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LENGTH OF OUTPATIENT TREATMENT AFFECTED BY EXTRAVERSION: STILL WATERS RUN LONG

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Summary—It has often been shown that in outpatient settings, about half of the treatments are terminated after only a few sessions. The present study sought to investigate the contribution of personality traits to length of treatment in a behaviour therapy-oriented outpatient treatment setting. All patients admitted during a 1 yr period filled out a personality questionnaire before the start of treatment, and were followed for at least 1 yr. It was found that Introverts stayed much longer in therapy and got more treatment sessions than Extraverts. Level of Neuroticism did not influence length of treatment. Low Extraversion scores may be a reflection of more severe and enduring (trait-like) psychiatric symptomatology. Also, Introverts may need more time to engage in a therapeutic relationship. Copyright © 1996 Elsevier Science Ltd.

INTRODUCTION

Long-term psychotherapy is an exception. It has been well-documented that in outpatient settings, not more than half of the patients get more than 4 or 5 sessions, and less than 10% come for 25 sessions or more (Garfield, 1994). This finding applies to all kinds of settings and psychotherapeutic orientations and—although not all early terminators are treatment failures—is viewed as a problem by many clinicians and researchers. In view of the fact that even the brief therapies that have recently been proven highly effective—e.g. cognitive–behavioral therapy for panic disorder (Clark, Salkovskis, Hackmann, Middleton, Anastasiades & Gelder, 1994a) or interpersonal therapy for depression (Elkin, Shea & Watkins, 1989)—usually encompass 12–16 sessions, a median number of 5 sessions seems very short.

Research pertaining to patient characteristics that are predictive for continuation of psychotherapy has not been very successful. Possible candidates, such as demographic variables, psychiatric diagnosis and psychological test scores have not shown a clear relationship with length of treatment (Garfield, 1994). Contradictory findings have been reported on the question whether the presence of a personality disorder (DSM—Axis II) influences therapy continuation of patients who seek help for a psychiatric (Axis I) disorder (Reich & Vasile, 1993; Shea, Widiger & Klein, 1992; Tyrer, Seivewright, Ferguson, Murphy & Johnson, 1993). DSM (*Diagnostic and Statistical Manual of Mental Disorders*: American Psychiatric Association, 1987) Axis II, however, is a categorical system of personality description. The relationship of personality *traits* with length of treatment has not been widely investigated, apart from some older studies using the MMPI (Garfield, 1994) and a study by Rahman and Eysenck (1978), that showed that outpatients with high Psychoticism scores take more time to improve. Personality traits have been extensively linked to personality disorders (DSM—axis II) (Widiger & Costa, 1994) and recent years witness a renewed interest in structures of personality and their relevance to psychopathology (Watson, Clark & Harkness, 1994). Stable, heritable and general personality dimensions such as Neuroticism and Extraversion seem relevant for distress disorders (Clark, Watson & Mineka, 1994b). Neuroticism appears to be a vulnerability factor for the development of anxiety and depression. High Neuroticism indicates poor prognosis and is associated with a past history of a depressive or anxious episode (Clark *et al.*, 1994b; Duggan, Sham, Lee, Minne & Murray, 1995). The evidence for Extraversion is mixed: Clark *et al.* (1994b) conclude that depression is specifically related to low Extraversion, but two recent studies found a relationship with Neuroticism only (Boyce, Parker, Barnett, Cooney & Smith, 1991; Duggan *et al.*, 1995).

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The setting where the present study was carried out is relatively homogeneous in patient population as well as in treatment orientation. It is a psychiatric outpatient clinic, specialized in short-term behavioural treatments for patients with primarily distress disorders. Patients with psychotic disorders are referred to another location of the same outpatients clinic. Sixty per cent of new patients are diagnosed with an anxiety disorder, a mood disorder, or both. Twenty-five per cent do not have a psychiatric diagnosis, but an adjustment disorder or V-code (e.g. marital problems). As regards length of treatment, the same pattern is observed in this setting as in the literature (see above): by session 4, about half of the treatments have been terminated. In this relatively homogeneous sample and setting, we wanted to explore the relative contribution of basic personality traits to length of treatment. Secondarily, the relationship of personality traits with psychiatric diagnosis and with global level of functioning (DSM—Axes I and V, respectively) was assessed.

