

## Relationship between Dimensions of Locus of Control and Mental Health in Iranian University Students

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(Received: 25 December 2008 ; Accepted: 5 March 2009)

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**Objective:** Many investigators have attempted to examine the relationship between perceived locus of control and psychological problems. The present study examined this issue on a sample of Iranian University students.

**Methods:** Study subjects consisted of 134 Iranian University students randomized from seven faculties of Esfahan University of Medical Sciences. The subjects completed the Symptom Checklist-90-R (SCL-90-R) and Levenson's multidimensions locus of control scale.

**Results:** Results of the study indicated that subjects who were more internal had lower scores on the SCL-90-R. Higher SCL-90-R scores were associated with belief that life was controlled by powerful others and chance. Findings, also, showed a significantly positive correlation between powerful others locus of control and depression, anxiety, somatization, phobic anxiety and paranoid ideation scores, and between chance locus of control and obsessive-compulsive, depression and somatization scores. Although the positive correlations between external locus of control and interpersonal sensitivity, hostility and psychotism were not significant, the negative correlations between internal locus of control and these subscales scores were significant.

**Conclusion:** The results of this study support some previous findings that all three of Levenson's scales are associated with measures of maladjustment, with internality negatively correlated and chance and powerful others orientations positively correlated with such measures.

*Iranian Journal of Psychiatry and Behavioral Sciences (IJPBS), Volume 3, Number 1, Spring and Summer 2009: 33-37.*

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**Keywords:** Locus of Control • Mental Health • University Students

### Introduction

It is beyond doubt that various factors contribute to mental health (1). The locus of control is a potential personality factor, which may have important role in mental health (2). The concept of locus of control was derived from a social learning theory and relates to inter-individual differences in one's expectations concerning the consequences of his or her behavior (internal versus external) (3). People with internal locus of control believe they control their own destiny. They tend to be convinced that their own skill, ability, and efforts determine the bulk of their life experiences. In contrast, people with external locus of control believe that their lives are determined mainly by sources outside themselves-

fate, chance, luck or powerful others (4,5). For example, college students with strong internal locus of control believe that their grades are determined by their abilities and efforts. These students believe, "The more I study, the better grades I get." They change their study strategies as they discover their deficiencies. They raise their expectations if they succeed, and they worry when they think they have no control over their assignments (5). In contrast, college students with strong external locus of control believe that their grades are the result of good or bad luck, the teacher's mood or God's will. They are more likely to say, "No matter how much I study, the teacher determines my grade. I just hope I'm lucky on the test" (5). Believing that luck essentially averages out, after they do well on a test, they lower their expectations. Likewise, when they fail a test, they are optimistic that the next test score will be better (6). These externals are less likely to learn from past experiences, and they have difficulty in persisting in tasks (7).

An increasing number of studies have

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investigated the relationship between locus of control beliefs and various aspects of mental health and psychopathology (8). For example Holder and Levi found that college students who were more external locus of control (Powerful Others and Chance) had higher scores on the SCL-90-R subscales (9). The results of other studies indicated that locus of control correlates positively with the ability to cope with stress and negatively with various aspects of psychopathology including depression, anxiety, hostility, somatization, psychotism, and interpersonal problems. In other word, these studies show that persons with a high internal locus of control are much more capable of coping with their problems than persons with a high external locus of control (8,9,10). Socio-cultural factors may contribute to locus of control beliefs and to the extent that this phenomenon concerns to mental health and psychopathology (10). However, Ghorbani and colleagues in a cross cultural study comparing locus of control between Iranian and U.S. university students found positive correlations with "Need for Cognition" and "Internal Control" and negative correlations with "External Control" and "Obsessive thinking" in both samples. Differences between samples failed to yield any support for Fukuyama's suggestion that Iranians might be more "alienated" in their psychological functioning (11). In another study, samples of Iranian and US managers were compared by Spector and colleagues on four sources of job pressure, five strains and work locus of control. As expected Iranian managers were more external and were higher on pressure and on all five job strains. Americans showed higher inter-correlations among strains except for absence, whereas Iranians had higher correlations among sources of pressure. Relations between pressure and job strains were similar across both samples, and in both samples internal locus of control was associated with lower strain (12). The purpose of the present study was to examine the relationship between the dimensions of the perceived locus of control and mental health in Iranian university students.

## Materials and Methods

A cross sectional design was used to measure

perceived locus control and mental health. The study was approved by the research council of behavioral sciences research center of Esfahan University of Medical sciences. In October 2007, 134 Iranian university students of Esfahan university of Medical Sciences were selected by stratified random sampling from seven faculties. Subjects were eligible if they met three criteria: 1) Being Iranian student 2) Consenting to respond to the self-reported questionnaires. Subjects were excluded if they were overseas students 2) had major psychiatric disorders 3) had serious medical conditions. They were given Levenson's internality, powerful others and chance scales of locus of control (13) and The Symptom Checklist-90-R (SCL-90-R) to complete. Socio-economic status was assessed using the criteria based on current employment of subject's parents or last job of them if they was retired, accommodation, area of living, income and education level of parents. Socio-economic status was categorized in three levels: low, medium and high. Pearson correlation coefficients were used to assess the relations between locus of control and mental health and the dimensions of locus of control and the different aspects of psychopathology. The study was approved by the research council of behavioural sciences research center of Esfahan University of Medical sciences.

## Results

Of 134 participants 87 were female and 47 were male. The age range was between 19-31 years with a mean age of  $22.88 \pm 3.96$  years. All of them were students in various medical subjects. Some demographic characteristics of the participants are listed in Table 1.

