

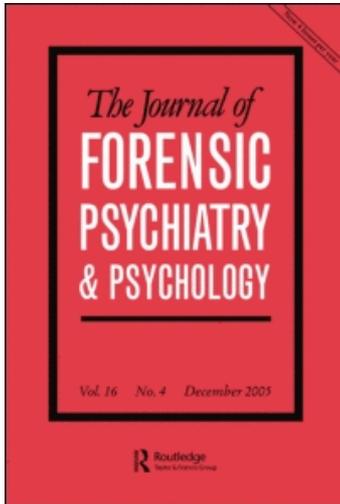
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Journal of Forensic Psychiatry & Psychology

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title-content=t714592861>

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First Published: June 2009

To cite this Article Birtchnell, John, Shuker, Richard, Newberry, Michelle and Duggan, Conor (2009) 'An assessment of change in negative relating in two male forensic therapy samples using the Person's Relating to Others Questionnaire (PROQ)', *Journal of Forensic Psychiatry & Psychology*, 20:3, 387 — 407

To link to this Article: DOI: 10.1080/14789940802542840

URL: <http://dx.doi.org/10.1080/14789940802542840>

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RESEARCH ARTICLE

An assessment of change in negative relating in two male forensic therapy samples using the Person's Relating to Others Questionnaire (PROQ)

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(Received 2 August 2008; final version received 9 September 2008)

This study tests the hypothesis that the negative relating of men with a forensic history can be reduced by psychotherapeutic intervention. The Person's Relating to Others Questionnaire (PROQ), a measure of negative relating, was administered to two male forensic therapy samples, one in a medium secure unit and one in a prison therapeutic community. In the first it was given at assessment prior to admission, at three and nine months after admission, and at follow-up, one year after discharge. In the second it was given on admission, after nine months, and after 18 months. There were significant improvements in mean scores on a number of scales in both samples. Over a fifth of both samples demonstrated reliable improvement. In both samples the major improvement in mean scores occurred relatively early in the period of stay, and thereafter the improvement was sustained. In the first sample, it was still apparent at follow-up.

Keywords: relating theory; PROQ; therapeutic community; negative relating; improvement

Introduction

Research has consistently shown that men in prison therapeutic communities demonstrate an improvement in self-esteem and psychological distress, and a reduction in anti-authoritarian attitudes, hostility, and impulsivity (Gunn & Robertson, 1982; Lees, Manning, & Rawlings, 1999; Newton, 1998). This has also been shown in patients in non-secure therapeutic communities (Chiesa & Fonagy, 2000; Dolan, Evans, & Wilson, 1992; Warren, Evans, Dolan, & Norton, 2004). Although such communities have

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defined their therapeutic model as one incorporating social learning, little research has evaluated how effective they are in terms of modifying maladaptive interpersonal tendencies. The present study examines changes in negative relating, over time, in two male forensic therapy samples. The primary measures used are the second and third versions of the Person's Relating to Others Questionnaire (PROQ2 and PROQ3).

The PROQ is based upon relating theory (Birtchnell, 1996, 2002a), which proposes that humans have an innate tendency to strive towards four principal relating objectives. These are getting closer, becoming more distant, relating downwards from a position of upperness, and relating upwards from a position of lowerness. Although these objectives have been described in terms of pairs of opposites, the theory maintains that each opposite position, under certain circumstances, carries advantages for the individual. The advantages of closeness, distance, upperness, and lowerness concern involvement, separation, status, and reliance, respectively.

The relating objectives can be represented graphically by two intersecting axes: a horizontal axis, close versus distant, and a vertical axis, upper versus lower. As with interpersonal theory (Leary, 1957; Kiesler, 1996; Wiggins, 1979), intermediate positions, representing a blending of the positions to either side of them, can be inserted between the four polar positions. This creates a theoretical structure called the interpersonal octagon. Each octant of the octagon has a two-word name, with the word for the vertical axis always preceding that for the horizontal one. Moving clockwise, the octant names are upper neutral (UN), upper close (UC), neutral close (NC), lower close (LC), lower neutral (LN), lower distant (LD), neutral distant (ND), and upper distant (UD). The octants are always presented in the same sequence and they are usually referred to only by their initials.

An important feature of relating theory is the clear distinction that is drawn between what is called positive and negative relating. In effect, negative relating is an imperfect form of positive relating. The positive and negative features of each octant are summarised in Figure 1. The PROQ was designed as a measure of negative relating and its eight scales are intended to correspond to the eight octants of the octagon.

A link has previously been hypothesised between negative relating and personality disorder, and on the basis of the published descriptions of their clinical features (American Psychiatric Association, 1994), the 10 DSM-IV personality disorders have been placed within the octants of the octagon (Birtchnell, 1997). To test the validity of this distribution, the PROQ2 and the Personality Diagnostic Questionnaire (PDQ-IV; Hyler, 1994) were administered to 107 admissions to the same prison therapeutic community used the present study (Birtchnell & Shine, 2000). The correlation between the total scores of the two measures was .65.

