Comparing the Motivational Structure and Coping Strategies in Patients with Somatoform Disorder and Normal Population

Maryam Aloudari¹, Fariborz Bagheri², Hosein Delavar Kasmai³*, Farhad Assarzadegan⁴ and Sima Osouli⁵

¹Department of Psychology, Islamic Azad University, Iran
²Assistant Professor of Department of Psychology, Islamic Azad University, Iran
³Department of Neurology, Shahid Beheshti University of Medical Sciences, Iran
⁴Associated Professor of Department of Neurology, Shahid Beheshti University of Medical Sciences, Iran
⁵Shahid Beheshti University of medical science, Iran

*Corresponding author: Hosein Delavar Kasmai, Department of Neurology, Shohadaye Tajrish Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Received Date: April 30, 2019
Published Date: May 23, 2019

Abstract

Objective: Our study was aimed to compare the motivational structure and coping strategies in patients with the somatoform disorder and normal population.

Materials and methods: Ex-post facto method and random sampling method were used. The sample of this study included 60 persons, who were selected from all individuals referred to Erfan Hospital and a private clinic for somatoform disorder therapy. They were assigned to an experimental group (30 patients with the somatoform disorder; 12 with conversion disorder; 9 with somatization disorder and 9 with pain disorder), and the control group (30 healthy persons). The results were analyzed by MANOVA.

Result: Motivational structure and coping strategies in patients with somatoform disorder are different from those in a normal population.

Conclusion: Patients with the somatoform disorder have maladaptive motivational structure and have more focus on emotional and physical inhibitory coping strategies. As compared to normal population, they put less importance to their goals, are less hopeful in achievement and control of them, the least satisfaction from achievement or sorrow from non-achievement of goal and the least commitment to the goals. They have less freedom in selection of their goals, act very passively in the execution of their plans, and since faced a lot of failures in their life, are somehow suffering from a learned frustration and end up with this belief that effort for the achievement of their goals is in vain. When facing obstacles on their way to their goals, they abandon them and have no continuance in their way to achieve them.

Keywords: Somatoform disorders; Motivation; Coping behavior

Introduction

Among psychological disorders, the somatoform disorder can be mentioned. Somatoform disorders include a broad range of diseases, the main component of which is physical signs and symptoms. They involve interactions of body and mind, in which brain issues, in yet-to-be-known ways, different alarms, whose effect on the consciousness of the individual is the induction of the presence of serious physical problems. In addition, partial or still unknown changes in neurochemistry and neurophysiology may arise from unknown mental or cerebral mechanisms that result in the development of disease [1]. Somatoform disorders and somatic signs that are not attributable to physical causes are common in medical settings. In trying to confirm a physical diagnosis, physicians resort to expensive medical examinations or tests and even surgery. When a physician proposes the likelihood that the cause may be mental, the response of the patients is typically anger [2]. In Diagnostic and Statistical Manual of Mental
Disorders, Fourth Edition, Text Revision (DSM-IV-TR), five specific pseudosomatic disorders are identified: (1) Somatization disorder, characterized by multiple physical complaints that are related to different systems; (2) Conversion disorder, characterized by one or two neurological complaints; (3) Hypochondriasis, characterized more by the patient’s belief in having a specific disorder than focus on symptoms; (4) Body dysmorphic disorder, characterized by preoccupation with or exaggerated perception of defect in part of the body; and (5) Pain disorder, characterized by pain symptoms either related only to psychological factors or exacerbated under influence of psychological factors. DSM-IV-TR has also two residual diagnostic classes for pseudosomatic disorders: (1) Undifferentiated somatoform disorder, including pseudosomatic disorders that are not otherwise described and lasted at least for six months or more; (2) Somatoform disorder that is not otherwise specified (NOS), which is a class for those group of somatoform disorders that do not meet the criteria for the previously mentioned somatoform disorders [1].

Bener conducted a study on a sample of Qatari patients in order to investigate gender difference in prevalence of somatoform disorders and investigate the highest frequency of physical signs among them. The results of this study suggested that the prevalence of somatoform disorders was 23.9% among the screened samples and the prevalence rate was slightly higher in females (24.2%) than in males (23.7%). Mood depression was significantly higher in females than in males (p=0.003). Low back pain was the most common pain reported by the males and headache was the most common sign reported by the females [3].

