	
Maximum		32			38	

Table 8.Distribution of the abundance and percentage of depression (post-test) of patients in experimental groups

Depression cumulative percentage		Experimental group			control	
		abundance	percentage	cumulative percentage	abundance	percentage
Low 0	13-19	1	6.7	6.7	0	0
Moderate 40	14-20	9	60	66.7	6	40
High 80	21-27	5	33.3	100	6	40
Very high 100	> 28	0	0	100	20	20
Total		15	100		15	100
Average age			19.13			23.80
Median			19			23
Variance			14.695			34.600
Minimum			12			16
Maximum			26			26

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Table 9. Distribution of the abundance and percentage of anxiety (post-test) of patients in experimental groups

Anxiety cumulative percentage		Experimental group			control		
		abundance	percentage	cumulative percentage	abundance	percentage	
Moderate	10-14	6	40	40	0	0	0
High	15-19	3	20	60	4	26.7	26.7
Very high	> 20	6	40	100	11	73.3	100
Total		15	100		15	100	
Average age		17.80			23.27		
Median		18			25		
Variance		29.457			22.781		
Minimum		10			16		
Maximum		28			32		

Table 10. Distribution of the abundance and percentage of stress (post-test) of patients in experimental groups

Stress cumulative percentage		Experimental group			control		
		abundance	percentage	cumulative percentage	abundance	percentage	
Normal	0-14	5	33.3	33.3	1	6.7	6.7
Low	15-18	4	26.7	60	2	13.3	20
Moderate	19-25	5	33.3	93.3	6	40	60
High	26-33	1	6.7	100	5	33.3	93.3
Very high	> 33	0	0	100	1	6.7	100

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Total	15	100	15	100
Average age	18.27		23.07	
Median	18		22	
Variance	29.067		34.210	
Minimum	10		12	
Maximum	32		34	

Table 11. Reference: results of the present study

Variable Confidence	Number	Average	Deviation from	Amount of
		standard	statistic Z	level
Depression (pretest) 0.772	30	22	5.01	0.663
Anxiety (pretest) 0.492	30	25.40	4.58	0.833
Stress (pretest) 0.887	30	24.07	6.38	0.582
Depression (posttest) 0.600	30	21.47	5.42	0.766
Anxiety (posttest) 0.523	30	20.53	5.74	0.813
Stress (posttest) 0.841	30	20.67	6.04	0.617

Table 12. The average values and deviation from standard of depression scores in patients during pre and post tests

Depression Standard	Number	Average	Deviation from	Adjusted	Adjusted
			standard	average	deviation
Experimental group	15	19.13	3.833	19.41	1.190
Control	15	23.80	5.882	23.52	1.190

Table 13.the results of Levin test to study the equality of variance scores for depression in the studied patients of experimental group

Variable Confidence level	F	Degree of freedom 1	degree of freedom 2
Depression	2.891	1	28	0.100

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Table 14. Brief results of Covariance analysis relevant to patients' depression

Source of variation level Effectiveness	Sum squares	Degree of freedom	Mean squares	F	Confidence
Pretest 0.023 0.177	122.045	1	122.045	5.801	
Team membership 0.022 0.180	124.714	1	124.714	5.927	
Error	568.088	27	021.040		
Total	14678	30			

Table 15. The average values and deviation from standard of anxiety scores in patients during pre and post tests

Anxiety Standard	Number	Average	Deviation from standard	Adjusted average	Adjusted deviation
Experimental group	15	17.80	5.427	17.49	1.198
Control	15	23.27	4.773	23.57	1.198

Table 16. The results of Levin test to study the equality of variance scores for anxiety in the studied patients of experimental group

Variable Confidence level	F	Degree of freedom 1	degree of freedom 2
Anxiety 2.149	1	28	0.154

Table 17. Brief results of Covariance analysis relevant to patients' anxiety

Source of variation level Effectiveness	Sum squares	Degree of freedom	Mean squares	F	Confidence
Pretest 0.012 0.212	155.252	1	155.252	7.276	
Team membership 0.001 0.321	272.145	1	272.245	12.757	
Error	576.081	27	21.336		
Total	13604	30			

Table 18. The average values and deviation from standard of stress scores in patients during pre and post tests

Stress Standard	Number	Average	Deviation from standard	Adjusted average	Adjusted deviation
Experimental group	15	18.27	5.391	18.94	1.103
Control	15	23.07	5.849	22.39	1.103

Table 19. The results of Levin test to study the equality of variance scores for stress in the studied patients of experimental group

Variable Confidence level	F	Degree of freedom 1	degree of freedom 2
Stress	0.151	1	28	0.701

