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The Symptom Differences In Anxiety Disorders According To Gender

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Abstract

Objective: In this study, the differences of symptoms in anxiety disorders according to gender has been investigated.

Method: 201 psychiatric outpatients (141 females, 60 males) presented to our clinic with a Diagnostic and Statistical Manual of Mental Disorders IV-TR diagnosis of anxiety disorder within six months period were included in this study. A detailed psychiatric interview through Sociodemographic Data Form, Structured Clinical Interview for the DSM-IV Axis I Disorders, Hamilton Anxiety Rating Scale and Yale-Brown Obsessive Compulsive Scale were completed by the interviewer. Beck Depression Inventory, Generalized Anxiety Disorder Rating Scale, Panic Agoraphobia Rating Scale, State-Trait Anxiety Inventory were filled by the patients.

Results: Beck Depression Inventory, Panic Agoraphobia Rating Scale, State-Trait Anxiety Inventory scores demonstrated significantly higher severity in females ($p<0,05$). Hamilton Anxiety Rating Scale somatic complaints and depressed mood subscale scores were significantly higher in females ($p<0,05$). Cardiovascular system symptoms in patients with panic disorder were significantly higher in males ($p<0,05$). In obsessive compulsive patients; dirt/contamination obsessions were most frequent obsessions; while washing/cleaning compulsions were the most frequent compulsions. Both genders exhibited highest number of comorbidity with obsessive compulsive disorder.

Conclusion: This study has contributed to the literature suggesting more severe symptom profile in anxiety disorders in females. Awareness of the gender differences in anxiety disorders will help clinician to make well educated guess on comorbidity, symptom severity and diverse presentations. Thus, convenient treatment interventions may readily be administered.

Keywords: anxiety disorders, gender, symptoms, distribution, differences

1. Introduction

Anxiety is a psychophysiological state with cognitive, somatic, emotional and behavioural components. Anxiety disorders are the most common psychiatric illnesses. According to the US National Comorbidity Survey, lifetime prevalences among females and males are found to be %30,5 and %19,2, respectively. All the anxiety disorders' combined incidence rate is %12,6, while prevalence rate is %14,6 (1).

Both in clinical and community surveys, almost all anxiety disorders are diagnosed with a higher frequency in females. Social phobia and obsessive compulsive disorder rates are found to be similar in both genders, exceptionally. The context in which social phobia presented also varies according to gender. In obsessive compulsive disorder, variability is observed in compulsive behaviour types; compulsive washing in females and ritualistic control behaviour in males are found to be more frequent (2). The investigation of symptom differences in anxiety disorders according to gender revealed more prominent severity in females (3). In an 8 years prospective study, panic disorder relapse rates happened to be 3 times higher in females. Social phobia demonstrated more serious pattern in females. The frequency and permanency of post traumatic stress disorder is declared to be higher in females (4). Interaction of biological and psychosocial factors might lead to the differences in the symptoms of anxiety disorders according to gender. Gender-specific demographic traits keeps clinician vigilant on comorbidity, representation and severity of symptoms. Thus, it paves the way for most appropriate clinical intervention through awareness of nuances in between genders. That's an issue pretty much overlooked in nowadays clinical practice of anxiety disorders with somber consequences. We aim to contribute to an extended understanding of the distribution and differences of the symptoms of anxiety disorders according to gender.

2. Material And Method

This research was carried out in Çukurova University Psychiatry Clinic Outpatient Unit in 6 months period. 201 patients (141 females, 60 males), with ages 18 to 65, presented to our clinic with a Diagnostic and Statistical Manual of Mental Disorders IV-Text Revised (DSM-IV-TR) diagnosis of anxiety disorder, were included in this study. 9 patients with inadequate and erroneous completion of questionnaires dropped out of study. Patients were informed about the study and applied a consent form. Patients with psychosis, dementia, alcohol and/or substance dependence, cognitive deficits, mental retardation, Parkinson disease, degenerative disease, neurological disorder such as multiple sclerosis were excluded. All the patients participated in this study were applied sociodemographic data form, Structured Clinical Interview for the DSM-IV Axis I Disorders, Hamilton Anxiety Rating Scale, Yale-Brown Obsessive Compulsive Scale, Beck Depression Inventory, Generalized Anxiety Disorder Rating Scale, Panic Agoraphobia Rating Scale and State-Trait Anxiety Inventory. All interviews and questionnaires were implemented via same researcher.

The Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I): is a structured diagnostic interview used to determine DSM-IV Axis I disorders, developed by First and colleagues (5).

Beck Depression Inventory: is a 21-question multiple-choice self-report inventory, 15 of which are psychological and the rest are somatic symptoms. It is developed by Aaron Beck and one of the most widely used instruments for measuring the severity of depression. Each item scores 0 to 3 points. With a cut-off score of 16/17, it can be used as a diagnostic scale.

Hamilton Anxiety Rating Scale: is a semi-structured questionnaire used by clinicians to rate the severity of a patient's anxiety. The scale consists of 14 items designed to assess the severity of a patient's anxiety. Each of the 14 items contains a number of psychological or somatic symptoms, and each group of symptoms is rated on a scale of zero to four, with four being the most severe. All of these scores are used to compute an overarching score and higher than 15 points is evaluated as major anxiety.

The State-Trait Anxiety Inventory (STAI): It's developed by Spielberger and colleagues. They intended to create a set of questions that could be applied towards assessing different types of anxiety. The STAI measures two types of anxiety - state anxiety, or anxiety about an event, and trait anxiety, or anxiety level as a personal characteristic independent of the context. A total of 40 items, each consists of 20 items; SCID-I and SCID-II, respectively. Higher scores are positively correlated with higher levels of anxiety.

Panic Agoraphobia Rating Scale: is developed by Bandelow and used to measure the severity of panic disorder (with or without agoraphobia). It consists of 14 items and widely used in clinical trials.

Yale-Brown Obsessive Compulsive Scale(Y-BOCS): is a semi-structured test to rate the type and severity of obsessive-compulsive disorder (OCD) symptoms and designed by Goodman. Scores are obtained both through patient responds and clinician's observations. This is 10-item scale (half of them to measure obsessions; the other half to measure compulsions), each item rated from 0 (no symptoms) to 4 (extreme symptoms), yielding a total possible score range from 0 to 40. Higher than 24 points is considered severe.

Generalized Anxiety Disorder Rating Scale: is developed by Argyropoulos and colleagues. It consists of cognitive, somatic and sleep related subscales.

All interviews and questionnaires are supervised by a psychiatry professor subspecialized in anxiety disorders.

3. Statistical Analysis

Data were analyzed with the statistical software SPSS v.16.0 for Windows. Two series of logistic regression analyses were implemented for each age group to assess the contribution of several variables in the prediction of the binary dependent variable. Continuous variables are expressed as the mean± standard deviation. The comparison of the genders and the etiological factors were made by using the chi-square test and ANOVA. The level of significance was set as $p < 0.05$.

4. Results

Beck Depression Inventory, Panic Agoraphobia Rating Scale, State-Trait Anxiety Inventory scores demonstrated significantly higher severity in females ($p<0,05$).

Anxiety disorder questionnaires' comparative scores are displayed in **Table 2**. The mean beck depression inventory scores of females and males were $23,0\pm9,8$ and $18,7\pm9,7$ respectively ($p=0,05$). The mean panic agoraphobia rating scale scores of females and males were $33,3\pm8,5$ and $25,6\pm6,8$ respectively ($p=0,029$). The mean state anxiety inventory scores of females and males were $52,5\pm10,7$ and $46,2\pm12,0$ respectively ($p=0,001$). The mean trait anxiety inventory scores of females and males were $56,2\pm8,8$ and $52,1\pm8,7$ respectively ($p=0,003$). Beck depression inventory, panic agoraphobia rating scale, state anxiety inventory and trait anxiety inventory scores of females were significantly higher than males ($p<0,05$).

Hamilton Anxiety Rating Scale symptom scores severity was detailed for both genders. The mean depressive mood subscale scores of females and males were $2,1\pm0,9$ and $1,8\pm0,8$ respectively. The mean somatic symptoms subscale scores of females and males were $1,8\pm0,9$ and $1,5\pm0,8$ respectively. The depressive mood subscale and the somatic symptoms subscale scores of females were significantly higher than males ($p=0,029$ and $p=0,040$, respectively). Anxious mood scores were severe in %42,4 of females and %41,7 of males. Tension subscale scores were severe in %42,4 of females. Insomnia subscale scores were severe in %33,3 of males. Anxious mood and tension subscales scores ranked the highest level among other subscales in both genders. The mean anxious mood subscale scores of females and males were $2,7\pm0,9$ and $2,5\pm0,9$ respectively. The mean tension subscale scores of females and males were $2,5\pm0,8$ and $2,3\pm0,7$ respectively. The mean insomnia subscale scores of females and males were $1,8\pm1,0$ and $2,0\pm1,1$ respectively. The mean respiratory symptoms subscale scores of females and males were $1,5\pm1,0$ and $1,3\pm0,9$ respectively. The mean genitourinary symptoms subscale scores of females and males were $1,5\pm0,9$ and $1,3\pm0,8$ respectively.