The data obtained from the studies conducted by Katrin Limbierowicz and Ulrich T Egle on the patients with the somatoform disorder, the patients with fibroma and control group suffering from a chronic pain indicated that the patients with fibroma and the patients with somatoform disorder scored higher on the stressor events of life. In addition to being sexually and physically abused, these patients had poor emotional relationships with both parents, and there were experiences of physical conflicts of the parents, addiction, and alcohol drinking problems in mothers of these children, separation and low economic condition before the end of the age 7 in this group of patients, but these factors were tangibly lower in the control group [4].

Naturally, when it comes to stress, its evaluation and copying components are immediately introduced. Lazarus and Folkman believe that presence of potential stress or stressor events in lives of the individuals does not result in their dysfunction, but ineffective coping with these stresses may be problematic [5]. An effort to decrease stress is called coping. When coping is unsuccessful and stress does not subside, the individual seeks clinical help for physical and mental problems resulted from continuous physiological arousal. There are various ways to consider coping, but the most important one is to differentiate between problem-oriented coping and emotion-oriented coping. In problem-oriented coping, the individual changes anything that makes the situation stressor, may make other plans or find a new and better way for correcting the situation. In any case, the individual tries to cope with the situation. In contrast, in emotion-oriented coping, the individual changes nothing in the situation, but instead tries to improve themselves or their feelings towards the situation [2]. According to Schroevers in addition to the method of coping, the individual’s goals play an important role in their assessment and perception of the event [6].

Based on the theory of Cox and Klinger, behavior, experience and cognitive activities of human are organized based on the “pursuit of incentives” and “goals”. According to this theory, a lot of factors influence the formation of disorders, which end up with a common point- i.e. motivation for the achievement of the goals. According to Cox and Klinger the process of selection and method of goal pursuit is called motivational structure. They indicated that there were two motivational structures: adaptive and maladaptive. The individuals with maladaptive motivational structure are about to provoke their emotion in an unhealthy way, so they suffer from derangement and disorder. Those with adaptive motivational structure spend their resources to pursue healthy stimuli and often seek positive goals; are highly committed to their goals; expect much joy from the achievement of their goals and sorrow if they do not achieve their goals; are optimistic about their achievements, and have the least conflict among their goals. Those with maladaptive motivational structure often seek avoidance goals and believe that achievement of goals brings little joy to them, will have slight sorrow if they are unsuccessful in the achievement of their goals, pursue the goal without thinking of success or unsuccessful in style of goal, and have high conflict among their goals [7].

The first study that indicated the effect of conflicts among goals was conducted by Palys and Little. This study showed that there was a relationship between conflict of goals and life satisfaction [8]. Emmons and King conducted two studies on a sample of university students in order to investigate the relationship between conflict of goals and welfare. The results of these studies indicated that there was a relationship between conflict of goals and psychological and physical disorders. These studies furthermore indicated that the conflicts were associated with high levels of negative emotions, depression and psychosomatic complaints [9].

Since somatoform disorder is common in medical settings and it has not previously attracted attention in the country, it is now turned into an important axis, and need for planning and implementation of many projects in mental health is felt more than ever, and since conduction of such studies may have important implications in prevention and treatment of somatoform disorders, the present study was designed with the general aim of comparing the motivational structure and coping strategies in patients with somatoform disorders and normal population by proposing two hypotheses: 1) Motivational structure in patients with somatoform disorder is different from that in normal population, and 2) There is a difference between coping strategies of patients with somatoform disorder and those of a normal population.
Materials and Methods

Ex-post facto method and random sampling method were used. The sample of this study included all individuals referred to Erfan Hospital and a private clinic for somatoform disorder therapy and normal population, and age, sex, education and marital status variables were controlled at the time of assignment of the individuals to the two groups. The sample included 60 individuals, 30 patients with somatoform disorder and 30 normal individuals. Among 30 patients with somatoform disorder, 12 were diagnosed with conversion disorder, 9 with somatization disorder and 9 with paid disorder. In the first phase, after diagnosis by the attending physician and necessary examinations and tests, they were diagnosed with somatoform disorder by a psychologist. Then, assuring the patients that all data will be kept confidential and their names will not be disclosed in this study, they were selected for this study after organized SCID interview. Normal population was also interviewed, and they completed the questionnaire after meeting the conditions that they suffer from no special disease. After collection of data, Multivariate Analysis of Variance (MANOVA) Statistical Test was used, and the data were analyzed by SPSS Software Ver 16. Study tools included:

Personal Concern Inventory (PCI)

PCI is a modified and summarized form of Motivational Structure Questionnaire (MSQ), part of which is idiographic just like MSQ, because plans and current concerns of each individual are assessed and studied in 12 different scales [7]. In PCI, the subjects are asked to think about their goals in each life context and then score their comments on how to achieve their goals in ten dimensions. Life contexts in PCI include:

1) Home and its related affairs;
2) Job, profession, and financial and economic condition;
3) Relationships with family, spouse and relatives;
4) Relationships with friends and acquaintances;
5) Love, intimacy and sexual relationships;
6) Change, correction and personal growth;
7) Education and training;
8) Medical health and mental health;
9) Smoking (cigarette and etc.)'
10) Spirituality;
11) Pastime and hobbies;
12) Other goals.

Cox and Klinger believe that the above contexts are selected as the most important contexts because they are held in common by many people [7].

In addition, part of the inventory is nomothetic, because interpersonal comparison is made possible through classification of the goals with the aid of 10 keywords for type of activities, and in this study, the second part of the inventory is concerned.

Dimensions in PCI

1) Importance: This dimension specifies importance of the subject’s goal. To what extent the goal is important for the subject that they want to achieve or accomplish it.
2) Possibility of Attainment: This dimension measures the respondent’s comment on possibility of achievement of the goals in case of effort.
3) Control on Attainment Process: This dimension measures the subject’s sense of control on achievement of their goals.
4) Awareness of What to Do: This dimension measures level of the subject’s information and knowledge on how to achieve their goals.
5) Satisfaction (In case of attainment): This dimension measures the subject’s joy from achievement of their goals.
6) Sorrow (In case of not attainment): This dimension measures the subject’s sorrow if their goals are not achieved.
7) Commitment to Goal: This dimension measures determinedness of the client in achievement of their goals.
8) Length of Time for Attainment: This dimension measures the respondent’s comment on probable length of time required to achieve their goals.
9) Degree of Freedom in Selection of Goal: This dimension determines whether the subject has selected the goal or others have selected the goal for him.
10) Importance of Goal for Other Goals: This dimension measures compliance or conflict of the subject’s goals.

Findings indicate that PCI is of good validity. Cox and Klinger calculated internal consistency of ten PCI scales by Chronbald’s Alpha Method in a sample consisted of 182 students, with α= 0.81 [7].

Copings Responses Inventory (CRI)

Developed by Billings and Moos (1981), this inventory has 32 scales that assess 5 types of coping strategies: coping based on problem solving (3 subscales), coping based on emotional inhibition (11 subscales), coping based on cognitive assessment (5 subscales), coping based on physical inhibition or somatization of problems (9 subscales), and coping based on attraction of social support (4 subscales). Scoring is based on a Likert scale ranging from 0 to 3.

Demographic Characteristics Inventory

After collection of data, Multivariate Analysis of Variance (MANOVA) Statistical Test was used, and the data were analyzed by SPSS Software, Ver. 16

Results

From 60 subjects participated in this study, 30 had somatoform disorder and 30 were normal population. From 30 patients with
somatoform disorder, 12 were diagnosed with conversion disorder, 9 with somatization disorder and 9 with pain disorder. Age, sex, education and marital status variables were controlled at the time of assignment of the individuals to the two groups. Age of the participants ranged between 13 and 60 years (Table 1).

Table 1: Demographics of Sample.

| Variables                  | Frequency | Percent |
|----------------------------|-----------|---------|
| Patients                   |           |         |
| Conversion Disorder        | 12        | 40      |
| Somatization Disorder      | 9         | 30      |
| Pain Disorder              | 9         | 30      |
| Sex                        |           |         |
| Female                     | 44        | 73.3    |
| Male                       | 16        | 26.7    |
| Marital Status             |           |         |
| Single                     | 18        | 30      |
| Married                    | 40        | 66.7    |
| Widow                      | 2         | 3.3     |
| Education                  |           |         |
| Illiterate to High School Diploma | 48  | 80  |
| High School Diploma to bachelor's degree | 12 | 20 |

Analysis of Results

In order to analyze results of the present study, appropriate statistical tests were used for hypotheses of the study. Hypotheses include: 1) Motivational structure in patients with somatoform disorder is different from that in normal population, and 2) There is a difference between coping strategies of patients with somatoform disorder and those of normal population. In order to analyze these hypotheses, Multivariate Analysis of Variance (MANOVA) Test was used (Table 2).