METHOD

Subjects and setting

All patients who contacted the clinic in a 1 yr period were included in the study. Almost all patients are referred by general practitioners. The clinic staff (psychiatrists, psychologists, social workers) supervise four advanced (third or fourth year) psychiatry residents, who carry out the majority of the treatments.

Instruments

Personality traits. The short version of the Eysenck Personality Questionnaire (EPQ) (Eysenck & Eysenck, 1991; Sanderman, Eysenck & Arrindell, 1991) was used; a 48-item self-report questionnaire with the following subscales: Psychoticism, Extraversion, Neuroticism and Social Desirability.

Diagnosis. DSM-IIIR diagnoses were grouped into the following categories: (1) No psychiatric diagnosis or V-code; (2) adjustment disorder; (3) anxiety disorder; (4) mood disorder; (5) co-morbid anxiety disorder and mood disorder; (6) otherwise. Patients with multiple diagnoses were only included in categories 1, 2, 3 or 4 if all diagnoses belonged to that category.

Procedure

As part of the standard procedure before the first diagnostic interview, patients were asked to complete a questionnaire on various biographical and psychiatric status variables, as well as the EPQ. Next, a full psychiatric and medical history was taken, while a physical examination was done if indicated. All patients were diagnosed using DSM-IIIR criteria by the treating physician in consensus with a supervising senior psychiatrist and a psychologist. In about one-third of the cases the senior psychiatrist actually interviewed each new patient in order to supervise diagnostic accuracy. The course of treatment was followed 1 yr after the inclusion of the last patient.

RESULTS

Patients

Of 328 consecutive patients, 297 (90%) completed the EPQ. Statistical analyses revealed one difference between completers and non-completers: non-completers were less well educated [$F(1,327) = 6.19$; $P < 0.05$]. Mean age and sex distribution were not different. At the end of the study period, 110 patients (37%) were still in treatment. Biographical, psychiatric history and diagnostic characteristics of the final sample (297 patients) is shown in Table 1. The EPQ scores are presented in Table 2.

Relationship of personality with biographical and psychiatric history variables

Restricting ourselves to Pearson correlation coefficients with at least a medium effect size (> 0.30) (Cohen, 1977) no significant relationships were found between EPQ subscale scores and age, history of symptoms and level of education. Also, no differences in EPQ subscale scores were found between males and females, single and married patients, patients with and without previous psychiatric

Table 1. Demographic and psychiatric history variables

Sex:	
Male	114(38.4%)
Female	183(61.6%)
Age:	
Mean 37.3	
SD 12.9	
Range 18–77	
Marital status:	
Lives with partner	164(55.2%)
Lives alone	133(44.8%)
Duration of present symptoms:	
< 1 yr	68(22.9%)
1–2 yr	39(13.1%)
2–5 yr	56(18.9%)
> 5 yr	134(45.1%)
Previous psychiatric treatment:	
No	114(38.4%)
Yes	183(61.6%)
Use of psychotropic drugs before start of treatment:	
No	193(65.0%)
Yes	104(35.0%)
Highest educational level	
Primary school	41(13.8%)
Secondary school	154(51.9%)
Professional education	76(25.6%)
University	26(8.7%)
Psychiatric diagnosis, DSM-IIIR Axis I:	
V-code/no diagnosis	70(23.6%)
Adjustment disorder	16(5.4%)
Anxiety disorder	71(23.9%)
Mood disorder	38(12.8%)
Anxiety + mood disorder	17(5.7%)
Otherwise	85(28.6%)
Axis V (current):	
Mean 66.0	
SD 13.3	
Range 25–90	
Axis V (past year):	
Mean 70.6	
SD 13.0	
Range 25–90	

Table 2. Means and standard deviations on the subscales of the Eysenck Personality Questionnaire (EPQ)

EPQ	M	SD
Psychoticism	2.7	2.0
Extraversion	6.0	3.6
Neuroticism	8.7	3.1
Social desirability	5.7	2.9

treatment, and patients on and off medication [t-tests for independent samples, medium effect size (>0.50) (Cohen, 1977)].