Table 20. Brief results of Covariance analysis relevant to patients' stress

Source of variation level Effectiveness	Sum squares	Degree of freedom	Mean squares	F	Confidence
Pretest 0.000 0.453	401.652	1	401.652	22.396	
Team membership 0.037 0.152	86.622	1	86.622	4.830	
Error	484.214	27	17.937		
Total	13872	30			

RESEARCH ARTICLE

Study of Genetic Diversity of Wild Caspian trout *Salmo trutta caspius* Migrating to the Astara and Chalus Rivers, using D- Loop Sequencing

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ABSTRACT

In this study the genetic diversity of wild Caspian trout (*S. trutta caspius*) population migrating to the Astara and Chalus Rivers was evaluated using D- Loop sequencing. For this purpose, 47 specimens of adult Caspian brown trout were collected from these rivers in the Gilan and Mazandarn provinces in fall and winter 2011 approximately 3-5 g of soft and fresh fin tissue was isolated and fixed in ethanol 96% then transferred to the Caspian Sea Ecology Research Center Genetics Laboratory in Sari, Iran. Genomic DNA from the samples was extracted using Ammonium Acetate method. The quality and quantity of the extracted DNA were assessed by spectrophotometer and agarose gel (1%) horizontal electrophoresis. Polymerase Chain Reaction (PCR) was performed on the target DNA using a primer sequence D- Loop region mtDNA molecule then product was purified and DNA sequencing was carried out using chain termination method. D- Loop region in mtDNA of Caspian trout contained 654 bp. Data were analyzed by Bio-Edit, DnaSP, Arlequin and Mega software. 10 and 14 haplotypes was observed in Astara and Chalus River the DNA sequence of one of them was recorded in Gene Bank with numbers KF015727 and KC991028. 240 and 251 polymorphic loci were detected in Astara and Chalus Rivers that all of them were

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out of Hardy- Weinberg equilibrium (P<0.05). Average nucleotide and haplotype diversity were (0.118±0.063) and (1.000±0.005) in Astara River and (0.122±0.063), (1.000±0.005) in Chalus River.

Keywords: Genetic diversity, *Salmo trutta caspius*, Astara, Chalus, Sequencing.

INTRODUCTION

Caspian trout, *Salmo trutta caspius* Kessler, 1870 is one of the nine subspecies of brown trout *Salmo trutta* in the world (1) and is an anadromous form and endemic subspecies of the Caspian basin. Distribution of subspecies occurs commonly at the Western and Southern coasts, from Terek to Sefidrud Rivers and is seldom found in the Northern part. The most important Iranian rivers for their spawning consist of, Karganrud, Navrud, Astarachay in Gilan Province and Tonekabon (Cheshmehkileh), Chalus, Sardabrud in Mazandaran Province. In Iran, Caspian trout populations have experienced a strong decline during the past two decades as a result of population growth, development of fishing equipment, overfishing, habitat pollution and reduction in spawning areas and similar to other brown trout populations is at risk of extinction and was listed as threatened in the Red List of International Union for Conservation of Nature (IUCN) that has been considered for a biological conservation program in the southern part of the Caspian Sea (2).

Genetic diversity refers to the total amount of genetic variation present within a species or population (3) whereas population differentiation refers to the degree to which populations are genetically distinct from one another.An understanding of the genetic diversity in aquatic organisms can be useful in stock conservation. Genetic diversity is important in both natural and cultural populations because it provides the necessary spectrum of genotypes for adaptive response to changing conditions and heterozygous individuals usually are superior to less heterozygous individuals in many economically important characteristics like growth, fertility and disease resistance (4).

Wild populations and the preservation of their genetic purity have a key role in conservation of Caspian trout genetic resources. As a first step, the remaining wild populations need to be identified and genetically characterized (5). mtDNA has a number of characteristics that makes it a valuable molecular marker for evolutionary and population-genetic structure studies (6). mtDNA is inherited maternally without intermolecular recombination and it has a higher mutation rate (7), which is one of the reasons for its use in the majority of phylogeographic studies (8). The pattern of DNA sequence polymorphism includes useful information on population background and it is also responsible for creation and retention of polymorphism (9). A high copy number of mitochondrial genome by a factor up to 10,000 (1000 mitochondria per cell, each 10 copies of the genome) is advantageous (10). The nucleotide sequence of D- Loop region is considered to be variable and without effect on transcription and replication (11). ThemtDNA evolves much faster than nuclear DNA and thus contains more sequence diversity compared to ncDNA (12). In fact D- Loop is the most variable region of mtDNA. Substantial genetic variation is found in the D- Loop region, even among individuals within a given species. Nucleotide variations in the D- Loop among individuals have been well studied in various species (11). The PCR technique is used to amplify a specific region of a DNA strand and then the target gene can be recognized from the other genes by electrophoresis. Rows of nucleic acids and bases will be cleared by standard techniques for DNA sequencing (13).