Table 2: Mauchly’s Test of Sphericity for the First Hypothesis.

| Epsilon       | Value of Statistic | Mauchly’s W | Approx. Chi-Square | Df | Sig. |
|---------------|--------------------|-------------|--------------------|----|------|
| Epsilon       | 0.008              | 265.509     | 44                 | 0.000 ||

Table 3: Results of Fourfold F Characteristics Related to MANOVA for the First Hypothesis.

| Effect                      | Value | F     | Significance Level |
|-----------------------------|-------|-------|--------------------|
| Pillai’s Trace              | 0.705 | 11.717| 0.000              |
| Wilks’ Lambda               | 0.295 | 11.717| 0.000              |
| Hotelling’s Trace           | 2.391 | 11.717| 0.000              |
| Roy’s Largest Root          | 2.391 | 11.717| 0.000              |

Results of Mauchly’s Test of Sphericity indicates that the obtained significance in the components is lower than significance level of 5 percent (p<0.05). Therefore, it can be said that the obtained f is higher than f of the table and necessary condition exists for using f Test (Table 3).

As it can be concluded from the above table, characteristic statistical value of F=11.717 is significant for all four characteristics at significance level of α=0.05; i.e. with the possibility of 95%, it can be concluded that motivational structure in the patients with somatoform disorder is different form that in normal population (Table 4 & 5).

Table 4: Results of MANOVA by the Patients with Somatoform Disorder and Normal Population for the First Hypothesis.

| Effect of Group                  | Sum of Squares | Degrees of Freedom | Mean Square | F      | Sig. |
|---------------------------------|----------------|--------------------|-------------|--------|------|
| Importance                      | 11834.036      | 1                  | 11834.036   | 41.693 | 0.000|
| Possibility of Attainment of Each Goal | 14642.188     | 1                  | 14642.188   | 53.895 | 0.000|
| Extent of Control in Attainment of Goal | 13022.793    | 1                  | 13022.793   | 48.793 | 0.000|
| Extent of Awareness of Necessary Steps and Measures | 15663.565   | 1                  | 15663.565   | 52.982 | 0.000|
| Extent of Happiness in Case of Attainment of Each Goal | 11967.548     | 1                  | 11967.548   | 35.321 | 0.000|
| Extent of Sorrow in Case of Failure of Each Goal | 5330.215      | 1                  | 5330.215    | 10.211 | 0.002|
| Extent of Commitment and Diligence in Relation to Attainment of Each Goal | 11644.366   | 1                  | 11644.366   | 38.566 | 0.000|
| Length of Time for Attainment of Each Goal | 14.741        | 1                  | 14.741      | 0.032 | 0.858|
| Degree of Freedom of Each Individual in Selection of Their Goal | 13856.321     | 1                  | 13856.321   | 42.084 | 0.000|
| Importance for Other Goals     | 8324.455      | 1                  | 8324.455    | 16.476 | 0.000|
### Table 5: Descriptive Data for the First Hypothesis.