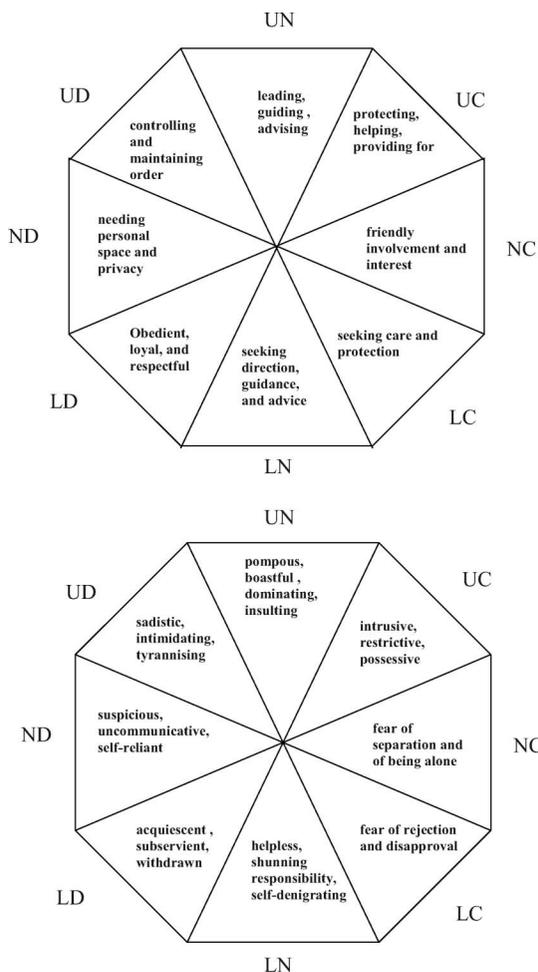


Figure 1. Positive (upper diagram) and negative (lower diagram) forms of relating. The pairs of initial letters are abbreviations for the full names of the octants given in the text. (Source: Birtchnell, 1994, pp. 518, 524; copyright The Tavistock Institute, 1994; reproduced with permission.)

Aims of the study

The study has three primary aims: to determine whether male forensic inpatients and prison inmates in two separate therapeutic institutions showed higher mean PROQ scores than general population-based non-patients; to examine whether the scores of the patients who were admitted to the medium secure unit (MSU) differed from those of the patients who were not, and whether the scores of the prisoners who were returned prematurely

from the prison therapeutic community (PTC) to their prison of origin differed from those of the prisoners who were not; and to determine whether, over the course of therapy, the PROQ scores of the patients and prisoners registered significant improvements. The hypotheses are that their mean scores will be higher than those of non-patients and that they will improve significantly over the course of therapy.

Method

The paper presents data from two separate therapy centres. While there are differences in the therapeutic approach, testing times, and version of the PROQ used at the two centres, there are sufficient similarities in terms of methodology and objectives to justify presenting the two sets of data in the same paper.

Samples

The first sample, of whom 83% were serving prisoners, was drawn from a 12-bedded MSU (Milton, Duggan, McCarthy, Costley-White, & Mason, 2007). Over an eight-year period 126 men were tested at the time of assessment for possible admission. Their ages ranged from 17 to 57 (mean 29.4, *SD* 8.4). Of these, 81 were admitted. The delay between assessment and admission ranged from two to eight weeks. Of the 81 men, 61 were tested again three months after admission, 36 were tested nine months after admission, and 30 were tested at one-year follow-up. Although the data reported upon in the paper were collected as part of an on-going assessment procedure, ethical approval for the use of the data for research purposes was obtained from the North Nottinghamshire Ethical Committee; consent was also obtained from the individual patients.

The men in the second sample were all seconded from their prison of origin in order to receive therapy in a PTC (Cullen, 1997). Previous research has revealed the prevalence of personality disorder in this community to be 88% (Newton, 2003); in addition, 47% of the men obtained a Psychopathy Checklist-Revised (PCL-R; Hare, 2003) score of at least 25 (Hobson & Shine, 1998) – the cut-off point for psychopathy most generally accepted in the UK. The mean PCL-R score was found to be higher than for any type of prison in the UK, including category B dispersal prisons (Shine & Newton, 2000). Unlike in the first sample, the prisoners did not complete the PROQ at the time of assessment for transfer. Over a five-year period, 410 prisoners completed it on their arrival in the prison assessment wing. Their ages ranged from 21 to 65 (mean 34.4, *SD* 8.2). Subsequently they were transferred to one of five therapy wings, where the intention was for them to complete it again after nine months and after 18 months. Since this subsequent testing was not part of the normal prison routine, permission to

proceed with it was obtained from the prison research advisory group and the prisoners were informed of the nature of the study and requested to give their written consent.

