The Study of Comparison Between the dimensions of Life Satisfaction in Coronary Artery patients and healthy people
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Abstract
The purpose of this research was to compare Life Satisfaction in coronary artery patients and healthy individuals. It is an experimental control study. The experimental group was 50 men and women having coronary artery disease, referring to heart clinic in Motahari Hospital located in Fooladshahr. The control group was healthy men and women living in three sites of Fooladshahr. Experimental and control group were similar regarding gender and they were all married. They were all selected by available sampling. The data was gathered using Feriseh’s Life Satisfaction Questionnaire. The evidence related to its validity was studied by using simultaneous validity and to its reliability by cronbach’s alpha which were both accepted. Multi variable variance analysis, controlling age and education, showed that Life Satisfaction in experimental group was significantly lower than control group. Since, the results showed that Life Satisfaction was significantly lower in coronary artery patients in terms of factors like physical health, self-esteem, work, play, money, love, spouse are lower in heart chronic patients, it is understood that Life Satisfaction is a related factor to this disease. Also, the result clarified there were not significant differences in factors such as goals and values, learning, creativity, helping, children, relatives, home, neighborhood and community

Keywords, Quality of Life Therapy (QOLT), Coronary artery disease, Life Satisfaction.

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Introduction

The cognitive theorists believe that Life Satisfaction is a cognitive judgmental process in which the person compares his situation with the criteria that he finds them suitable and more appropriate to himself (Diener, 1985). In other words, the less the imaginary distance is between the person’s wishes and achievements, the more the satisfaction is (Diener & Oishi, 2003). Life Satisfaction is always a component of Quality of Life and happiness’s assessments and theories (Gladis, Gosch, Dishuk, Christoph, 1999; Spilker, 1996). World Health Organization (1994) believes that Quality of Life involves happiness, Life Satisfaction, self-actualization, complete physical, psychological and social well being. In other words, it's not just about lack of disease. Also, researchers believe happiness has three components: Life Satisfaction, positive affection and negative affect (Argyle, 1987). In recent psychological approaches such as Positive Psychology, Life Satisfaction is very fundamental. The positive psychological approach to Life Satisfaction is considered as Quality of Life Therapy. Life Satisfaction reflects happiness and Quality of Life in the best way because to veenhoven’s view, it shows the elegance of a good life philosophy. To Seligman’s views, this is a reflection of permanent and consistent health which is called genuine and reliable happiness. Life Satisfaction has a personal representation and it is a flexible concept which describes happiness and Quality of Life (Diener, 2003). In Quality of Life Therapy (QOLT), Life Satisfaction is the individual evaluation of his needs, goals and wishes. That is, the difference between what the person has and what he wishes in his life indicate his satisfaction (Frisch, 2004). Quality of Life Therapy is a new approach in Positive Psychology which is presented by Frisch (2006). It is the integration of Cognitive Therapy and Positive Psychology which is in line with the last formula of Beck's Cognitive Therapy, depression-Cognitive Theory and psychopathology (Frisch, 2006). Frisch relates his theory to therapy metaphors, relaxation, meditation and emotional theories. This approach is used for increasing happiness and satisfaction in clinical and non-clinical groups. One of the characteristics in QOLT is that it measures Life Satisfaction in 17 dimensions. They are of 1- physical health, 2- self-esteem, 3- goals and values, 4- money, 5- work, 6- play and fun, 7- learning, 8- creativity, 9- helping, 10- love, 11- friends, 12- children, 13- relatives, 14-
home, 15- neighborhood, 16- community, 17- spouse. In Quality of Life approach, the importance and value of a dimension in one's life is a reflection of his goals and wishes in the interest he has and this would surely affects the individual’s judgment and evaluation of his Life Satisfaction throughout his life span (Frisch, 2006). This approach emphasizes on clients' needs, the ones that clarify their life important values and then it helps them to work out on experiences that assist them to concentrate and attain their values. The experiences which are made in a five-ways model in this therapy and are the basic parts of it’s psychotherapy based on QOLT consist of 1-circumstance, 2- attitude, 3- standards of fulfillment, 4- importance, 5- overall satisfaction.