| Index                                                                 | Group   | Number | Average | Standard Deviation |
|----------------------------------------------------------------------|---------|--------|---------|--------------------|
| Importance of Each Goal                                              | Patient | 30     | 62.8    | 19.7               |
|                                                                     | Normal  | 30     | 90.9    | 13.4               |
|                                                                     | Total   | 60     | 76.9    | 21.9               |
| Possibility of Attainment of Each Goal                               | Patient | 30     | 45.8    | 15.2               |
|                                                                     | Normal  | 30     | 77      | 17.6               |
|                                                                     | Total   | 60     | 61.4    | 22.7               |
| Extent of Control in Attainment of Goal                              | Patient | 30     | 43.5    | 14.5               |
|                                                                     | Normal  | 30     | 72.9    | 18                 |
|                                                                     | Total   | 60     | 58.2    | 22                 |
| Extent of Awareness of Necessary Steps and Measures                   | Patient | 30     | 45.9    | 16.9               |
|                                                                     | Normal  | 30     | 78.2    | 17.5               |
|                                                                     | Total   | 60     | 62      | 23.6               |
| Extent of Happiness in Case of Attainment of Each Goal               | Patient | 30     | 62.5    | 21.6               |
|                                                                     | Normal  | 30     | 90.8    | 14.5               |
|                                                                     | Total   | 60     | 76.6    | 23.1               |
| Extent of Sorrow in Case of Failure of Each Goal                     | Patient | 30     | 57.8    | 24.3               |
|                                                                     | Normal  | 30     | 66.7    | 21.3               |
|                                                                     | Total   | 60     | 57.3    | 24.6               |
| Extent of Commitment and Diligence in Relation to Attainment of Each Goal | Patient | 30     | 54.7    | 20.4               |
|                                                                     | Normal  | 30     | 82.6    | 13.7               |
|                                                                     | Total   | 60     | 68.6    | 22.2               |
Results of ANOVA in Table 4 indicates that except for "Length of Time for Attainment of Goal", for which there is no significant difference between the two groups, there are significant differences between the patients with somatoform disorder and normal population for other components. As seen from the descriptive indices included in Table 5, except for "Length of Time for Attainment of Goal", average of the patients is lower than that of normal population for all components (Table 6).

Table 6: Mauchly’s Test of Sphericity for the Second Hypothesis.

| Effect    | Mauchly’s W | Approx. Chi-Square | Df | Sig. | Epsilon |
|-----------|-------------|--------------------|----|------|---------|
| Factor 1  | 0.497       | 39.391             | 9  | 0.000| 0.743   |

Results of Mauchly’s Test of Sphericity indicates that the obtained significance in the components is lower than significance level of 5 percent (p<0.05). Therefore, it can be said that the obtained f is higher than f of the table and necessary condition exists for using f Test (Table 7).

Table 7: Results of Fourfold F Characteristics Related to MANOVA for the Second Hypothesis. Multivariate Tests.

| Effect       | Value | F   | Significance Level |
|--------------|-------|-----|-------------------|
| Pillai’s Trace | 0.487 | 10.260 | 0.000           |
| Wilks’ Lambda | 0.513 | 10.260 | 0.000           |
| Hotelling’s Trace | 0.950 | 10.260 | 0.000           |
| Roy’s Largest Root | 0.950 | 10.260 | 0.000           |

As it can be concluded from the above table, characteristic statistical value of F=10.260 is significant for all four characteristics at significance level of α=0.05; i.e. with the possibility of 95%, it can be concluded that coping strategies in the patients with somatoform disorder are different from those in normal population.

Tests of between-subjects effects

(Table 8 & 9) Results of ANOVA in Table 8 indicates that except for “Cognitive Assessment and Attraction of Social Support”, for which there is no significant difference between the two groups, there are significant differences between the patients with somatoform disorder and normal population for other components. Comparison of the two groups indicates that the patients with no somatoform disorder use coping strategy based on problem solving more than those with this disorder, and the patients with somatoform disorder use coping strategies based on emotional inhibition and physical inhibition more than those without this disorder.

Table 8: Results of MANOVA by the Patients with Somatoform Disorder and Normal Population for the Second Hypothesis.

| Source | Dependent Variable | Type III Sum of Squares | Df | Mean Square | F   | Sig. |
|--------|--------------------|-------------------------|----|-------------|-----|------|
| Group  | Problem Solving    | 25.350                  | 1  | 25.350      | 7.014 | 0.010 |
|        | Emotional Inhibition| 93.750                  | 1  | 93.750      | 5.595 | 0.021 |
|        | Physical Inhibition | 416.067                 | 1  | 416.067     | 32.139 | 0.000 |
|        | Cognitive Inhibition| 13.067                  | 1  | 13.067      | 1.957 | 0.167 |
|        | Social Support     | 7.350                   | 1  | 7.350       | 1.610 | 0.210 |
| Error  | Problem Solving    | 209.633                 | 58 | 3.614       | 16.757 |
|        | Emotional Inhibition| 971.900                 | 58 | 16.757      | 12.946 |
|        | Physical Inhibition | 750.867                 | 58 | 12.946      | 6.677 |
|        | Cognitive Inhibition| 387.267                 | 58 | 6.677       | 4.566 |
|        | Social Support     | 264.833                 | 58 | 4.566       |       |
| Total  | Problem Solving    | 2061.000                | 60 | 34.351      | 60   | 0.000 |
|        | Emotional Inhibition| 11441.000               | 60 | 190.216     | 60   | 0.000 |
|        | Physical Inhibition | 6544.000                | 60 | 6544.000    | 60   | 0.000 |
|        | Cognitive Inhibition| 6202.000                | 60 | 6202.000    | 60   | 0.000 |
|        | Social Support     | 1843.000                | 60 | 1843.000    | 60   | 0.000 |
Discussion

