

Magical Thinking and Psychological Symptoms: Evidence from Turkey

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Abstract

The purpose of this study was twofold. The first one is to investigate the correlation between the Brief Symptom Inventory (BSI) and the Magical Ideation Scale (MIS), and the second one is to examine psychological symptoms of college students. The sample of the study consists of 103 prospective teachers, 63 female and 40 male, enrolled in variety departments of a state university located in a small city in Turkey. We found statistically significant correlation between the MIS and each subscales of BSI. Whereas the highest correlation was found in the dimensions of psychoticism and hostility, the lowest correlation in the phobic anxiety. No statistically significant difference was observed between male and female prospective teachers.

Keywords: *psychological symptoms, Brief Symptom Inventory, Magical Ideation Scale, prospective teachers*

1. Introduction

The concept of mental health is commonly defined in terms of personal and societal harmony and integrity. A person with a balanced mental health is in harmony with the society, at peace with himself and those around him, considerably away from troubles, fear and anxieties, in balance and consistency (Yörükoğlu, 1996). Mentally healthy persons can build positive social relationships with others, whereas unhealthy ones are likely to live negative relationships at works and in their families and social lives.

According to the WHO, 12.3% of the health problems faced are those related to mental health. The most common mental problems are emotional state disorders, dementia, schizophrenia, post-trauma stress disorder, anxiety disorders and drug addiction (Regier, 1993). Depression is an extensive problems of adolescent period, frequency of which varies from 5% to 20% (Dopheide, 2006, Hamrin and Pahler, 2005). Studies show that depression is also common among girls (Allgood-Merten et al, 1990). Death of the parent(s), divorce, psychological disorder among family members, lack of parental interest and support, failure at school and low scores were found factors causing depression (Meadow et al, 2006). Studies show that depression is statistically correlated with self-respect (Burwell and Shirk, 2006). Clinical evidence indicate that whereas prevalence of depression among adolescents and young adults is similar, depressive symptoms are more frequent among adolescents (Takamura and Sakihara 2001).

There are variety of instruments in measuring the psychological problems of adolescents, among them the Brief Symptom Inventory (BSI) is widely reported as a reliable and valid instrument (Sahin and Durak: 1994; Sahin, Durak and Ugurtasın: 2002; Rupierez et al 2001). Loutsiou et al (2008) have applied the BSI on the Greek adults and reported that the symptoms have a distinctive and discriminating diagnostic quality. In an intercultural study, Watson and Sinha (1999) have applied the BSI on Indian and Canadian university students and found that the Indian students' total psychological symptoms are higher than Canadian students. In particular, whereas the dimensions of somatization, paranoid ideation, psychoticism and interpersonal susceptibility were found high in the Indian group, the dimensions of hostility, phobic anxiety, somatization and paranoid ideation were found high in the Canadians. Piersma et al (1994) administered the BSI and a symptom scanning list to a psychiatric patient group of adults and adolescents and reported that both scales have yielded similar results. Morlan and Tan (1998) found a high correlation

between the BSI and the Brief Psychiatric Assessment Scale, especially in the dimensions of depression, anxiety and hostility.

Another variable examined in this study is magical thinking. Magical Ideation Scale (MIS) was developed by Eckblad and Chapman (1983) to predict the probable psychotic disorders among adolescents. The authors have interpreted the magical thinking as the process whereby individuals build causal relationships among different concepts by using thoughts that are not acceptable in the culture to which they belong. To understand someone's inclination for magical thinking, it is necessary to be well acquainted with the cultural environment from which the person comes. Moreover, magical thinking is related to the environmental and biologic structure (Baron et al 1983, Reynolds et al, 2000).

Schizotypal personality structure, one of whose typical important symptoms is magical thinking, has a high disposition for schizophrenia or psychosis. The term 'schizotype' points to a clinical symptom that is similar to schizophrenia but it has lighter symptoms. It is probable that those who have schizotypal symptoms will have a psychotic disease in the future. Diagnosis of schizotypal personality disorder has included in the classification of the American Psychiatric Association since 1980. In the WHO's classification of the mental behavioral disorders, schizotypal disorder is classified within the same category with schizophrenia. Typical schizotypal personality disorder are observed emotional disorders, oddity in speeches and behaviors, odd beliefs, magical thoughts, deviations in perception, skepticism and avoidance of social relationships.

Studies indicated that the MIS can predict several psychotic disorders, schizotypal symptoms and psychosis-like (Chapman et al, 1994). Einstein and Menzies (2004) have used lucky belief scale, lucky behavior scale and magical ideation scale on children and found that there is a high relationship between the magical thinking and obsessive-compulsive dimension. Meyer (1999) suggested in his two-year follow-up study that the MIS is more successful in predicting the schizotypal personality traits than the other related scales. In a ten-year follow up study Chapman et al (1994) found that the MIS can very successfully predict the psychotic disorders, schizotypal symptoms and psychosis-like lives.

There are limited numbers of studies that examine psychological symptoms of adolescents in Turkey. Küey and Güleç (1987) have reported that the prevalence of mental health disorders among Turkish adolescents is around twenty percent. Cuhadaroglu (1993) measured the frequency of psychiatric symptoms of Turkish university students and reported that there is no significant difference in the dimensions of depression and anxiety in terms of gender but girls indicate more symptoms in the dimension of constant anxiety. Doğramacı (1997) used the BSI and found that there is a significant difference in the depression subscale in terms of gender. Balkaya and Sahin (2003) have examined the relationship between the feeling of anger and pathologic states in their study and found a relationship between the BSI and multidimensional scale of anger. Examining the validity and reliability of the magical thinking on university students, Atbaşoğlu (2003) found the Cronbach-alpha coefficient of the scale as 0.78. Studies indicate that there is a significant positive correlation between the MIS and Perceptual Aberration Scale (Kızıl et al:2009), and the MIS and Schizotypal Personality Scale (Şener et al:2006).