Molecular markers, such as mtDNA D- Loop and cytochrome b, microsatellites, RFLP (Restriction Fagments Length Polymorphism) and AFLP (Amplified Fragments Length Polymorphism), were recently used in a variety of investigations regarding brown trout (14). PCR-RFLP analysis of mitochondrial DNA was conducted for identification of Caspian roach (*R. rutilus caspius*) populations in the southern coast of the Caspian Sea, Iran (15). Genetic differences between mtDNA D- Loop F1 and 12S1-H region of native salmons (*Salmo trutta sp.*) caught in the rivers of Aras, Kapasu and Coruh were determined using PCR- RFLP and microsatellite method (16). Population and family structure of brown trout, *Salmo trutta*, was evaluated in a Mediterranean stream (17). Genetic divergence

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among native trout *Salmo trutta* populations from southern Balkans was determined based on mitochondrial DNA and microsatellite variation (18). New mtDNA Haplotype of Brown Trout *Salmo trutta* l. was detected from Crni Timok Drainage Area in Serbia (14).

So conservation policy and restocking programs are necessary. But despite the economic importance of the Caspian trout, study on its genetic and population structure in south Caspian Sea Rivers is scarce and more studies are necessary. This study was conducted to determine the causes and the extent of decline in brown trout fishery, and protect indigenous Caspian trout populations in Southern of Caspian Sea and provide conservational management strategies for the regulatory agencies.

MATERIALS AND METHODS

Sample collection

A total of 47 caudal fin samples of wild Caspian trout were collected from Astara River in Gilan Province and Chalus in Mazandaran Province by small beach seine and cast net in fall and winter 2011 (Table 1). Samples were kept in 96% ethanol (19) until DNA extraction and then transferred to the Genetics Laboratory located at the Caspian Sea Ecology Research Center, Sari, Iran. The extracted DNA was stored at -4ºC until use.

Genomic DNA extraction

Total DNA was extracted from 50 mg of fin sample by ammonium acetate method (20). The quality and quantity of the extracted DNA were assessed by spectrophotometer (Bio photometer, Eppendorf) and agarose gel (1%) horizontal electrophoresis (21). DNA absorption was measured by spectrophotometer at 260 and 280 nm wavelengths. Samples with a ratio of 1.8 to 2 were selected and DNA was then re-extracted from unsuitable samples. Resolution of DNA bands on agarose gel (1%) was investigated and samples with protein contamination-free bonds and RNA were selected for PCR. Purified DNA was stored at -20ºC until use.

PCR

PCR was used for amplification of target genes (22). PCR were performed in an Auto-Qselver Thermal Cycler (Quanta biotech Company, England) using primers D- Loop F1(5'– TGGCATTTGGTTCCTACTTCAGG –3', 12S1-H Reverse (- 5'– TGCGGAGACTTGCATGTGTAAGT –3') (16) under the following conditions: initial denaturation (94ºC, 3 min) followed by 30 cycles of strand denaturation (94ºC, 30 sec), primer annealing (48ºC, 45 sec) and DNAextension (72ºC, 45 sec; the last extension prolonged to 5 min) in the Thermo Cycler (Auto-Qselver, Quanta biotech Company, England). Each PCR reaction in volume of 25 µl contained 1X PCR buffer, 1.5 mM MgCl2, 0.1 mM dNTP, 1.2 nM of each primer 1U of Taq DNA polymerase (CinnaGen Company) and 5-10 ng of genomic DNA.

Gel electrophoresis and staining

Amplified DNA fragments were run on 1.5% agarose gel at 90 V for 45 min using horizontal electrophoresis and stained with ethidium bromide for visualization and DNA ladder 50bp (MBI Fermentase Company) was used to calculate the fragment length. The PCR products were separated for visualization on 1.5 % agarose gels containing ethidium bromide at 90 V for 45 min. Photographs of the gels.

DNA sequencing

The fragment length of D- Loop sequencing in the Caspian trout was evaluated to be 654 bp. The purified DNAs of each sample with forward primer were transferred to the BIONEER Company in South Korea for sequencing. Single-pass sequencing was performed on each template using forward (D- Loop) primer. PCR products were purified and sequenced at BIONEER Company using modified Sanger sequencing method (14).

