



## Somatic Expression of Psychological Problems (Somatization): Examination with Structural Equation Model

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### ABSTRACT

The main purpose of the research is to define which psychological symptoms (somatization, depression, obsessive-compulsive, hostility, interpersonal sensitivity, anxiety, phobic anxiety, paranoid ideation and psychoticism) cause somatic reactions at most. Total effect of these psychological symptoms on somatic symptoms had been investigated. Study was carried out with structural equation model to research the relation between the psychological symptoms and somatization. The main material of the research is formed by the data obtained from 492 people. SCL-90-R scale was used in order to obtain the data. As a result of the structural equation analysis, it has been found that 1)Psychoticism, phobic anxiety, and paranoid ideation do not predict somatic symptoms.2)There is a negative relation between interpersonal sensitivity level and somatic reactions.3)Anxiety symptoms had been found as causative to occur the highest level of somatic reactions.

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### 1. Introduction

Somatization Disorder is a psychiatric disorder and has a major impact on our health care system, but patients are reluctant to see and be treated by psychiatrists. They frequently are managed by nonpsychiatric physicians who have limited understanding of the condition (Mai, 2004;Weiss et al., 2009). Somatization disorder is the most severe and refractory of the somatoform disorders (Mai, 2004; Woolfolk& Allen, 2010).

Somatization Disorder (historically referred to as hysteria or Briquet's syndrome) is a polysymptomatic disorder that begins before age 30 years, extends over a period of years, and is characterized by a combination of pain, gastrointestinal, sexual, and pseudoneurological symptoms(APA,2000). There is no single cause for Somatization disorder, as with most psychiatric conditions, the disorder is the end result of the interplay between genetic factors and various events in the antecedent life history of the individual (Mai, 2004). Various psychological, social, pathophysiological, familial, and genetic mechanisms have been proposed to explain the origin of somatization disorder. At present, strong evidence supports an increased risk of somatization disorder in first- degree family relatives, indicating a familial or genetic effect (Smith, 1990). A definite diagnosis requires the presence of all of the following: (a) At least 2 years of multiple and variable physical symptoms for which no adequate physical explanation has been found; (b) Persistent refusal to accept the advice or reassurance of several doctors that there is no physical explanation for the symptoms; (c) Some degree of impairment of social and family functioning attributable to the nature of the symptoms and resulting behavior (WHO, 1993).

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Somatization disorder is far more prevalent in women than men. It does occur in men, however, and should be considered in the differential diagnosis of unexplained somatic complaints in men and usually starts in early adult life (Smith, 1990). Menstrual difficulties may be one of the earliest symptoms in women (APA, 2000).

Some researchers have suggested that Asian populations tend to react to excessive stress with somatic symptoms, whereas Western populations tend to respond more with affective or depressive symptoms (Weiss et al., 2009; Carlton, 2001). In patients who have experienced Somatization Disorders for a long time, loss of social ability is at issue. If they acknowledge psychosocial problems, they usually deny vigorously their possible effects on their presenting physical symptoms, despite clear temporal relationships. Such patients frequently view psychological difficulties as weaknesses, and they often feel angry and blamed if they receive a psychiatric diagnosis (Stewart, 1990).

Childhood sexual abuse is an important factor in the multifactorial etiopathogenesis of somatization disorder (Spitzer et. al., 2008; Samelius et. al., 2007). Some evidence indicates that women with somatization disorder are likely to have been neglected, sexually molested, and were only given attention when physically ill (Smith, 1990; Mai, 2004). However, women with somatization disorder appear to selectively mate with men with antisocial personality disorder and alcoholism (Smith, 1990; APA, 2000). A research's result showed that mothers' somatization problems, showing that low maternal warmth and harsh punishment still predicted multiple child problems at ages 9 to 11 even when the mothers' somatization problems (Loeber et. al., 2009). Children of patients with the disorder may develop unexplained somatic complaints that represent the onset of the disorder (Smith, 1990). According to Gilleland et. al (2009), Mothers' and fathers' report of children's somatic complaints may be significantly influenced by their own somatic functioning.

