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Impulsiveness in Obsessive-Compulsive Patients

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Summary: Obsessive-compulsive patients with a history of poor impulse control were identified and compared with non-impulsive obsessive-compulsive patients. Although both groups reported comparable obsessive-compulsive symptoms, the impulsive group rated significantly higher on disturbances during childhood, which included learning problems, low frustration tolerance, poor interpersonal relationships and attention-seeking behaviour. The impulsive group also scored highly on the neuroticism scale of the Eysenck Personality Questionnaire and reported a higher incidence of somatic symptoms. It appears that poor impulse control was related to disturbances which had already manifested themselves during childhood, while the obsessive-compulsive disorder was superimposed at a later time.

While most patients with obsessive-compulsive disorders exhibit obsessive personality traits, in an estimated 16 to 36 per cent of patients, other premorbid traits continue to be prominent (Black, 1974). We noticed among our clinic population a small number of patients with obsessive-compulsive disorders who had a history of impulsive acting-out during adolescence and early adulthood. Their obsessive-compulsive symptoms were frequently, but not always, related to the fear of losing self control, although at the time of admission to the clinic they had achieved reasonable levels of self control.

This paper examines whether obsessive-compulsive patients with impulsive personalities differ from the more typical non-impulsive obsessive-compulsive patients in the following dimensions: disturbances during childhood, personality traits, clinical symptomatology and social adjustment. We were also interested in the relationship between impulsive behaviour, the occurrence of obsessive-compulsive symptoms and levels of trait anxiety. In our patients, the acting-out behaviour preceded obsessive-compulsive symptoms. This suggests the possibility that the latter symptoms were attempts to control impulses and developed during times of heightened anxiety.

Method

Selection of subjects

Ten adult patients diagnosed as having an obsessive-compulsive disorder according to DSM-III (1980) criteria were selected from patients attending the anxiety clinic at The Johns Hopkins Hospital. They had to currently experience recurrent ego dystonic thoughts, images or impulses which appeared to be senseless or repugnant to them. Behaviour was regarded as compulsive when it was recognized as senseless because of its quality of repetitiveness. These symptoms were prominent in patients' psychopathology and were a significant source of distress. In addition these patients had to have a history of socially undesirable acting-out from adolescence until at least their mid-twenties. Acting-out was defined as frequent argumentativeness, explosiveness, sexual excesses, sprees of excessive drinking and spending, and other behaviour which was under poor self-control and viewed as potentially harmful by the patient and society. Excluded were patients in whom acting-out behaviour occurred only during well-defined stressful periods and represented a reactive pattern rather than a personality trait. In doubtful cases, the concensus of two psychiatrists was obtained.

A comparison group of 10 obsessive-compulsive patients fitting the same diagnostic criteria but lacking impulsive personality traits was selected. An attempt was made to match the two groups with respect to sex, age, and education as closely as possible.

Measures

All patients were interviewed by a psychiatrist. In addition, psychiatrists and patients filled out the following measuring instruments.

Personality measures

Eysenck Personality Questionnaire, Form A (Eysenck and Eysenck, 1975). This 57-item questionnaire measures (a) extraversion, which describes a

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person's sociability and impulsivity, and (b) neuroticism, which measures trait anxiety, dysphoria and emotional lability.

Mastery-Powerlessness Scale (Frank *et al*, 1978). This is an 18-item modification of Rotter's Locus of Control Scale (Rotter, 1966) that rates a person's perception of internal control, i.e., the degree to which he sees himself in control of himself and his environment, as opposed to external control, i.e., the degree to which he sees himself at the mercy of fate and other forces.

Barratt Impulsiveness Scale (BIS-7) (Barratt, 1972). This 48-item scale describes three aspects of impulsiveness, headed 'I am', 'I like', and 'I do'. The scales were filled out twice: once as patients saw themselves at 20 to 25 years of age and once as they saw themselves 'at present'.

State-Trait Anxiety Inventory (STAI), Trait Form (Spielberger *et al*, 1970). This 20-item scale measures predominantly psychic aspects of anxiety and rates a person's general tendency to respond with anxiety. Patients completed the form twice: once as they saw themselves at 20–25 years of age, and once as they saw themselves 'at present'.

State measures

Physician-rated measures

Hamilton Anxiety Rating Scale (Hamilton, 1959). This 14-item scale rates psychic and somatic symptoms of anxiety.

Hamilton Depression Rating Scale (Hamilton, 1960). This 21-item scale rates psychic and somatic symptoms of depression.

Patient-rated scales

State-Trait Anxiety Inventory (STAI), State Form (Spielberger *et al*, 1970). This 20-item scale measures predominantly psychic symptoms of anxiety at the time of rating.