The present study was mainly aimed to compare motivational structure and coping strategies in the patients with somatoform disorder and normal population. Considering the obtained results, role of motivational structure and coping strategies seem to play an important role in etiology and development of somatoform disorder. Based on the findings, the patients with somatoform disorder have maladaptive motivational structure. As compared to normal population, they put less importance to their goals, are less hopeful in achievement of their goals, have less control and awareness of their goals, have the least satisfaction from achievement of goal or the least sorrow from non-achievement of goal, and have the least commitment to the goals and conflict of goals. As compared to normal population, they have less freedom in selection of their goals, act very passively in execution of their plans and goals, and since they faced a lot of failures and stresses in their life, they are somehow suffer from a learned frustration and end up with this belief that effort for achievement of their goals is in vain. When facing obstacles on their way to their goals, they relinquish the goals and have no continuance and diligence in their way to achieve their goals.

Generally, goal pursuit has a specific starting point- i.e. when the individual selects a motivation and forms an internal commitment to pursue that goal [10].

Commitment to a goal is important with respect to both the consequences of relinquishment of goal and numerous changes made by commitment to a goal. Firstly, commitment to a goal changes the initial effects of sudden obstacles, which means that before an individual can be committed to a goal, obstacles cause the goal to lose its attraction, but after commitment, the obstacles not only reinforce the goal but also deepen the commitment [11]. Secondly, the commitment makes change in function of the mind. Before commitment, the individual regularly estimates various options for their choice; in other words, their mindset is in an assessment status, but after commitment, the individual gains instrumental mind characterized by support of a specific goal and focus on the ways to achieve that goal. Thirdly, by beginning the commitment, a latent process is formed in the mind that makes the individual sensitive to any sign related to goal pursuit [12]. Since it was revealed in this study that the patients with somatoform disorder had less commitment to their goals than did the normal population, the most prominent characteristic of the action process-“continuance and diligence” until achievement of the concerned goal - is not seen in the patients.

The study conducted by Roberson also indicated that the people with job satisfaction had different motivational structure as compared to those with job dissatisfaction [13]. Studies of Newcomb and Harlow on the adolescents and the youth also indicated a significant correlation between addiction and having no goal and direction in life [14]. In addition, the findings of this study indicated that motivational structure of the patients with somatoform disorder is not different from that of normal population with respect to the length of time predicted by them to achieve their goals, and both groups were in similar position with respect to this variable.

According to Cox and Klinger the individuals having the least hope in achievement of goal, the least satisfaction from achievement of goal and/or the least sorrow from not achievement of goal, the least commitment to goal, low sense of control on goal and the least information about their goals have maladaptive motivational structure. On the other hand, the other characteristic of the people with maladaptive motivational structure is that they have avoidance goals instead of dispositional goals (they try to avoid from negative consequences). Therefore, according to Cox and Klinger, the finding of this study can be generalized as follows: goals of each individual are different from those of others; an individual might have selected achievement of high scientific position as his/her goal and the other one quitting his/her addiction; both goals require spending a lot of time. The patients may more often pursue avoidance goals and seek getting rid of or escaping from negative annoying goals- for example, trying to not getting sick, trying to not getting fired or trying to get rid of negative stimuli such as unsuccessful marriage. The patients predict as much time expected for achievement of their goals, and since they faced a lot of failures and stresses in their life, they are somehow suffer from a learned frustration and end up with this belief that effort for achievement of their goals is in vain. When facing obstacles on their way to their goals, they relinquish the goals and have no continuance and diligence in their way to achieve their goals.

