Isr J Psychiatry Relat Sci Vol 29 No 2 (1992) 120-127

MMPI Profiles of Patients with Panic Disorder and Generalized Anxiety Disorder: Relationship to Diagnosis and Time Since Onset

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Abstract. Ten patients with generalized anxiety disorder (GAD) and 10 patients with panic disorder (PD) were given the Minnesota Multiphasic Personality Inventory (MMPI). The 2 groups were not found to be statistically different on any of the sub-scales. Elevated anxiety and depression scores were noted in both groups. Time since onset (TSO) of symptoms was found to be inversely correlated with MMPI scores so that patients with long duration of illness had better scores than those with a short duration of symptoms. These findings are discussed in light of possible factors affecting improvement in chronic anxiety disorders.

Introduction

Current classifications of anxiety disorders distinguish between 2 major clinical entities which were formerly classified as anxiety neurosis, namely panic disorder (PD) and generalized anxiety disorder (GAD). The clinical characteristics and diagnostic criteria for these syndromes and the differentiating features were first outlined in the DSM-III (1) and recently, with some minor modifications, in the DSM-III-R (2). The 2 syndromes differ

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not only on clinical grounds but also with respect to factors such as response to pharmacotherapy (3), high comorbidity with depressive illness in PD, but not in GAD (4) and increased familial incidence (5), with evidence suggesting a genetic vulnerability in PD but not in GAD (6).

Previous psychological studies have attempted to examine personality characteristics of psychosomatic (7) and agoraphobic patients (8), using objective assessment tools, but few attempts have yet been made to objectively characterize the new anxiety disorder typologies from a personality perspective. One purpose of this study was to evaluate carefully diagnosed PD and GAD patients in order to identify some trait differences as expressed in their response patterns on an objective psychological tool.

Many patients with either PD or GAD present to the clinician with long lasting symptomatology which is usually manifest for several years.

Eysenck (9) claimed that roughly two-thirds of all neurotic disorders will remit spontaneously within 2 years of onset. Eysenck and Rachman (10) later argued that it is not the mere passage of time which is presumed to be responsible for the spontaneous improvement, in what they called "neurotic disorders", but rather events that occur over that time period which account for the improvement. Numerous studies on spontaneous improvement have been reported. For example, Schorer et al. (11), traced 55 patients who received no treatment in a follow-up period which averaged 5 years. Sixty-five percent of these untreated neurotic patients with personality disorders remitted spontaneously. Bergin (12), in his research on therapeutic outcomes, found the median rate of spontaneous recovery to be in the vicinity of 30%. Conversely, every investigation reported so far has produced evidence of a group of patients whose difficulties fail to remit spontaneously. The figures for such patients range from 20% to as high as 50% (13). The effect of time since onset of their symptoms on MMPI variables of anxiety disorder patients who have not remitted spontaneously, was another question addressed by this study.

Method

Subjects

Subjects came from consecutive referrals to the anxiety disorder clinic at the Rambam Medical Center. The sample consisted of 10 patients with PD and 10 patients with GAD. There were 4 males and 6 females in the PD group, with a mean age of 34 years (S.D.=5.4), and 5 males and 5 females in the GAD group with a mean age of 38 (S.D.=10.4). Two thirds of the patients had a prolonged course of clinical symptoms for a mean of 13 years in the PD group (median 4 years, range 0.5-21 years) and 5.5 years in the GAD group (median 4 years, range 0.5-15 years). These differences were not statistically significant.

Evaluation procedure

All subjects satisfied DSM-III-R (2) criteria for either PD (with and without agoraphobia) or GAD. Confirmation of diagnosis was based on the structured clinical interview for DSM-III-R (SCID) (14).

Following a 2 week drug free period and before entering a drug trial, subjects were given the Hebrew version of the Minnesota Multiphasic Personality Inventory (Tel Aviv MMPI) (15). This standardized self-reported scale provides information concerning relatively stable personality characteristics. The MMPIs were scored blindly, only later to be matched with the respectively coded patient data.