Statistical analysis

Data were analyzed by Bio- Edit (Ver. 7.1.3.0), DNA SP (Ver. 5.10.01), Arlequin (Ver. 3.5.1.2) and Mega (Ver. 5.05) software. All sequences were aligned with Clustal X multiple-alignment program (23) in Bio- Edit software (24). Haplotype frequencies among populations (25), population pairwise Fsts and their significance (26), the polymorphic genetic loci, the number of gene copies, the number of alleles and the expected heterozygosity (27), the real and expected number of alleles (28), the gene diversity, nucleotide composition and the number of transition and transversion (29), nucleotide diversity (P) for each population and mean number of pairwise differences (25), divergence time (30) were estimated using Arlequin software (31). Genetic distance within samples was estimated using Kimura 2-parameter 1980 by Mega software (32). The haplotype diversity (h), fixation index (Fst) and Gene flow (Nm) were estimated using DnaSP software (33). The mean difference of paired nucleotide within and among samples of regions was constructed using Mega software (34). To examine the partitioning of genetic diversity among and within populations was used by analysis of molecular variance (AMOVA) (31). The Φ statistics generated by AMOVA were used to assess population genetic differentiation.

RESULTS AND DISCUSSION

The sequence lengths of the samples determined were 654 bp. There are 47 haplotype in the Astara and Chalus Rivers. Haplotypes were specific to each river and were not seen in other river. The two sequences have been deposited in database (NCBI) under the following accession numbers: KF015727 and KC991028.The average number of alleles was 2.117±0.334 and 2.135±0.354 in the Astara and Chalus Rivers.The gene diversity (observed heterozygosity) was calculated 1.000±0.045 and 1.000±0.027 in Astara and Chalus Rivers according to Nie (1987). The highest Nei's average genetic diversity (expected heterozygosity) (0.321±0.141) was calculated in the Astara River.Haplotype frequencies in the Astara and Chalus Rivers were 0.10% and 0.07% and it was significant between these rivers (P<0.05).

The average haplotype diversity (h) of the D- Loop in the Caspian trout caught in the Astara and Chalus Rivers was 1.000±0.005 and the highest average nucleotide diversity (0.122±0.063) was observed in the Chalus River (Table 2).

Phi (Φ) statistics are analogous to Wright's F-statistics.
P values are based on 99 permutations.
The genetic differences between Astara and Chalus Rivers were calculated to 0.058. Also the rate of gene flow was 2.78.

The pairwise FSTs was calculated (0.048) between Astara and Chalus Rivers which indicated that there was genetic differentiation among populations in these rivers (P<0.001).Transition number was 71 and 90 and transversion number was 137 and 170 in the Astara and Chalus Rivers and the relative degree calculated -0.51 and 0.01 in the Astara and Chalus Rivers.

CONCLUSION

First step to protect biological diversity and genetic structure of fish populations are being exploited in a sustainable harvest management strategy. If this strategy should be based on accurate and robust methods such as molecular data can maximize the uptake and utilization to the conservation of biodiversity (35). Genetic markers and identification of diversity at the DNA level provide the opportunity to investigate the correct genetic differences between individuals. mtDNA is applied to identify fish stocks and determine stocks contribution in mixed catches. mtDNA also provides useful information to study the genetic differences in fish (36). D- Loop, a displacement loop in mitochondrial DNA, is applied as a mediator at the beginning of replication. Nucleotide sequence from D- Loop region reveals diversity occurring without any effects on translation and replication. Nucleotide sequence in mtDNA occurs 10 times faster than nuclear DNA and D- Loop is the most changeable region of mtDNA (11). Genetic

diversity is one of the three levels of biodiversity, proposed by IUCN for conservation reserves (37). Therefore, it is essential to study the genetic diversity of Caspian trout as a highly endangered species (2).

There are several ways to assess the genetic diversity of biological communities but the allele frequency measurement is a useful tool for detecting expression and evolutionary relationships of populations close (38). In this study, Haplotypes were specific to each river and were not seen in other river. One sequence from each river was recorded in Gene Bank with accession numbers KF015727 and KC991028. Also haplotype frequencies were significantly different between the rivers studied (P<0.05), which indicate the separation hypothesis Caspian salmon populations in rivers studied.The real number of alleles (N_A) and effective allels (N_E) are the criteria to determine the polymorphic locus (39). Determine the degree of heterozygosity is the most common measure of a population's gene diversity (40). In this study, the average number of alleles was less than the amount reported for anadromous fish (11.3) (Dewoody and Avise, 2000) which can be attributed to several factors such as differences in temperature, salinity and nutrients in different habitats of the Caspian Sea.