This study was conducted on teachers candidates. It is likely that teachers' mental health affects the training process deeply. The process of training contains a process whereby the trainer displays his/her personality, behaviors, psychological reactions, knowledge, skills, namely all his equipment. If any one of these is problematic, this may affect the entire training process. In a study on kindergarten teachers by Wueidang (2010), it was stated that 36.7 % of 270 fresh teachers have psychological problems and the most intensive ones are susceptibility, depression, anxiety, fear, hostility and disorder in the relationships with other people. Wueidang also argues that trainers who are psychologically unhealthy impede the service of training and become unsuccessful (Wueidang, 2010). This is a worldwide problem in teacher

education. It can be said that mental health states of prospective teachers should be determined before they start their job and the required measures, if any, should be taken.

2. Method

Sample

The sample of the study consists of 103 randomly-chosen prospective teachers enrolled in different departments of the Education Faculty at Ağı Ibrahim Cecen University in 2009-2010 training year.

Instrumentation

Brief Symptom Inventory (BSI): This instrument was developed by Derogatis, which is the shorter version of the SCL-90-R that came out of the studies with SCL-90-R. Of the 90 items distributed to the 9 factors of SCL-90-R, 53 items with the highest factor loading were chosen. The instrument consisting of nine subscales (somatization, obsessive-compulsive disorder, interpersonal sensitivity, depression, anxiety disorders, hostility, phobic anxiety, paranoid ideations, psychoticism) was adapted into Turkish by Şahin and Durak, (1994). The reliability coefficients of the subscales were found between 0.71 and 0.85. The participant were asked to reply a five-point scale ranging from 'not at all' to 'extremely'

Magical Ideation Scale (MIS): This scale was developed by Eckbald and Chapman (1983) to predict the psychosomatic states of adolescents. The scale contains 30 'true' or 'false' statements, of which 23 of them are positively worded and 7 items are negatively worded.

3. Results and Discussion

The independent samples t-test was conducted to determine whether there is a significant difference between male and female teacher candidates in their psychological symptoms and magical thinking (table 1). No significant differences were found for gender variable in terms of symptom frequency measured by BSI [$t = 0,925$ $P = 0,357$], and magical thinking states measured by the MIS [$t = 1,441$ $P = 0,153$]. These results show that magical ideation was higher in women than men, no statistically significant difference was observed between two groups. The average scores of female participants were also found higher than the average scores of male participants (Male= 64,63; Female= 70,03), these results indicate no significant difference.

The paired t-test was conducted on the total scores taken from the BSI and MIS in order to determine whether there is a relationship between the symptom frequencies and magical thinking states of the students included in the study. We found significant and positive correlation between students' average magical thinking states scores and their symptom frequencies [$r = 0,314$ $P = 0,001$]. We also conducted a t-test to determine whether there is a relationship between magical thinking states and dimensions of BSI, that is, depression, anxiety disorder, hostility, phobic anxiety, paranoid ideations and psychoticism (Table 2).

Table 1. t-test results of the MIS and the BSI scores for gender variable.

Scale	Gender	N	M	SD	t	P
MIS	Male/Female	40/63	12,90/13,94	3,241/3,745	1,441	0,153
BSI	Male/Female	40/63	64,63/70,03	28,089/29,435	0,925	0,357

Note: The minimum and maximum scores for the BSI and the MIS are 0-212, 0-30 respectively.

Table 2. *t* test results for the MIS and the BSI scores

Scale	N	M	SD	r	t	P
Depression/ MIS	103	8,62/13,53	5,018/3,578	,201	4,913	0,001
Anxiety disorder/MIS	102	7,20/13,52	4,219/3,592	,258	6,324	0,001
Hostility/MIS	103	7,38/13,51	4,415 /3,578	,292	6,155	0,001
Phobic anxiety /MIS	101	4,49/13,51	3,390/3,593	,150	9,030	0,001
Paranoid ideations/MIS	101	7,10/13,51	3,822/3,554	,260	6,416	0,001
Psychoticism/MIS	103	5,71/13,53	3,452/3,578	,293	7,825	0,001
Total: BSI /MIS	103	67,93/13,53	28,902/3,578	0,314	19,727	0,001

The MIS indicated positive correlation with each subscales of the BSI. There is a significant and positive relationship between the students' magical thinking states and their symptom frequencies of depression, anxiety disorder, hostility, phobic anxiety, paranoid ideations and psychoticism. As individuals' psychological symptoms increase, their magical thinking levels also increase, and vice versa. The highest positive correlation was found between the magical thinking state and psychoticism and hostility, the lowest correlation between the magical thinking and phobic anxiety. This finding accords with earlier studies that the MIS can successfully predict deviations and aberrations in thinking (Eclad and Chapman, 1983; Atbaşoğlu, 2003; Kızıl et al, 2009; Şener et al, 2006).

The present study provides cross cultural evidence that the BSI and the MIS are significantly correlated in measuring psychological symptoms. The study however has some limitations. Since the implementation of the date gathering-tools takes relatively long time, the number of participants limits the generalizability of the findings obtained in the study. More research with larger samples from more and less selective universities is needed to generalize the contextual results of the study.

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