Table 1: Mean K-Corrected MMPI T-scores for Panic Disorder and Generalized Anxiety Disorder Patients

Measure		PD Patients (N=10)		GADPatients (N=10)	
		Mean	SD	Mean	SD
Scale L		52	7	49	5
Scale F		68	14	67	11
Scale K		52	9	50	8
Scale 1	Hs/ Hypochondriasis	67	14	74	13
Scale 2	D/Depression	77	13	83	17
Scale 3	Hy/Hysteria	72	17	72	9
Scale 4	Pd/Psychopathic deviate	9	73	8	68
Scale 6	Pa/Paranoia	64	12	70	9
Scale 7	Pt/Psychasthenia	74	15	75	12
Scale 8	Sc/Schizophrenia	72	16	71	13
Scale 9	Ma/Hypomania	60	11	62	10
Scale 0	Si/Social introversion	58	9	61	9
Mean MMPI*		68	10	71	7

*Clinical scales only

Results

The mean MMPI profile for PD patients was: 27 38'. The mean profile for GAD patients was 2"714386'*. In both groups, the mean depression score (D) was higher than any other score. Pessimistic worrying, tension and anxiety (Pt), a sense of alienation, of feeling misunderstood or different from others (Sc), and a somewhat demanding or demonstrative style(Hy) were also characteristic of both PD and GAD subjects.

The two groups did not differ statistically with regard to any of their MMPI

* Scale numbers to the left of the ' sign indicate standardized scores ranging between 70-79. Scale numbers to the left of the " sign indicate standardized scores ranging between 80-89.

scores. However, several differentiating trends were noted: GAD subjects appeared to be somewhat more concerned with their health (Hs); they seemed to harbor more anger (Pd) and tended to show more difficulty in trusting others (Pa) in comparison to the PD subjects.

When the mean MMPI score for the combined sample of both groups was plotted against the time since onset (TSO), an inverse correlation of -.44 ($p<.05$) was seen, indicating a decrease in overall psychological pathology the longer the time since the onset of the disorder. The mean anxiety score for the combined sample was also negatively related to the TSO ($r=-.49$, $p<.05$). A significant relationship was also found between the TSO and the tendency to deliberately present oneself in a positive light (scale L) ($r=.5$; $p<.05$), indicating a greater need to deny psychological problems the longer the time elapsed since the onset of the disorder. Similar findings were seen when a TSO of 2 years was arbitrarily defined as a cut-off between long (M=9.6 years, SD=5) and short (M=1.3 years, SD=.7) durations of illness (Table 2). Patients from both diagnostic groups with a duration of illness of more than 2 years, showed less overall distress as measured by the average MMPI clinical scales, were less inclined to describe themselves in pathological terms (lower F), were

Table 2: Mean K-Corrected MMPI T-scores for Panic Disorder and Generalized Anxiety Disorder in Terms of Time Since Onset (TSO) of the Symptoms

Measure		TSO ≤ 2 years (N=7) Mean	SD	TSO > 2 years (N=13) Mean	SD	t[1] (df=18)
Scale L		47	4	53	6	2.4*
Scale F		79	9	62	9	-4.0**
Scale K		45	5	54	8	2.7*
Scale 1	Hs/ Hypochondriasis	74	17	69	12	-.8
Scale 2	D/Depression	90	18	75	11	-2.4*
Scale 3	Hy/Hysteria	73	16	71	12	-.2
Scale 4	Pd/Psychopathic deviate	69	9	71	8	.5
Scale 6	Pa/Paranoia	69	16	66	7	-.6
Scale 7	Pt/Psychasthenia	83	16	70	10	-2.3*
Scale 8	Sc/Schizophrenia	80	14	67	13	-1.9
Scale 9	Ma/Hypomania	65	10	59	10	-1.4
Scale 0	Si/Social introversion	63	9	58	8	-1.2
Mean MMPI[2]		74	10	67	5	-2.2*

* $p<.05$
** $p<.001$
[1]two-tailed
[2]Clinical scales only

more likely to present themselves in a desirable manner (higher L), tended to be psychologically better guarded (higher K), and displayed significantly lower levels of both depression (D) and anxiety (Pt) than more recently afflicted anxiety disorder patients did.