In obsessive compulsive disorder patients, dirt/contamination obsessions were the most frequent obsessions in both genders. None of the obsession subtype comparison according to gender was statistically significant ($p>0,05$). Washin/cleaning and controlling compulsions were the most common compulsions in both genders. Repetitive ritualistic behaviours and "other" compulsions subtypes were significantly higher in males ($p<0,05$).

In panic disorder patients, cardiovascular system symptoms were found to be significantly higher in males than females ($p=0,03$).

Comorbidity most frequently accompanied to obsessive compulsive disorder in both genders. The mean ratio in females and males were 1.65 ± 0.77 and 1.47 ± 0.91 , respectively. Comorbidity wasn't significantly different in both genders ($p>0,05$).

5. Discussion

In our study State-Trait Anxiety Inventory scores demonstrated significantly higher severity in females ($p=0,001$ and $p=0,003$ respectively). Most of the studies in anxiety disorders state significantly higher distribution rates in females than males; holding an exception for obsessive compulsive disorder and social phobia whose ratios are around 1. A number of studies concerning the symptom differences in anxiety disorders according to gender manifested more severe symptom profile in female gender (6). Nevertheless, this topic maintained to be relatively less scoped area of psychiatry literature. Presence of symptoms and severity variations might result from insufficient declaration by the patient. Males are hesitant to attend to professional help, while females are relatively open in that matter (7). Males are prone to downplay anxiety symptoms in an effort to protect their strengthful male archetype. Psychosocial factors such as social learning, society imposed sexual roles and expectations play a crucial role on anxiety representation of individual (8). Life events, stress tolerance and coping mechanisms are cited as main determinants of anxiety appearance. Females usually exhibit higher degree of stress intolerance and emotional expression (9). In our country, traditional female role hampers healthy strategies to develop self-confidence. The individual ends up with feelings of hopelessness and dependency. In contrast, males are encouraged to demonstrate a formidable facade and disguise their weaknesses. Variations in biological sensitivity may also account for symptom differences in both genders. Recent studies on brain serotonin system have shown variance in between males and females. This findings are coherent with higher prevalence of chronic depression and anxiety in females (10).

Beck depression inventory scores of females were significantly higher than males ($p=0,05$). This finding was coherent with general literature on depression (11).

Hamilton Anxiety Rating Scale scores comparison according to gender was not statistically meaningful ($p=0,07$). However, the depressive mood subscale and the somatic symptoms subscale scores of females were significantly higher than males ($p=0,029$ and $p=0,040$, respectively). This finding was in alignment with Norton's study suggesting more severe cognitive and somatic symptom presentation in females (12).

Panic Agoraphobia Rating Scale scores demonstrated significantly higher severity in females ($p=0,029$). This finding might be attributed to Panic Agoraphobia Rating Scale's specificity in detecting severity rather than distribution. Females are believed to have a propensity for conditioning to fear responding. They are shown to exhibit undue psychological reaction to aversive circumstances (13). Ruminations and hypervigilance to bodily sensations are more frequently observed in females (14). In panic disorder patients, cardiovascular system symptoms were found to be significantly higher in males than females ($p=0,03$). That finding was in accordance with epidemiological surveys on cardiovascular system functioning in general population in our country (15).

Yale-Brown Obsessive Compulsive Scale scores' comparison according to gender was not statistically meaningful ($p=0,77$). None of the obsession subtype scores' comparison according to gender was statistically significant either ($p>0,05$). Repetitive ritualistic behaviours and

“other” compulsions subtypes were significantly higher in males ($p<0,05$). Our study complies with epidemiological studies indicating similar distribution between genders in obsessive compulsive disorder (16). There may be two factors contributing to these results. One is that the children and adolescents were not included in our study and the second is the number of obsessive compulsive disorder patients ($n=41$) was relatively low in comparison to other researches on obsessive compulsive disorder and gender heading.