Somatic Symptoms Scale (Hoehn-Saric, 1981). This scale consists of 21-items describing somatic symptoms that frequently accompany anxiety.

Symptoms Checklist (SCL-90) (Derogatis, 1977). This 90-item scale describes symptoms of somatization, obsessive-compulsiveness, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism.

Social adjustment measure

Social Adjustment Interview (Noyes *et al*, 1980). This is a psychiatrist-rated scale of adjustment at work, marriage, family and social relationships, sex and general health. Ratings were scored for adjustment between ages 20 to 25 and for present adjustment.

Childhood behaviour disturbances measure

Childhood history (Tarter *et al*, 1977). This 50-item checklist outlines symptoms seen in persons with minimal brain dysfunction, including diminished impulse control and concentration, learning disabilities, hyperactivity and inadequate social interaction prior to age 14.

Motivation to control impulsive behaviour

Impulsive patients wrote down and ranked their reasons for curbing impulsive behaviour, and noted the age at which self-control became important to them.

Statistics

Two-tailed Student's t-tests were calculated for all comparisons.

Results

Description of patients

The impulsive group consisted of 7 male and 3 female patients: 9 were white and 1 was black. The average age was 40.8 years (26–57 years), with an average education of 12.1 years (8–18 years). Impulsive, acting-out behaviour during adolescence and early adulthood consisted of the following: destruction of property and vandalism in 7 patients, sexual acting-out ranging from intermittent homosexual acts to intercourse with animals and attempted rape in 5 patients, periodic excessive drinking and drug abuse in 5 patients and physical violence in 3 patients. Systematic efforts to acquire self-control over impulsive behaviour had been made from an average age of 30.7 years (23–38 years) on. Obsessive-compulsive symptoms started at an average age of 32.6 years (23–52 years). At the time of admission to the anxiety clinic, all patients exhibited obsessive-compulsive symptoms consisting of obsessive ruminative thoughts in 9 patients, compulsive checking in 4 patients, and compulsive phobic avoidance in 3 patients. They also reported increased levels of generalized anxiety and depression; three patients experienced panic attacks.

The non-impulsive group consisted of 6 male and 4 female patients, all white, with an average age of 42.6 years (29–60 years), and an average education of 13.0 years (8–18 years). On the average, patients had their first psychiatric contact at the age of 29.6 years (20–41 years). In 7 patients, obsessive-compulsive symptoms started during the late teens or early twenties and gradually increased in severity. Symptoms occurred suddenly in 3 patients, concurrent with childbirth in one patient, and during a period of marital discord in 2 patients. The symptoms consisted of obsessive, intrusive thoughts in 9 patients, compulsive checking in 6

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patients and phobic avoidance behaviour in 4 patients. At the time of admission to the clinic, all patients exhibited pathological levels of anxiety and depression; one patient also reported panic attacks.

Demographic characteristics at the time of the first psychiatric clinic contact and the distribution of obsessive-compulsive symptoms did not differ significantly in the two groups.

Comparison of the two groups by personality trait measures

Impulsive patients differed from non-impulsive on several personality trait measures (Table I). Impulsive patients rated significantly higher on the neuroticism subscale of the Eysenck Personality Questionnaire ($P < .05$) and, as expected, on the Barratt Impulsiveness Scale; the differences were significant for the total scores ($P < .005$) as well as the subscores of the scale ($P < .05$ to $P < .005$). Impulsive patients also tended to be more extraverted ($P < .10$) on the Eysenck Personality Questionnaire and more external on the Mastery-Powerlessness Scale ($P < .10$), which suggested that they were less willing or able than the non-impulsive patients to accept responsibility for themselves and their actions. The trait form of the State-Trait Anxiety Inventory was within the pathological range in both groups; the groups did not differ significantly from each other on this measure.

Comparison of the two groups by state measures

At the time of assessment, all patients had been in treatment for at least 3 months and some had attended the clinic for several years. Treatment consisted of individual psychotherapy and, if necessary, pharmacotherapy. Antidepressants were prescribed for depressive symptoms. Anxiolytic medications were used sparingly and intermittently. All patients showed some improvement ranging from minimal to moderate, but none of the patients were free from obsessive-compulsive symptoms or anxiety at the time of evaluation. Most impulsive patients continued to have intermittent but mild and socially acceptable relapses into impulsive behaviour patterns.