Most of somatization disorder patients have severe problems with comorbid psychiatric illnesses. Unnecessary surgery, addiction to prescription medicines, depression and attempted suicide are common complications of this syndrome (Seligman, Rosenhan, 1997). More than 90 percent of patients with somatization disorder acknowledge a history of depression (the form of major depressive episodes and dysthymic disorder) (Smith, 1990). Öztürk and Sar (2008), demonstrated that concurrent somatization disorder diagnosis was the only predictor of suicidal ideation. Somatization was significantly related to traumatic events and posttraumatic symptoms (Aragona et. al., 2010). Somatization Disorder patients had an eightfold higher risk for lifetime diagnosis of complex Post Traumatic Stress Disorder and a fifteen fold higher risk for current complex Post Traumatic Stress Disorder (Spitzer et. al., 2008). Much cross-sectional research has been carried out, and most studies show a positive correlation between alexithymia and somatization (Wai, 2004). Somatization is encountered among a wide range of syndromes in dermatology (Gupta, 2006).

Individuals with somatization disorder use extensive amounts of drug and that effects economy of the country in a negative way. Drug use causes adverse effects in individuals. This situation affects the marriage, business and social life in a negative way. In this context, the research can be said to be important because of the contribution to the economy of the country and awareness levels of the people with regards to the fact that it contributes to the field.

## 2.Method

Study is performed by Structural Equation Model. Structural Equation Model (SEM) has been useful in attacking many substantive problems in the social and behavioral sciences. Such models are now being used in marketing in addition to the traditional areas of sociology, psychology, education, and econometrics (Jöreskog & Sörbom, 1982). SEM is a modeling tool, and not a tool for "descriptive" analysis. It fits models to data. These models require testing in order to determine the fit of a model to the data. Social science, business, marketing, and management journals are littered with the consequences of the use of "approximate fit indices" – a plethora of forgettable, non-replicable, and largely "of no actual measurable consequence" models (Barret, 2007).

SEM is a powerful statistical technique that combines measurement model or confirmatory factor analysis (CFA) and structural model into a simultaneous statistical test (Hoe, 2008). SEM is statistical technique that one can use to reduce the number of observed variables into a smaller number of latent variables by examining the covariation among the observed variables. Observed variables are also termed measured, indicator, and

manifest, and researchers traditionally use a square or rectangle to designate them graphically (Schreiber et al., 2006). SEM allows for analysis of causal patterns among unobserved variables represented by multiple measures. It permits testing of causal hypotheses and theory, examination of psychometric adequacy, and enhancement of the explanatory power of correlational data. That characterizes counseling psychology research (Fassinger, 1987).

### **2.1. Participants**

The population of the research is consisted of students who study in Sakarya University Faculty of Education in 2010-2011 fall terms. The sample of the research comprises of 492 students in total who have been determined on the basis of voluntary participation. Since participation in study was carried out in accordance with the voluntariness principle, inventories of all participators have been included in the analysis because of the fact that there has been no negativity experienced in the answers given by participators to the inventory. With the sample size of 492, sample error was determined as 0.05% on a confidence level of 95%.