The present study was mainly aimed to compare motivational structure and coping strategies in the patients with somatoform disorder and normal population. Considering the obtained results, role of motivational structure and coping strategies seem to play an important role in etiology and development of somatoform disorder. Based on the findings, the patients with somatoform disorder have maladaptive motivational structure. As compared to normal population, they put less importance to their goals, are less hopeful in achievement of their goals, have less control and awareness of their goals, have the least satisfaction from achievement of goal or the least sorrow from non-achievement of goal, and have the least commitment to the goals and conflict of goals. As compared to normal population, they have less freedom in selection of their goals, act very passively in execution of their plans and goals, and since they faced a lot of failures and stresses in their life, they are somehow suffer from a learned frustration and end up with this belief that effort for achievement of their goals is in vain. When facing obstacles on their way to their goals, they relinquish the goals and have no continuance and diligence in their way to achieve their goals.

Generally, goal pursuit has a specific starting point- i.e. when the individual selects a motivation and forms an internal commitment to pursue that goal [10].

Commitment to a goal is important with respect to both the consequences of relinquishment of goal and numerous changes made by commitment to a goal. Firstly, commitment to a goal changes the initial effects of sudden obstacles, which means that before an individual can be committed to a goal, obstacles cause the goal to lose its attraction, but after commitment, the obstacles not only reinforce the goal but also deepen the commitment [11]. Secondly, the commitment makes change in function of the mind. Before commitment, the individual regularly estimates various options for their choice; in other words, their mindset is in an assessment status, but after commitment, the individual gains instrumental mind characterized by support of a specific goal and focus on the ways to achieve that goal. Thirdly, by beginning the commitment, a latent process is formed in the mind that makes the individual sensitive to any sign related to goal pursuit [12]. Since it was revealed in this study that the patients with somatoform disorder had less commitment to their goals than did the normal population, the most prominent characteristic of the action process-“continuance and diligence” until achievement of the concerned goal - is not seen in the patients.

The study conducted by Roberson also indicated that the people with job satisfaction had different motivational structure as compared to those with job dissatisfaction [13]. Studies of Newcomb and Harlow on the adolescents and the youth also indicated a significant correlation between addiction and having no goal and direction in life [14]. In addition, the findings of this study indicated that motivational structure of the patients with somatoform disorder is not different from that of normal population with respect to the length of time predicted by them to achieve their goals, and both groups were in similar position with respect to this variable.
the clients pursuing many avoidance goals in treatment process showed few changes in satisfaction from life as compared to those clients having less avoidance goals in treatment process [15]. In addition, people are different in their imagination of the objectivity of pursuing their goals. Sometimes, they only think of the final result; i.e. how they will feel when they achieve their goals- for example, thinking of a prosperous job. But if they imagine what steps are necessary for achievement of goals, they are more likely to be successful in achievement of their goals and probably pay more attention to the problems encountered on their way, especially if the goals are of high value for them [16].

In this study, it was also revealed that the patients with somatoform disorder reacted emotionally and impulsively instead of acting in a problem-based way when facing the problems, and part of their time and energy is spent for the problems arising from somatization of their mental conflicts, and consequently the opportunity to solve the problem is taken from them. Instead of solving the problem, they just transiently decrease its emotion by impulsive behaviors or somatization, while these approaches increase the individual’s problems in long term. The patients with somatoform disorder acted like the patients with other disorders in using coping strategies when facing the problems, which had been confirmed by the former studies [2]. But, for using coping strategies based on social support and cognitive assessment, no difference was observed between the two groups and both groups were in similar position. Although this finding seems to be inconsistent with the initial expectation, but it can reflect the fact that the patients with somatoform disorder are like normal population with respect to reception of support and various assistance from other people. Several generalizations may be made to justify this finding of the study.

Although no significant difference was seen between the patients with somatoform disorder and normal population for coping strategies based on cognitive assessment in this study, they experienced many stressor events in their lives and considered the conditions uncontrollable when facing such events and used more emotion-based coping strategies when facing the problems as compared to normal population, so they become more predisposed to various diseases including somatoform disorder. Results of the study may have implications for prevention by veteran and trained clinical psychologists and development and exacerbation of or damages resulting from this disorder may be decreased. In initial prevention, training programs of immunity against stress, reinforcement of problem solving skills and adjustment of emotional copings and logical and healthy methods of resolving the conflicts may be provided to them by the experts, and also by using Systematic Motivational Counseling (SMC), the patients may be made aware of the processes of their maladaptive thoughts and goals, and by encouraging them to reassess their negative interactions, their awareness and knowledge may be increased so that they can benefit from the necessary opportunities to achieve their goals.