The present research aimed to study the dimensions of Life Satisfaction in coronary artery patients compared to healthy people. We have used the newest approach known as QOLT and assessed total Life Satisfaction and satisfaction in it’s 17 dimensions. Also, it was important to look at the subscales in which the two groups might be different. Coronary artery disease is an important reason in people's death in all the countries around the world. In spite of different methods to campaign, its prevalence is still high (Kelly, 2008). Coronary artery disease is a kind of heart disease which is basically psychosomatic. It is shown that, the psychological factors play very important roles to this disease. These psychological factors including career and social stress, rage, hostility, and type A personality (Rosenman, Fridman, sited by Sarafino Edvard, 2006). These factors as physiological risk factors, would increase the likelihood of coronary artery disease risk. As such, the psychological risk factors such as depression, anxiety, rage, psychological pressure have the primary effect on the onset of disease and secondary effect on its progress (Fiterman, 1992). Depression, anxiety, rage, weak and insubstantial control, social isolation, being low regarding social and economical circumstances, and being psychologically very defensive and guarded, are hinder and blocks in patient’s improvement process (Michalsen, 2005).

On the other hands, the researchers believe that low life satisfaction throughout the life, predicts behavioral problems and it is also an important risk factor for psychological and emotional disturbances (Frisch, 2006). There are a lot of researches on the topics of Life Satisfaction, and its association with psychological factors and physical problems. For
example, in one study, low Life Satisfaction predicts depression, anxiety, aggressive behaviors, low job performance and job satisfaction and as it was already discussed, these psychological factors, could consequently increase probability of getting involved with a coronary artery disease (Fiterman, 1992; Michalsan, 2005). Levinson and his colleagues pointed out that, low Life Satisfaction is prior to onset of clinical depression events. The depression group reported low Life Satisfaction before depression onset and their satisfaction worsened during depression (Frisch, 2006). Moreover, depression not only increases the probability of coronary artery disease, but also the likelihood of death becomes higher in next months of a heart attack (Fiterman, 1992). Depression can rise blood pressure, affects on thrombosis and heart rhythm and rate and increase cholesterol level (Michalsan, 2005). As such, low Life Satisfaction anticipates anxiety disorders (Barfol, Gislle, 1995), and anxiety is a crucial or fundamental risk factor for heart disease. Based on variety of research, anxiety is complicatedly accompanied with coronary artery risk factors. Specially generalized anxiety is accompanied with high blood pressure, high cholesterol, IBM, smoking and all these are risk factors to Coronary Heart Disease (Barger, Sidman, 2005, sited by Rahimian Bougar, 2011). Mohamadian, Bayat and Khanbani (2007) showed that anxiety in coronary artery patients is significantly higher than the healthy people and its severity and disorder has an important role to start and intensify the coronary artery disease. Also the researches have pointed out that low Life Satisfaction predicts factors such as aggressive behaviors in adolescents and adults (Valois, Zullig, 2001), impulsive behaviors (Kalichman, Honkanen, 2002) and low job performance and low job satisfaction (Judje, Huliin, 1993; Judge, Watanabe, 1993). Therefore, the researche showed that rage disclosure has significant relationship with coronary artery disease. The high levels of rage disclosure lead to health negative consequences, such as high blood pressure, atherosclerosis progress (Dembrosky, 1985; Sigman,1992; Esvarz, Williams, 1990; Sited rahimian, 2011). Also, career pressure, job’s demands, independency at job and job satisfaction are related to coronary artery disease. Since they have important roles to increase the probability of the onset of coronary artery disease increase, they are of considerable attention as risk factors (Rahimian, 2011). Frisch (2006) believes that perfectionism and high standards lead to low Life
Satisfaction. Moazen & his colleagues (2009) also explored that there is an important difference between negative perfectionism in coronary artery patients compared to healthy people; that is, negative perfectionism has a predictable role in this disorder.

In this case the researchers believe those who have experienced high level of happiness and Life Satisfaction, are more successful in attaining life valuable goals and domains because the inner experience of enduring happiness and satisfaction leads to increasing self-confidence, optimism, self-efficacy, positive interpretation of others’ behavior, sociability, friendliness, more activity and energy, physical health, effective adjustment with challenges and pressures, creativity and flexibility (Lyubomirsky, Tkach, 2004). Base on these documents the study of psychological variables related to disease such as coronary artery disease is very essential. Since, coronary artery disease is an epidemic and costly illness in physical disease, investigating the relationship between Life Satisfaction and coronary artery disease sounds very important. In particular, learning about the dimensions of Life Satisfaction in coronary artery patients compared to healthy individuals is a valuable investigation to carry out. Nevertheless, to find out about the different dimensions in two groups, can lead to practical and constructive intervention aiming to improve or prevent the disease. Frisch's Life Satisfaction Questionnaire is used in Iran for the first time and also investigating different dimensions of Life Satisfaction in coronary artery patients compared to normal individuals is a new inquiry. We hope it can help heart specialists to construct strategies to improve Life Satisfaction in all the patients. This research is a step to answer whether there is significant difference between Life Satisfaction in coronary artery patients and healthy people.