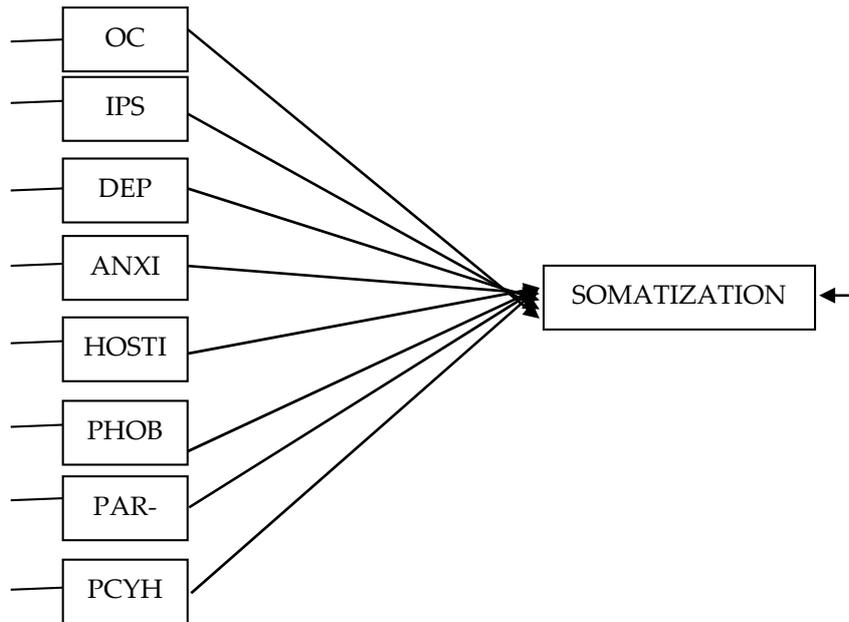
### **2.2. Instruments**

In the collection of research data, "SCL-90-R" was used in order to record the demographic features of the students and to determine the psychological symptom levels of the students, respectively.

**2.2.1. Symptom Checklist (SCL-90-R):**Developed by Deragotis et al. in 1977, SCL-90-R is a psychological symptom scanning tool with self-evaluation. The validity-reliability studies of the scale, which was developed to measure the psychological and physical symptoms, the level of compulsion experienced by the individual or the negative stress reaction lived, were carried out by Dağ (1991). The test which consists 90 items is based on five-point Likert type evaluation, namely never (0), little (1), medium level (2), quite much (3), high level (4). The test has 10 subscales in total: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism. Turkish translation of the scale was used on samples in some researches in Turkey and it was observed that it distinguishes used and examined groups in a significant level. Reliability study of the scale was carried out by Dağ in 1989 and its Cronbach alpha value was found ".97". A correlation between .10 - .77 was found between general symptom average and MMPI (Bozkurt, 1996).

### **2.3. Hypothesis**

Figure 1 is the graphic concerning the hypothetic model of the relation between the factors and somatization in the study. In the model, it is stated that the psychological symptoms effect the arising of the somatic symptoms. In the model, psychological symptoms are independent latent variables and somatic symptoms are dependent latent variables.



**Figure 1.** The offered model for the relation between Psychological Symptoms and Somatic Symptoms

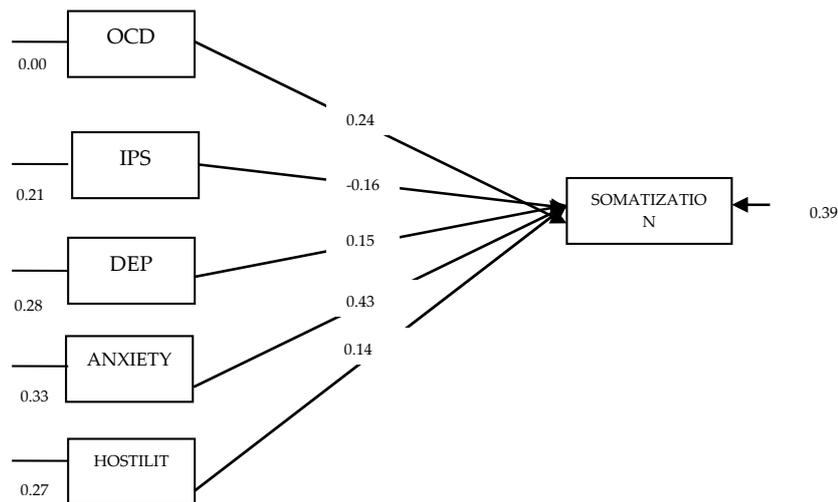
### 3. Results

**Table 1:** Correlations between obsessive-compulsive (O-C), interpersonal sensitivity (IPS), depression (DEP), anxiety (ANX) and hostility (HOS) symptoms

		SOMAT	OC	IPS	DEP	ANX
O-C	N	492				
	r	0,60**				
	p (2-tailed)	,000				
IPS	N	492	492			
	r	0,51**	,065**			
	p (2-tailed)	,000	,000			
DEP	N	492	492	492		
	r	0,63**	0,67**	0,74**		
	p (2-tailed)	,000	,000	,000		
ANX	N	492	492	492	492	
	r	0,73**	0,62**	0,70**	0,78**	
	p (2-tailed)	,000	,000	,000	,000	
HOS	N	492	492	492	492	492
	r	0,60**	0,55**	0,55**	0,58**	0,67**
	p (2-tailed)	,000	,000	,000	,000	,000