**Table 1:** Demographic Characteristics

<b>SEX</b>	
Male	47(35.0%)
Female	87(65.0%)
<b>Age (Mean)</b>	22.8 ± 3.96
<b>Marital status</b>	
Married	39(29.0%)
Single	95(71.0%)
<b>Social class</b>	
1	18(13.4%)
2	71(53.0%)
3	45(33.6%)

Correlation coefficients were used to evaluate the relations between the dimensions of locus of control and the components of mental health. The correlation coefficients of relations between three dimensions of locus of control and Global Severity Index (GSI) of SCL-90-R as a psychopathology index are listed in Table 2.

**Table 2:** Correlation Coefficients between Three Dimensions of Locus of Control and Global Severity Index

Dimensions of Locus Of Control	Global Severity Index	
	Correlation Coefficients (r)	P-Value
Internal locus of control	-0.335	0.044
Chance internal locus of control	0.380	0.024
Powerful others locus of control	0.380	0.02

Significant p value < 0.05

There were positively significant correlations between chance ( $r=0.380, p=0.024$ ) and powerful others external locus of control and GSI of SCL-90-R as the index of psychopathology ( $r=0.380, p=0.02$ ). Also, there was negatively significant correlation between internal locus of control and GSI of SCL-90-R ( $r = -0.335, p = 0.044$ ). The correlation coefficients of the relations between three subscales of locus of control and nine subscales of SCL-90-R are listed in table 3.

Regarding subscales of SCL-90-R, there were negatively significant correlation between internal locus of control and all subscales of SCL-90-R as the aspects of psychopathology excluding phobia subscale ( $r = -0.028, p = 0.056$ ). But there was a trend towards significance for correlation between internal locus of control and phobia subscale.

Also, there were positively significant correlation coefficients between chance locus of control and depression ( $r=0.728, p=0.000$ ), somatization ( $r = 0.353, p = 0.015$ ) and obsessive compulsive scores ( $r = 0.355, p = 0.014$ ). Furthermore, positive correlations between powerful others locus of control and depression ( $r = 0.405, p = 0.018$ ), anxiety ( $r = 0.340, p = 0.018$ ), phobia ( $r = 0.355, p = 0.014$ ), paranoia ( $r = 0.292, p = 0.044$ ) and somatization ( $r = 0.386, p= 0.007$ ) were significant. No statistically significant correlations were found between chance locus of control and anxiety, aggression, phobia, paranoia, psychotism and interpersonal sensitivity, and between powerful others locus of control and aggression, psychotism, obsessive- compulsive symptoms, and interpersonal sensitivity.

### Discussion

The locus of control is a construct that consists of factors that influence and contribute to a person’s belief concerning the extent and degree to which he or others can influence life events (13).

Many studies have been published regarding various aspects of mental health and locus of control showing significant correlations between locus of control and the aspects of psychopathology (9,14).

The current study had two purposes. The first purpose was to examine relations between Global Severity Index (GSI) of SCL-90-R and internal, chance and powerful others subscales of Persian version of Levenson’s scale. The second purpose was to evaluate relations between various aspects of locus of control

**Table 3:** Correlation coefficients (r) between three dimensions of locus of control and SCL-90-R subscales

	Depression	Anxiety	Aggression	Phobia	Paranoia	Psychotism	Somatization	Obsessive-Compulsive Symptoms	Interpersonal Sensitivity
	P r	P r	P r	P r	P r	P r	P r	P r	P r
Internal locus of control	-0.405 0.009	-0.353 0.015	-0.355 0.014	-0.280 0.056	0.318 0.028	-0.394 0.007	-0.288 0.049	-0.392 0.006	-0.291 0.050
Chance internal locus of control	0.728 0.000	0.275 0.064	0.125 0.402	0.191 0.189	0.249 0.091	0.280 0.056	0.353 0.015	0.355 0.014	0.271 0.066
Powerful others locus of control	0.405 0.018	0.340 0.018	0.249 0.091	0.355 0.014	0.292 0.044	0.280 0.056	0.386 0.007	0.253 0.086	0.271 0.066

and aspects of psychopathology among Iranian university students.

Regarding the first aim, generally the findings of this research supported the results of previous studies on the relationship between dimensions of locus of control and mental health (5,8-10). In regard to the second purpose, findings of the current study revealed relationship between all of three dimensions of locus of control, and only depression and somatization. It also found a relationship between chance locus of control and depression, obsessive-compulsion and somatization.

However, this research also revealed that there was an association between powerful others locus of control and several aspects of psychopathology in SCL-90-R including depression, anxiety, phobia, paranoia, and somatization. There were some differences between the results of this study and past studies in respect of relations among dimensions of locus of control and various aspects of psychopathology (8,10).

Generally, the development of locus of control stems from family, culture, and past experiences.

Most internals have been shown to come from families that focused on effort, education, and responsibility. On the other hand, most externals come from cultural beliefs and past experiences (4,10).

The differences in the result of this study in comparison to the results of other studies may be due to the cultural differences among locus of control beliefs particularly regarding chance locus of control beliefs. Perhaps, in Iranian society, culturally, students tend to attribute their experiences to fate, chance, or luck. They feel that their success was based upon luck and that it would happen again. Therefore, it seems that chance locus of control beliefs correlated with fewer aspects of psychopathology while powerful others locus of control beliefs correlated with more dimensions of psychopathology. Since they probably attribute both their successes and failures to luck or chance, they tend not to have very high levels of expectation. In such a cultural context, chance locus of control belief

possibly does not lower people's self-esteem and therefore does not lead to psychopathology.

### Limitations of the study

Our study had a small sample size. There was also a selection bias as study only carried out on students who were willing to sign a consent form and take part in the study.

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