**Methods**

The present research is an experimental-control group which compares Life Satisfaction in coronary artery patients and healthy people. The subjects in experimental group are all patients referring to a heart clinic in Motahari Hospital in Fooladshahr in 2010. The subjects are married men and women living in three sites of B1, B2, B3 in Fooladshahr - Isfahan. The average age of the experimental group was 39/73 and control one 38/75. The entrance criteria for patients were: 1- willing to participate 2- coronary artery disease diagnosis 3- lack of other malignant disease such as renal failure, chronic obstructive
pulmonary disease, neuro motor disorder 4- having an education level of at least middle school degree Two groups were all married men and women and they were parallel regarding gender. The healthy group were checked for physical disease and psychological disorders. The education level and age were similar to the control group. Two groups participated voluntarily and they were selected by available sampling. The subjects in control group were selected among those without any coronary artery disease history. The output criteria were: cancer, MS, suffering from a malignant disease including renal failure, chronic obstructive pulmonary disease, neuro motor disorder.

The research instrument

1- Practitioner's diagnosis: The experimental group was selected by cardiologist.
2- Demographic form: It contains age, gender, education, marital status, past history of the disease.
3- Frisch's Life Quality Questionnaire: It is presented by Michal Frisch in 2006. It has 36 questions and 17 subscales. It is for both clinical and nonclinical usages. Its use in nonclinical situation and positive oriented psychology is a criteria to evaluate life quality and satisfaction which is an integrative theory to direct therapeutic intervention and the reliability and validity characteristic of therapy output. It’s used in non-clinical situation as a criteria for Positive Psychology and Life Satisfaction. It is based on an integrative theory which improves the present instruments and criteria regarding negative emotion, disease or psychological disorder. It is useful in:
   1- Clinical screening/ psychological health
   2- Evaluations of treatment’s progress and psychological health output and general medicine treatments/ behavioral medicine.
   3- Therapeutic plans in psychological health and general medicine fields/ behavioral medicine. In Person and Bertagnol’s perspective, Life Quality Questionnaire is an available scale to assess life problems and formed the essential part and cognitive conceptualization (Frisch, 2006). The introduced dimensions by Frisch in cognitive therapy of this questionnaire are explained here. He studies the importance of each dimension and the individual’s satisfaction towards them. The scoring domain is between
-6 to +6, based on various researcher's assessment and studies (eg, Agles, et al, 1996; Rabkin, et al, 2000), The Quality of Life Questionnaire has the 11 criteria, the ones that each accurate and useful instrument should have. They are gathered by some specialists (Newman et al, 1999) and are including: psychometric power and strength, practical/clinical usage, being understandable for non professionals, being in line with different theories and clinical methods, inexpensive usage, its usefulness in progress evaluation and therapy results and also it is being suitable for wide variety of groups (Frisch, 2006). Cronbach’s alpha is reported between 77% to 89% among three clinical samples and three nonclinical samples by Frisch. The total correlation of questions are appropriate and acceptable. The validity (test-retest) is between 80% to 91%. In order to study the psychometric characteristics the questionnaire was sent to 5 professionals and its content validity was confirmed. Then the test was carried out on 40 people (pilot study) which was meaningful. The questionnaire validity and retest reliability was 71% after two weeks which had a suitable simultaneity with world health organization Quality of Life and Beck's depression scale. It was completed by 200 people that cronbach’s alpha was 92% (padash, 2010

Results

The participants were 100 people, including 50 people in experimental group and so in control one. Each group had 32 women and 18 men who were all married. The purpose was to compare Life Satisfaction in two groups. In this paper, age and education variables were controlled. It means their effect on Life Satisfaction was deleted and then they were compared. Table1 show covariance analysis for Life Satisfaction based on group membership.
Table 1 Covariance analysis for Life Satisfaction in coronary artery patients and healthy people

<table>
<thead>
<tr>
<th>Source</th>
<th>Mean square</th>
<th>F</th>
<th>Sig</th>
<th>Observed power</th>
</tr>
</thead>
<tbody>
<tr>
<td>age</td>
<td>0.086</td>
<td>0.493</td>
<td>0.486</td>
<td>0.106</td>
</tr>
<tr>
<td>Education</td>
<td>0.002</td>
<td>0.009</td>
<td>0.926</td>
<td>0.051</td>
</tr>
<tr>
<td>Groups</td>
<td>0/342</td>
<td>1.962</td>
<td>0/01</td>
<td>0/993</td>
</tr>
</tbody>
</table>

As table 1 shows there is a significant difference in Life Satisfaction in 2 groups (p<0.05). Also the patients had lower Life Satisfaction to the other one.