Table II describes the State measures of the two groups. Impulsive patients exhibited more symptoms than did non-impulsive patients; significant differences were obtained predominantly from analysis of symptoms relating to somatic complaints. Impulsive patients rated higher on the Hamilton Depression Scale ($P < .05$); this may be attributed in part to higher ratings of somatic symptoms. Impulsive patients also rated higher on the positive symptoms distribution index (i.e. severity ratings of positively scored symptoms) of the SCL-90 ($P < .05$), and on the SCL-90 subscales of somatization ($P < .05$), anxiety ($P < .05$), and paranoid ideation ($P < .05$). Impulsive patients also tended to rate higher on the somatic subscores of the Hamilton Anxiety Rating Scale and on the Somatic Symptoms Scale, as well as on the SCL-90 subscale 'interpersonal sensitivity' (all three, $P < .10$).

Comparison of the two groups on ratings of disturbances in early childhood

The Childhood History Scale differentiated the two groups to a significant degree ($P < .005$) (Table I). The impulsive group rated high within the pathological range while the non-impulsive group scored within the normal range. During childhood half of the impulsive patients had learning problems and poor handwriting, were impulsive, were restless, and failed to follow

TABLE I

Comparison between impulsive and non-impulsive obsessive-compulsive patients: Trait measures and childhood history

	Impulsive	Non-impulsive	Difference	Significance
Personality measures				
Eysenck Personality Questionnaire				
Extraversion	11.2±4.8	8.1±4.2	3.1	<.10
Neuroticism	17.8±4.0	13.1±5.1	4.7	<.05
Mastery-Powerlessness Scale	12.9±4.0	15.1±3.1	−2.2	<.10
STAI, Trait Form	57.6±13.9	51.9±9.7	5.7	NS
Barratt Impulsiveness Scale				
Total score	119.8±14.7	99.8±9.6	20.0	<.005
'I am'	35.3±5.7	30.2±4.1	5.1	<.05
'I like'	32.3±4.0	28.4±2.4	3.9	<.01
'I do'	52.2±6.3	41.2±4.4	11.0	<.005
Disturbances in childhood measure				
Childhood History Scale	18.7±7.3	4.4±4.3	14.3	<.005

Numbers represent averages and standard deviations; N = 10 in each group.
Significance levels were calculated by two-tailed Student's t-test.

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TABLE II

Comparison between impulsive and non-impulsive obsessive-compulsive patients: State measures

State measures	Impulsive	Non-impulsive	Difference	Significance
Hamilton Anxiety Scale				
Total score	19.0±7.0	16.3±5.8	2.7	NS
Psychic subscale	11.3±4.5	10.5±4.3	0.8	NS
Somatic subscale	7.7±3.5	5.8±2.6	1.9	<.10
Hamilton Depression Scale	20.9±8.3	13.6±6.0	7.3	<.05
STAI—State Form	54.3±13.8	50.8±13.1	3.5	NS
Somatic Symptoms Scale	21.5±12.3	13.5±8.6	8.0	<.10
SCL-90				
Total score	102.0±89.7	92.7±50.6	9.3	<.10
Positive symptoms distribution index	2.24±0.78	1.63±0.44	0.61	<.05
Somatization	1.48±1.02	0.75±0.50	0.73	<.05
Obsessive-compulsive	1.78±1.31	1.50±0.59	0.28	NS
Interpersonal sensitivity	1.73±1.20	1.09±0.69	0.64	<.10
Depression	1.77±1.11	1.33±0.58	0.44	NS
Anxiety	1.99±1.14	1.19±0.69	0.80	<.05
Hostility	1.71±2.02	1.0 ±1.09	0.71	NS
Phobic anxiety	1.38±1.22	1.18±1.70	0.20	NS
Paranoid ideation	1.67±1.05	0.84±1.04	0.83	<.05
Psychoticism	1.36±0.96	1.12±1.99	0.24	NS

Numbers represent averages and standard deviations; N = 10 in each group.
Significance levels were calculated by two-tailed Student's t-test.

directions. More than half of the impulsive patients rated themselves as having been easily frustrated and unable to tolerate delay. They demanded excessive attention but felt left out and unpopular with peers. Frequently they got into fights, but they also withdrew from group activities and daydreamed excessively. Amongst non-impulsive patients the positive ratings were scattered over the scale.

The results of the childhood history scale were supported by the clinical report that 6 of the impulsive, but only 2 of the non-impulsive patients suffered from enuresis until the age of 7 or older (Chi-square, $P < .10$).

Retrospective ratings of trait anxiety and impulsiveness during patients' early twenties

Retrospective ratings on the trait scale of the State Trait Anxiety Inventory and on the Barratt Impulsiveness Scale showed non-impulsive patients during their early twenties to be not only less impulsive (total scale score $P < .005$), but also lower on trait anxiety than the impulsive group ($P < .05$).