\*\*p<.01,

Table 1 shows correlations between obsessive-compulsive, interpersonal sensitivity, depression, anxiety and hostility symptoms. As it is seen on the table, there is a positive and significant ( $p < .01$ ) relation between somatization and obsessive-compulsive ( $r = 0.60$ ), interpersonal sensitivity ( $r = 0.51$ ), depression ( $r = 0.63$ ), anxiety ( $r = 0.73$ ), hostility ( $r = 0.60$ ) symptoms. It means that when somatization symptoms increase, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, and hostility symptoms increase, too. Model includes all these symptoms because correlations between these symptoms are lower than 0.80. As a result of the analysis dimensions of psychoticism, paranoid ideation, and phobic anxiety are taken out of the model since they do not cause somatic reactions.



**Figure 2.** Path diagram of the offered model for the relation between psychological symptoms and somatization

Hypothesized model was examined via structural equation modeling (SEM). Figure 2 presents the results of SEM analysis, using maximum likelihood estimations. The model fitted good ( $\chi^2 = 5,71df = 3, p = 0,126$ , GFI = 1.00, AGFI = .98, CFI = 1.00, NFI = 1.00, IFI = 1.00, and RMSEA = 0.043). The standardized coefficients in Figure 2 clearly showed that somatization was predicted positively by anxiety (.43), obsessive compulsive disorder (.24), depression (.15), hostility (0.14) and negatively by interpersonal sensitivity (-.16).

#### 4. Discussion

Psychoticism, paranoid ideation, and phobic anxiety symptoms don't cause somatic reactions. Somatization is defined as the 'conversion' of psychological pressure and overwhelming emotions into more acceptable physical symptoms (Gupta, 2006). The patient's need to somatize can be rechanneled into a discussion of psychological issues with a balanced somatopsychological orientation (Carlton, 2001). Why is not such a result experienced in psychoticism, paranoid ideation, and phobic anxiety? The individuals experiencing these psychological problems express the stress they feel with verbal or nonverbal behaviors instead of holding it in. According to Seligman & Rosenhan (1997), the mechanism by which silence hurts may be rumination; the less people talk to others about tragedy or distress, the more they ruminate.

A negative relation was found between interpersonal sensitivity and somatization. The course of disorder is often associated with long-standing disruption of social, interpersonal, and family behavior (WHO,1993). Mai offered 3 reasons for some patients' expression of dysphoria as a somatic symptom: 1) individual differences in temperament and physiological response; 2) social, cultural, and linguistic factors; and 3) previous experience of illness (Mai, 2004). Somatic patients, like anyone else, use the emergent symptoms for interpersonal advantage to make the most of their predicament. This constitutes the secondary psychological gain (Hurwitz, 2004). As the level of linking himself/herself with other individuals increases and this associating is aimed at approving each other's presence and accepting each other's presence as it is, there occurs a decrease in somatic reactions. In other words, close and sincere relations strengthen the ego of the individual. The most important factor preventing the individual from experiencing somatic symptoms is communication which is constructive and emphatic understanding oriented.

Somatic symptoms are a psychological defense against mental instability (Hurwitz, 2004). Mental distress in people's world is expressed through bodily distress (Seligman, Rosenhan, 1997). The psychological disorder which causes somatic reactions at the highest level is anxiety. The reason is the uncertainty about the source of anxiety experienced by the individual. The individual experience restlessness, but the reason, in other words the source is unknown. Living in a way that something bad may happen at any moment causes the

individual to take some precautions necessarily. These precautions are refraining, avoiding and lastly introversion respectively. Introversion is experienced in two ways: First one is physical and second one is psychological introversion. In psychological introversion, the defense mechanism referred by the individual is "repression". This means that: the one who is addressed here is an individual who is trying to control the conflicts in the inner world but at the same time who is experiencing the anxiety of losing control. According to Chaturvedi, Desai and Shaligram(2006), the concept of abnormal illness behavior explains the patients' concerns and distress due to their suffering. As Jongsma (2006), the client with somatization issues is choosing to make his / her bodily concerns the primary or only focus of his / her attention. This can be very disconcerting to significant others around him / her and can also seriously reduce the client's ability to function effectively. These people live the life as they step on glass, any moment you can hear a cracking sound.

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