The average observed heterozygosity was higher than the amount reported for anadromous fish (0.68) (41). Also the rate of observed heterozygosity was higher than the expected heterozygosity and there were also significant differences between the observed and expected heterozygosity (P<0.05) because genetic diversity of species that live in unstable and stressful environment is greater than the same species in a sustainable environment (42).Fst is a common method for estimating genetic differentiation in genetic studies that is directly or indirectly related to the degree of gene flow or effective migration (Nm) between populations (43). In this study the average genetic differentiation was calculated medium between the rivers (44).High levels of gene flow between populations show the evolution of their group and if it is low, indicating the evolution of populations is almost independent of each other (45). When is Nm>1, the gene is the major factor in the creation of genetic differentiation and When is Nm<1, genetic drift is the main factor to differentiate genetically (46). In this study, gene flow is the main factor to differentiate genetically and shows the evolution of populations of Caspian trout in the rivers of the study group.

Homozygosity increased presence of null alleles, genetic drift, the intercourse between closely related species, mooring limited number of alleles, selection, mixing of populations, non-random mating, insufficient sampling and sampling error can cause a deviation from Hardy-Weinberg equilibrium (47). In this study, samples of both rivers were out of Hardy-Weinberg equilibrium (P<0.05) which could be due to the presence of null alleles, Fusion of kinship, non-random mating and mixing.The average genetic distance for conspecific populations is (0.05) (range: 0.002-0.07) and for congeneric species is (0.30) (range: 0.03-0.61) (48). Therefore the genetic distance of obtained in this study, Caspian trout population migrating to these Rivers are conspecific populations.Haplotypes are good indicators to determine the genetic differences from each other and the level of genetic variation, or haplotypes can vary from zero (all members of the population have the same haplotype) to one (all members of the population have different Haplotypes) (49). In this study, the highest average nucleotide diversity observed in Chalus River and there were significant differences in nucleotide diversity between these Rivers. Also average haplotype diversity (h) in both rivers was 1.000 and shows that all members of the population have different Haplotypes.

Analysis of molecular variance is the appropriate test to determine the population structure and the degree of genetic differentiation between populations (50). The results of the analysis of molecular variance in this study showed that there is a maximum amount of genetic diversity within populations of the Rivers and differences in genetic variation within and between populations of Caspian trout were significant in the rivers (P<0.01) which is indicative of the health of populations and their ability to respond to natural selection (51).Transition and Transversion are the molecular diversity indices (52) and in this study, the highest number Transition and Transversion we observed in the Chalus River.The problem of classification is determined by the degree of kinship. If P<0.05, reject the null hypothesis (equality between the tree and the rate of evolution) and if P>0.05 shows the evolution of exchange rates between the trees (29) and the Caspian trout degree of kinship in this study shows that equality between the tree and the rate of evolution.Overall, the results showed that there is not a similar population of Caspian trout in these Rivers and was diagnosed two different genetic groups of this fish.

ACKNOWLEDGEMENTS

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Table 1. The Geographical location of rivers for Caspian trout sampling

River	Latitude	Longitude	Number of fin
Astara	38° 24'	48° 27'	15
Chalus	36° 20'	51° 20'	32

Table 2. Number of alleles (A), Haplotype diversity (h), Nucleotide diversity (P), Real allele (N_A), Effective allele (N_E), Observed heterozygosity (H_O), Expected heterozygosity (H_E), Tajima's D and Hardy-Weinberg equilibrium (HWE) of Caspian trout samples

River	N_A	N_E	H_O	H_E	h	P	HWE	Tajima´D
Astara	2.117±0.334	9.460	1.000±0.045	0.321±0.141	1.000±0.005	0.118±0.063	0.021	-0.512
Chalus	2.135±0.354	12.972	1.000±0.027	0.317±0.149	1.000±0.005	0.122±0.063	0.042	0.007

AMOVA analysis revealed that the majority of genetic variation (89%) occurred within populations (P<0.01) (Table 3).

Table 3. Analysis of molecular variance (AMOVA) results for sources (within populations, among populations) geographic scales: degrees of freedom (df), sums of squares (SS), mean squares (MS), genetic variance estimates (Est. Var.), proporation of variance (% Var.) attributed to the different levels in the spatial hierarchy of *Salmo trutta caspius*

Source	df	SS	MS	Est.Var.	% Var.	Φ	P
Within populations	3	69.523	31.128	0.412	89		
Among populations	114	692.145	7.718	6.21	11	0.845	<0.01