Discussion

We could not find statistically significant differences between MMPI variables of PD and GAD patients. Noteworthy is the considerable degree of depression that both groups displayed. This finding is in accordance with previous studies which found that PD patients were at an increased risk for depression (16, 17, 4). Our results, however, imply that depression may be as strongly related to GAD. Interestingly, recent reports suggest that tricyclic antidepressants, widely used in PD are also effective in GAD (18, 19). It should also be noted that more mean MMPI scores of GAD subjects fell above the cut-off line (T=70), indicating a possible trend towards more distress in GAD patients. GAD subjects, unlike PD subjects, had mean above the cut-off line scores in scales measuring somatic concern (Hs), anger (Pd) and suspicion (Pa). While the apparent difference in somatic concern might be related to the more pervasive psychophysiological arousal that generalized anxiety disorder patients suffer from, further research is required before comments can be offered on the relationship between anger, suspicion and GAD.

The relationship between time since onset (TSO) of the disorder and MMPI variables was the second issue addressed by this study. Previous studies which explored changes in untreated non-psychotic patients reported substantial improvements and spontaneous remissions in up to two-thirds of the population (19, 11, 20). It has been suggested by Eysenck and Rachman (10), that events occurring over time might probably account for the improvement. While it is unclear that the patients alluded to in Eysenck's early work were really neurotic in the sense that current DSM disorders are, we were still interested to examine how the passage of time and its events influenced the unremitted anxiety disorder patients.

Our findings suggest that not only does the passage of TSO not worsen the self reported distress of unremitted anxiety disorder patients, as reflected in MMPI scores, but rather tends to improve it.

A possible explanation for this is that the same processes that account for spontaneous recoveries in neurotic disorders are also related to less pathological personality profiles in unremitted neurotic patients with prolonged duration of symptoms. A review of the relevant empirical literature concluded that the majority of people who report experiencing distress in their lives do seek help for their problems (21). Initially, they tend to turn to family and

friends, while relief agencies or professional service organizations are contacted only as a last resort (22). Rosenblatt and Mayer (23) found that the sole use of professional services occurs much less frequently than either exclusive reliance on family and friends, or the seeking of help from both the social network and professional sources. It is, thus, conceivable that the longer the TSO, the greater the likelihood that these patients have benefitted from some help prior to their current referral and assessment. Data collected in this study, but not presented with the main results, tend to give some credence to this interpretation. While the reported use of psychotropic medication since an onset of the disorder, among patients who had been afflicted for 2 years or less, was similar to that reported by patients with TSO greater than 2 years (71% and 77% of the patients, respectively), only 14% of the patients who were afflicted for 2 years or less attended at least one professional counselling session since the onset of their disorder, compared with 85% of the patients afflicted for more than 2 years.

Another possible process that may have contributed to the psychological improvement positively associated with increased TSO was **adaptation to stress** (24). It is suggested that through accumulated experience with their symptoms, some patients gain valuable information about what to expect. For example, they may realize that alleviation of acute distress will occur shortly, or they may have learned how to utilize such coping strategies as turning to family for support. The final result of such a process may very well be higher stress and anxiety tolerance as reflected in the better ego defensive scores and lower clinical scores of patients diagnosed long after the onset of their disorder.

Our methodology and the relatively small sample size did not provide for a more accurate analysis of life events and psychological processes that may have contributed to the better MMPI scores of patients afflicted for longer durations. Future investigations should not only study the psychological differences between these two relatively new diagnostic entities, but should also attempt to explore those natural coping and adaptation processes responsible for the improvement, and in some cases, the recovery of untreated neurotic patients.

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