Relationship between personality and psychiatric diagnosis

The EPQ scores of each diagnostic group are depicted in Table 3. Multivariate analysis of variance with 4 dependent measures (EPQ subscales) and one between Ss variable (psychiatric diagnosis) proved to be highly significant [Wilks' λ, $F(20,930) = 2.34; P < 0.001$]. Subsequent univariate F-tests were significant for Neuroticism [$F(5,292) = 6.77; P < 0.001$]. *A posteriori* contrasts revealed that the patients with a V-code/no diagnosis had lower Neuroticism scores than each of the five groups with a psychiatric diagnosis. Among these five groups, no differences were observed. Pearson correlations were calculated between EPQ subscale scores and Axis V scores (level of functioning). Only EPQ Neuroticism was significantly (and negatively) related with Axis V scores. The correlations were $r = -0.38$ ($P < 0.001$) for level of functioning during the past year and $r = -0.30$ ($P < 0.001$) for current level of functioning. The other correlations did not reach the medium effect size of 0.30.

Table 3. Relationship between EPQ-subscales and DSM-IIIR Axis I diagnoses

EPQ-scales	Subgroups						
	I	II	III	IV	V	VI	$F(5,292)$
Neuroticism	7.0(3.4	9.2(2.1)	9.1(2.7)	9.7(2.7)	10.2(1.5)	8.9(3.1)	6.77*
Extraversion	6.8(3.5)	5.6(3.1)	5.9(3.6)	5.5(3.4)	4.3(3.5)	6.2(3.7)	1.74
Psychoticism	2.5(2.0)	3.1(1.7)	2.3(1.9)	3.2(2.1)	3.1(1.7)	3.0(2.1)	1.29
Social desirability	5.5(2.9)	5.4(2.7)	6.3(2.8)	5.5(3.3)	5.9(2.9)	5.4(2.8)	0.61

Note. I = V-code/no diagnosis (N = 70); II = adjustment disorder (N = 16); III = anxiety disorder (N = 71); IV = depressive disorder (N = 38); V = anxiety/depressive disorder (N = 17); VI = otherwise (N = 85).
* $P < 0.001$.

Relationship between personality and duration of treatment

One-hundred and eighty-seven patients were discharged before the end of the study period. The reasons for discharge were: (a) non-admittance to treatment (N = 19); (b) referral (N = 20); (c) premature withdrawal (drop-out) (N = 60); (d) completion of treatment (N = 88). Using a median split, patients were divided into subgroups on the basis of their EPQ subscale scores. Next, the association between reason of discharge and personality (EPQ subgrouping) was investigated using Chi-square analyses. None of these analyses was significant, indicating that personality traits did not affect manner of treatment termination.

Hierarchical Cox' regression analyses were employed to examine the influence of EPQ scores and their interactions on length of treatment (number of sessions and weeks in treatment), while controlling for Axis I psychiatric diagnosis. In both these analyses, only EPQ Extraversion improved prediction over and above the prediction based on psychiatric diagnosis. Extraversion was associated with fewer sessions (OR = 1.08; 95% CI = 1.03–1.13; $P < 0.0004$) and with fewer weeks in treatment (OR = 1.08; 95% CI = 1.03–1.13; $P < 0.0001$). None of the other EPQ scores or EPQ interaction terms improved the prediction model. In order to visualise the influence of Extraversion on discharge, the above analyses were repeated with psychiatric diagnosis entered at the first step and dichotomized Extraversion scores at the second step. In comparison with low Extraverts, high Extraverts were less likely to have a high number of sessions (OR = 0.78; 95% CI = 0.63–0.91; $P < 0.002$) or to stay many weeks in treatment (OR = 0.77; 95% CI = 0.66–0.91; $P < 0.002$). Figure 1 gives a plot of the cumulative survival function of low vs high Extraverts in terms of weeks in treatment. The plot for number of sessions was quite similar. The median number of sessions for low Extraverts was 12 (95% CI: 9–15) and for high Extraverts was 4 (95% CI: 3–5). The median number of weeks in treatment was 53 (95% CI: 18–88) and 21 (95% CI: 15–27) for low and high Extraverts, respectively.

DISCUSSION

The main result of the present study is the finding that length of treatment in a behaviour therapy-oriented outpatient setting is clearly affected by patients' basic personality structure. Introverts are much longer in therapy than Extraverts. This finding holds true when Axis I psychiatric diagnosis is controlled for, and is not caused by Extraverts dropping out of treatment earlier or more often. Neuroticism, in contrast, does not contribute to length of treatment although it is related to the presence of a psychiatric disorder. Neuroticism also negatively affects level of functioning before the start of treatment. In contrast with Rahman and Eysenck (1978), there was no relationship between Psychoticism and length of treatment in the present study. The reason for this difference is not clear. It is not related to different statistical analysis techniques (correlations between Psychoticism and length of treatment were around zero). Perhaps, the use of a different version of the EPQ is partly responsible.