Table 2 Covariance analysis for Life Satisfaction subscales in coronary artery patients and healthy people

<table>
<thead>
<tr>
<th>Variables</th>
<th>Df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>1</td>
<td>47.61</td>
<td>6.004</td>
<td>0.01</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>1</td>
<td>47.61</td>
<td>5.93</td>
<td>0.01</td>
</tr>
<tr>
<td>Goals&amp; Values</td>
<td>1</td>
<td>8.356</td>
<td>1.471</td>
<td>0.2</td>
</tr>
<tr>
<td>Money</td>
<td>1</td>
<td>15.484</td>
<td>3.968</td>
<td>0.04</td>
</tr>
<tr>
<td>Work</td>
<td>1</td>
<td>21.022</td>
<td>2.573</td>
<td>0.01</td>
</tr>
<tr>
<td>Play</td>
<td>1</td>
<td>14.713</td>
<td>6.599</td>
<td>0.01</td>
</tr>
<tr>
<td>Learning</td>
<td>1</td>
<td>18.49</td>
<td>2.24</td>
<td>0.13</td>
</tr>
<tr>
<td>Creativity</td>
<td>1</td>
<td>1.199</td>
<td>0.174</td>
<td>0/6</td>
</tr>
<tr>
<td>Helping</td>
<td>1</td>
<td>12.684</td>
<td>1.723</td>
<td>0.1</td>
</tr>
<tr>
<td>Love</td>
<td>1</td>
<td>131.838</td>
<td>23.311</td>
<td>0.00</td>
</tr>
<tr>
<td>Friends</td>
<td>1</td>
<td>14.44</td>
<td>2.02</td>
<td>.15</td>
</tr>
<tr>
<td>children</td>
<td>1</td>
<td>36.185</td>
<td>3.909</td>
<td>0.05</td>
</tr>
<tr>
<td>Relatives</td>
<td>1</td>
<td>0.360</td>
<td>0.047</td>
<td>0.82</td>
</tr>
<tr>
<td>Home</td>
<td>1</td>
<td>10.745</td>
<td>1.230</td>
<td>0.2</td>
</tr>
<tr>
<td>Neighborhood</td>
<td>1</td>
<td>7.588</td>
<td>2.099</td>
<td>0.1</td>
</tr>
<tr>
<td>Community</td>
<td>1</td>
<td>6.500</td>
<td>0.750</td>
<td>0.3</td>
</tr>
<tr>
<td>spouse</td>
<td>1</td>
<td>216.500</td>
<td>40.29</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Table two shows that there are significant differences regarding Life Satisfaction subscales in both groups. It means that, in terms of various dimensions including physical health, self-esteem, work, play, money, love, spouse, there were significant differences. That is, patient’s satisfaction was significantly lower than healthy people in terms of abovementioned dimensions. However, there were not significant differences in other dimensions including goals and values, learning, friends, creativity, helping, children, relatives, home, neighborhood and community between the two. It means that, their satisfaction is not different in terms of these variables.