A limitation in this study was related to selection of the population, for which only a private hospital and a clinic was considered. Surely, by selection of more specialized centers such as hospitals, and private clinics and offices, the results may be better generalized. Since this disorder is common in medical settings and the patients find their problem physical but not mental, they refer to the physicians for treatment and since medical care is time-consuming and expensive for them and they attempt for psychotherapy only upon recommendation of the physician, close cooperation between the physicians and the psychologists and recruitment of veteran clinical psychologists specialized in behavioral medicine and provision of services to such patients seems necessary.

**Conclusion**

Patients with the somatoform disorder have maladaptive motivational structure and have more focus on emotional and physical inhibitory coping strategies. As compared to normal population, they put less importance to their goals, are less hopeful in achievement and control of them, the least satisfaction from achievement or sorrow from non-achievement of goal and the least commitment to the goals. They have less freedom in selection of their goals, act very passively in the execution of their plans, and since faced a lot of failures in their life, are somehow suffering from a learned frustration and end up with this belief that effort for the achievement of their goals is in vain. When facing obstacles on their way to their goals, they abandon them and have no continuance in their way to achieve them.

**Acknowledgment**

The participants in this study are hereby appreciated for their cooperation in conducting this study.

**Conflict of Interest**

No conflict of interest.

**References**

1. Sadock BJ, Kaplan HI (2003) Summary of Psychiatry (Behavioral Sciences- Psychiatry), translated by Dr. Nosratollah Poonafkhadi (2005).
2. Halgin RP, Whitbourne SK (2003) Abnormal Psychology: Clinical Perspectives on Psychological Disorders, McGraw-Hill.
3. Bener A, Ghuloum S, Burgut FT (2010) Gender differences in prevalence of somatoform disorders in patients visiting primary care centers. J Prim Care Community Health 1: 37–42.
4. Imbierowicz K, Egle UT (2003) Childhood adversities in patients with fibromyalgia and somatoform pain disorder. Eur J Pain 7: 113–119.
5. Folkman S, Lazarus RS, Dunkel-Schetter C, Delongis A, Gruen RJ (1986) Dynamics of a stressful encounter: cognitive appraisal, coping, and encounter outcomes. J Pers Soc Psychol 50: 992-1003.
6. Schroers M, Kraij V, Garneski N (2008) How do cancer patients manage unattainable personal goals and regulate their emotions? Br J Health Psychol 13: 551-562.
7. Cox WM, Klinger E (2004) Measuring Motivation: The Motivational Structure Questionnaire and Personal Concerns Inventory. In: W Miles Cox, Eric Klinger (Eds.), Handbook of motivational counseling: Concepts, approaches, and assessment, U.S. John Wiley & Sons Ltd, New York, USA.
8. Pals TS, Little BR (1983) Perceived life satisfaction and the organization of personal project systems. Journal of Personality and Social Psychology 44: 1221-1230.

9. Emmons RA, King LA (1988) Conflict among personal strivings: Immediate and long-term implications for psychological and physical well-being. J Pers Soc Psychol 54: 1040-1048.

10. Heckhausen H, Gollwitzer PM (1987) Thought contents and cognitive functioning in motivational versus volitional states of mind. Motivation and Emotion 11: 101-120.

11. Klinger E (1975) Consequences of commitment to and disengagement from incentives. Psychological Review 82: 1-25.

12. Gollwitzer PM, Heckhausen H, Steller B (1990) Deliberative and Implemental Mind-Sets: Cognitive Tuning Toward Congruous Thoughts and Information. Journal of Personality and Social Psychology 59: 1119-1127.

13. Roberson L (1990) Prediction of job satisfaction from characteristics of personal work goals. Journal of Organizational Behavior 11: 29-41.

14. Newcomb MD, Harlow LL (1986) Life events and substance use among adolescents: Mediating effects of perceived loss of control and meaninglessness in life. J Pers Soc Psychol 51: 564-577.

15. Elliot AJ, Church MA (2002) Client articulated avoidance goals in the therapy context. Journal of Counseling Psychology 49: 243-254.

16. Koestner R, Lakes N, Powers TA, Chicoine E (2002) Attaining personal goals: self-concordance plus implementation intentions equals success. J Pers Soc Psychol 83: 231-244.