Comparison of social adjustment in the two groups

On the Social Adjustment Interview, both groups were rated to have social maladjustment in various areas, but the differences between the groups failed to reach significance. Impulsive patients had more problems at their place of employment and in social relationships and complained more about physical health, while non-impulsive patients had more difficulties in marital relationships. Sexual problems were rated high in both groups.

Social maladjustment during the early twenties was difficult to relate to present maladjustment because of changes over time which affected patients' life styles. Overall, however, during the early twenties social maladjustment was higher in the impulsive than in the non-impulsive group.

Discussion

The present study identified a subgroup of obsessive-compulsive patients who exhibited high levels of impulsiveness. This group suffered more disturbances during childhood than a comparable group of non-impulsive obsessive-compulsive patients. In addition, impulsive patients rated higher on neuroticism and several state measures, suggesting a more diverse psychopathology in impulsive than in non-impulsive patients.

The Childhood History Scale (Tarter *et al*, 1977) describes symptoms and behaviour associated with disorders labelled as 'minimal brain dysfunction' or 'attention deficit disorder'. The presence of such

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disorders in childhood indicates increased vulnerability which manifests itself through heightened incidence of various mental illnesses in later life. Minimal brain dysfunction has been associated with impulsive character disorders, early onset alcoholism, attention deficit, affective lability, low stress tolerance and an increased incidence of psychosis in adulthood (Gomez *et al,* 1981; Morrison, 1979; Quitkin and Klein, 1969; Quitkin *et al,* 1976; Tarter *et al,* 1977; Wender *et al,* 1981). In a survey of our anxiety clinic population we found that patients with a pathological score on the Childhood History Scale were significantly more anxious, more depressed, and exhibited more severe somatic symptoms than patients with normal scores. However, an association between such childhood disturbances and subsequent obsessive-compulsive symptoms has not, to our knowledge, been described previously. In contrast to the impulsive group, the non-impulsive group showed very little disturbance in early childhood. Subsequently, they developed more circumscribed symptoms than the impulsive group and while the obsessions and the compulsive rituals were disturbing and anxiety-provoking, the non-impulsive group exhibited fewer somatic symptoms than the impulsive group.

Some caution is necessary in the interpretation of the results. The Childhood History Scale is rated retrospectively and is therefore subject to distortion. In addition, a number of items on the scale describe symptoms of heightened anxiety and of social maladjustment which often occur in patients with an 'attention deficit disorder' but also occur independently. Further studies are needed to clarify the degree to which high ratings on the Childhood History Scale and a subsequent impairment of self-control are related to organic brain dysfunction, to adverse early environmental influences, or to a combination of both.

Self-ratings as well as psychiatric history suggest that, contrary to our expectations, the desire to control impulsive behaviour was not directly related to levels of trait anxiety. It was the non-impulsive rather than the impulsive patients who rated themselves significantly lower on trait anxiety during their early twenties. The impulsive patients appeared to have been highly anxious even during their teens and early twenties, i.e. the time when they had shown the least self-control. It was mainly after they became concerned about losing valued relationships, such as a good marriage, their family, satisfaction at work, or social recognition, that they began to exercise increased self-control. Their self-control, however, never became fully established and all patients relapsed intermittently. These relapses were mild and caused no social harm but were upsetting to the patients.

The obsessive-compulsive symptoms of the impulsive group appeared to be more closely related to real life situations than those of the non-impulsive group, although the symptoms tended to become independent of the original source and occurred under all types of stress. For instance, in two patients compulsive checking began with difficulties at work because of sloppy performance. In those patients, double and triple checking, compulsive cleaning and neatness generalized eventually to other situations and were triggered also by non-occupational stress. In another case, compulsive checking of doors and windows began after the patient's home was burgled, but gradually spread into checking of irrelevant objects, becoming particularly strong when the marital relationship declined. Similarly, after a brief homosexual encounter, one patient developed guilt feelings which eventually led to obsessive ruminations about his mannerisms appearing feminine, although the patient realized the groundlessness of these thoughts.

Walker (1973) described the differences between compulsive rituals and normal rituals which are performed to alleviate anxiety. Normal rituals are usually performed only once and relate to an object of potential danger, while obsessive rituals are performed over and over again and frequently are connected to insignificant issues. Moreover, the performance of the normal ritual reduces anxiety while obsessive-compulsive rituals do not. Some obsessive ruminations and compulsive acts of our impulsive patients appeared to fall between the normal and obsessive-compulsive rituals. They appeared to be related to reality at first, but eventually became independent and lost their original function. However, other obsessive-compulsive symptoms were entirely devoid of an overt link with impulsive acts. Thus, it appears that motivation to control acting-out behaviour may have contributed to the development of some obsessive-compulsive symptoms but it fails to explain the development of the disorder in impulsive patients.

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