**Discussion**

This paper studied Life Satisfaction dimensions in coronary artery patients compared to healthy individuals. The results showed that, Life Satisfaction was significantly lower in patients in terms of some of the subscales like physical health, self-esteem, work, play, money, love and spouse. Although, regarding some dimensions such as goals and values, learning, friends, creativity, helping, children, relatives, home, neighborhood and community there was not any difference. Related to this topic, there are several types of studies. The first group of research is the one that report the effect and relationship of Life Satisfaction on coronary artery disease. The second one report the effect and relationship of Life Satisfaction and psychological factors on coronary artery disease and finally those research that investigate the relationship between Life Satisfaction subscales with coronary artery disease. In the following, some of them are described. In relation with the effect of Life Satisfaction on coronary artery disease, Vitaliano and his colleagues showed that low Life Satisfaction is related with coronary artery disease such as Myocardial Anfaretos (Vitaliano, 1994). Also, in relation to Life Satisfaction with psychological factors and coronary artery disease, the researches showed there is a relationship between Life Satisfaction and anticipated problems and psychological disorders (Frisch, 2004). For example, low Life Satisfaction predict low job functioning and also dissatisfaction (Judge, Haliin, 1993), anxiety disorder (Barfol et al, 1995), major depression, both onset and relapse (Levinson, 2001), aggressive behaviors in adolescent and adult, impulsive behavior (Volvise et al, 2001) and perfectionism behavior (Frish,
To clarify the relationship between psychological factors with coronary artery disease, the researches showed in addition to medical factor, stress and psychological factors such as depression, anxiety and increase the death probability (Blomental, 2005). Depression, anxiety and rage can increase blood pressure, can affects on thrombosis, heart rate and rhythm and rises cholesterol and insulin levels (Rahimian Bougar, 2010). Based on researches, anxiety, depression and rage are significantly higher in coronary artery patients than healthy people. Anxiety especially when it becomes at a severe level or a disorder, has an important role. When anxiety becomes unresolved, it may lead to chronic feeling of loss of control on life that affects on patient's ability and his return to general life, also it increases the probability of next heart attack (Auditoriam). Again, Depression not only enhances the likelihood of coronary artery disease, but also it affects on death rate after heart attack (Yu, Nelsen, Zigier,Dimsdale, 2001). It seems that life dissatisfaction is related to some factors such as low mood in life, rage, anxiety, depression stress, smoking cigarette, job dissatisfaction, psychological disturbances, life basic roles and social roles (Frisch, 2006; Barfol, 1995; Valois, 2001; Koivumaa, 2002). On the other hand, there are many evidences that showed, depression, anxiety, psychological disturbances, rage, stress, job dissatisfaction, smoking cigarette and mood situation are related with coronary artery disease (for example see, Judge, 2001; Lindsee,200; Cacippo, 2000). It is pointed out that psychological factor such as depression, anxiety and rage can increase coronary artery disease probability (Michalsen, Grossman, Lehmann, Knoblauch, Paul, 2005) These factors are on the other hand, related to dissatisfaction.

The findings of this research indicate that there is a significant difference between satisfaction in patients and healthy people in subscales such as physical health, self-esteem, work, play, money, love and spouse. To describe the difference between the coronary artery disease and healthy people in subscales such as money finances and job, Karazak and his colleagues (1988; sited by Rahimian, 1386) showed that there is a relationship between job pressure, job dissatisfaction, low economical status and social condition with coronary artery disease and it is to be noted for special risk factors. In subscales of love and spouse, Rostami's, Rahimian's, Beshart's (2007) showed that, there
is a significant difference between marital psychological pressure in coronary artery patients and healthy individuals. In subscales of physical health and self-esteem, the researches clarified that since coronary artery disease can create physical and psychological tension that could be understood as pain, loss of health, loss of job, feeling of deprivation, imminent death and different reflection of disappointment, tiredness and fear, it leads to feeling of worthless and low self-confidence in patients and that might consequently cause dissatisfaction in physical health and self-esteem (Auditoriam, 2003).

In the subscales of game and fun the results showed that the patients had low satisfaction which means that this dimension is not paid attention. These findings are not odd and not in disagreement of the literature; since, coronary artery patients experience more motor deprivation and it consequently leads to low Life Satisfaction. Some researchers showed that, game and fun affect on positive affections, physical and psychological health (Argyle, 1987). The present research showed that, there were not significant differences in subscales of goals and values, learning, friends, creativity, helping, children, relatives, home, neighborhood and community between patients and healthy people. These results are also not in disagreement with the literature and they are somehow expected results; since there is not reason to find differences regarding these dimensions between healthy individuals and coronary artery disease.

The present research refers to low satisfaction in life, in terms of physical health, self-esteem, work, play, money, love and spouse in coronary artery patients compared to healthy individuals. So, it is essential to carry out more research regarding these findings and to investigate further steps of in terms of the processes and the reasons for such results and endeavor to intervene and effect on this process. It is suggested to use various strategies to increase Life Satisfaction and to invest practically and scientifically on coronary artery disease because it has the most death rate in the world and specially in our country (Saraf zadegan, Nazal & colleagues, 1997). Here our limitation is self-report data although the researchers were interested to evaluate peoples' Life Satisfaction.

Appreciation

We deeply appreciate the manager and personnel's of Motahari Hospital in Fooladshahr to cooperate with the researcher in terms of data collection.
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