The effect of Extraversion on length of treatment is large and needs to be explained. In the present study Extraversion was unrelated to diagnosis, biography, psychiatric history and level of functioning. Regretfully, no severity measurements for psychopathology were collected in the present study, but low Extraversion can be linked both empirically and theoretically with distress disorders (Clark *et al.*, 1994b; Watson, Clark & Carey, 1988). Consequently, it is possible that
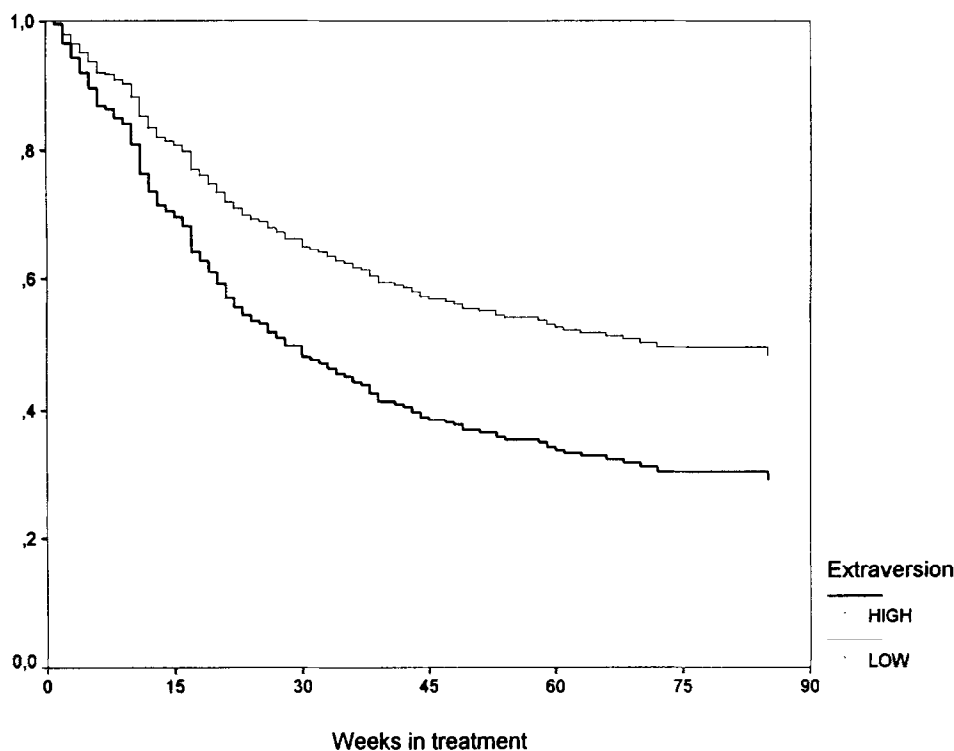
Fig. 1. Proportion of high and low Extravert patients in treatment as a function of the number of weeks after start of treatment.

Introverts are longer in therapy even after controlling for psychiatric disorder, because they have more severe psychopathology, that is also more stable and traitlike in character.

Additional hypotheses for the difference in length of treatment between Introverts and Extraverts are that Introverts need more time and sessions to engage in a therapeutic relationship, which may be prerequisite for changes to occur. Also, Extraverts may discuss more freely what they learn in therapy sessions with friends or family members, thereby enhancing the effectiveness of the interventions. These hypotheses are not mutually exclusive. Introversion may not only influence symptomatology and course, but also affect in- and out-therapy behaviour relevant for seeking and obtaining help.

The possible association of basic personality traits with Axis I disorders has important implications for the assessment of psychopathology and planning of treatment for individual patients. General measures of personality may complement existing diagnostic classifications and measures of current psychopathology. If the important role of Extraversion could be replicated in other studies, therapists as well as patients can be provided with valuable information at the beginning of treatment, namely a more sophisticated prediction of how long the therapy will last. An interesting topic for future studies would be to investigate the effect of patients' Extraversion in treatments where the therapeutic relationship may be less important (e.g. medication studies) or is absent (e.g. studies on the effectiveness of self-help manuals).

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