In our study, the numbers of social phobia, specific phobia and posttraumatic stress disorder patients were too low to interpret statistically.

Both genders exhibited highest number of comorbidity with obsessive compulsive disorder (the mean number in females and males were 1.54 ± 0.87 and 1.11 ± 0.78 respectively) . Psychiatry literature supports this finding by %50 anxiety disorder comorbidity with obsessive compulsive disorder (17).

Limitations of our study includes implementation in 3rd level health institution and difficulties in generalization to public domain, as well as relative scarcity of sample group.

6. Conclusion

Beck Depression Inventory, Panic Agoraphobia Rating Scale, State-Trait Anxiety Inventory scores demonstrated significantly higher severity in females. Hamilton Anxiety Rating Scale depressive mood subscale and somatic symptoms subscale scores of females were significantly higher than males. These findings suggest more severe anxiety symptom profile in female gender. Clinician should take into consideration these nuances in execution of an effective treatment plan. Ignorance of these gender differences and treating each anxiety disorder patient with the same paradigm may lead to suboptimal management and poor prognostic outcome. Further research on gender difference should be encouraged, preferably not only in anxiety disorders but in all psychiatric illnesses.

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Table 1: The distribution of patients with anxiety disorders according to gender.

	Female n(%)	Male n(%)	Total	Female/Male	p
Panic Disorder	13(59,1)	9(40,9)	22	1,4	0,198
Obsessive Compulsive Disorder	35(69,4)	14(30,6)	49	2,5	0,795
Generalized Anxiety Disorder	81(73,6)	29(26,4)	110	2,7	0,167
Social Phobia	2(40,0)	3(60,0)	5	0,6	0,149
Specific Phobia	9(75,0)	3(25,0)	12	3,0	1,000
Posttraumatic Stress Disorder	1(33,3)	2(66,7)	3	0,5	0,204
Total	141(70)	60(30)	201	2,3	

Table 2: Comparisons of questionnaire scores according to gender

	Female		Male		Total		p
	Mean±SD	Median (min-max)	Mean±SD	Median (min-max)	Mean±SD	Median (min-max)	
BD	23,0±9,8	22,0 (2,0-54,0)	18,7±9,7	16,0 (2,0-46,0)	21,8±9,9	21,0 (2,0-54,0)	0,005
STAI-I	52,5±10,7	52,0 (27,0-76,0)	46,2±12,0	44,5 (25,0-76,0)	50,6±11,5	50,0 (25,0-76,0)	0,001
STAI-II	56,2±8,8	57,0 (36,0-78,0)	52,1±8,7	52,5 (33,0-73,0)	54,9±9,0	55,0 (33,0-78,0)	0,003
PA	33,3±8,5	32,0 (20,0-47,0)	25,6±6,8	23,0 (18,0-36,0)	30,4±8,6	30,0 (18,0-47,0)	0,029
GAD	39,0±15,0	37,0 (2,0-70,0)	34,7±15,4	32,5 (3,0-69,0)	37,8±15,2	36,0 (2,0-70,0)	0,073
HA	23,5±6,2	23,0 (4,0-41,0)	21,9±5,2	21,0 (11,0-37,0)	23,0±6,0	22,0 (4,0-41,0)	0,075
YBOCS	25,4±4,01	26,0 (17,0-34,0)	25,7±3,4	25,5 (21,0-32,0)	25,5±3,8	26,0 (17,0-34,0)	0,799
OBS	13,2±2,3	13,0 (7,0-17,0)	13,0±2,1	13,5 (10,0-16,0)	13,1±2,2	13,0 (7,0-17,0)	0,780
COMP	12,2±2,1	12,0 (7,0-17,0)	12,7±1,7	12,5 (10,0-16,0)	12,3±1,9	12,0 (7,0-17,0)	0,413

BD: Beck Depression Inventory, STAI-I: State Anxiety Inventory, STAI-II: Trait Anxiety Inventory, PA: Panic Agoraphobia Rating Scale, GAD: Generalized Anxiety Disorder Rating Scale, HA: Hamilton Anxiety Rating Scale, YBOCS: Yale-Brown Obsessive Compulsive Scale, OBS: Yale-Brown Obsessive Compulsive Scale obsession subscale, COMP: Yale-Brown Obsessive Compulsive Scale compulsion subscale.