It is common practice in both the treatment settings for non-compliant patients to be returned prematurely to their place of referral. Of the first sample, 47 were returned at some stage during the course of therapy. Of the second sample, 123 were returned before the end of the first nine-month period and a further 38 were returned between the nine-month and 18-month testing points. Four others who were tested at nine months refused to be tested further. Besides those who were prematurely returned, there were 103 prisoners who were tested only at the time of assessment. The majority of these (92) were not tested further because, by this time, a sufficient number had already been tested at all three points. A small number (11) declined to be tested further. Eventually there were 130 prisoners who had been tested on all three occasions, a further 42 who had been tested on admission and at nine months, and a further 11 who had been tested on admission and at 18 months.

The study also draws upon two general population samples used for two earlier studies. The first comprises 50 English men who had completed the PROQ2 (Birtchnell & Evans, 2004); the second comprises 59 English men who had completed the PROQ3 (Birtchnell, Hammond, Horn, & De Jong, submitted). Both of these were convenience samples. Brief reference will also be made to 69 male psychotherapy patients who completed the PROQ3. These are men who were treated in a number of psychotherapy departments. They comprise an extension of a sample that was collected for the submitted PROQ3 paper. Finally, the PTC sample will be compared with a sample of 234 men (see 'Acknowledgements' section) who were admitted to another prison therapeutic community. Further information is not available for any of these additional samples.

Measures

The PROQ has passed through three stages of development. The last two, the PROQ2 (Birtchnell & Evans, 2004) and the PROQ3 (Birtchnell et al., submitted), feature in the present study. The PROQ3 is half the length of the PROQ2. Its items were derived from those PROQ2 items that loaded most heavily on the extracted factors and that loaded only on one factor. For the PROQ3, all the five negative UC items and three of the five negative LD items were replaced. This was partly to improve the discrimination between neighbouring scales, and partly because the original UC scale failed to distinguish significantly between patients and non-patients. The PROQ2 has been used routinely in a number of therapy departments. When the PROQ3 became available, most departments changed to using it, but, to remain consistent, the MSU has continued to use the PROQ2.

The PROQ2 has 96 items and the PROQ3 has 48 items. Both the PROQ2 and the PROQ3 have eight scales that are based upon the eight negative octants of the interpersonal octagon (Figure 1, bottom diagram); they have 12 items and six items per scale, respectively. In both questionnaires each scale includes unscored, positive items (two out of 12 for the PROQ2 and one out of six for the PROQ3). These are to increase motivation. In both measures each item has four response options: 'Nearly always true', 'Quite often true', 'Sometimes true', and 'Rarely true', which carry scores of 3, 2, 1, and 0. Thus the maximum score for each scale is 30 for the PROQ2 and 15 for the PROQ3. There are computer programs for scoring both versions of the questionnaire, and these may be obtained from the first author. They provide both a numerical print-out of scores and a representation of scores in the form of shaded areas of the octants of the octagon.

In two previous studies, the eight scales of the PROQ2 and the PROQ3 have been shown to have good internal reliabilities. In a psychotherapy sample all PROQ2 scales had an alpha coefficient above .80 (Birtchnell & Evans, 2004). In a different psychotherapy sample, five PROQ3 scales had an alpha of .78 or above and no scale had an alpha below .70 (Birtchnell et al., submitted). There were some high positive correlations between neighbouring scales but, unlike those measures that are based upon the interpersonal circle, there were no high negative correlations between scales from opposite sides of the octagon, and this is in keeping with the underlying theory. The highest correlations were between scales that are neighbours on the octagon, and since intermediate scales are conceptually a blending of scales to either side of them, this is to be expected. The full correlation matrices for the PROQ2 may be found in Birtchnell and Evans (2004). Correlation matrices for the PROQ2 (MSU sample) and the PROQ3 (PTC sample), and for various other samples, are available from the first author. They are comparable with those of previous studies. For both measures, there is factor analytic support for most of the eight scales (PROQ2: Birtchnell & Evans, 2004; PROQ3: Birtchnell et al., submitted). For both measures, the mean scores for psychotherapy patients have been shown to be significantly higher than those for non-patients, and, over the course of psychotherapy, the scores on most scales were shown to have improved significantly (Birtchnell, 2002b; Birtchnell et al., submitted). In a test of validity the scales of the PROQ3 were shown to correlate positively and meaningfully with a short sequence of scales of two measures based upon the interpersonal circle (Birtchnell et al., submitted).

The Hostility and Direction of Hostility Questionnaire (HDHQ; Caine, Foulds, & Hope, 1967) was administered to 56 prisoners in the PTC sample on admission and on discharge. Since the questionnaire comes closest to being a measure of negative relating, its scores were compared with those of

the PROQ3 in an attempt to explore whether significant improvements also occurred on this measure. It has five subscales: AH (urge to act out hostility), CO (criticism of others), PH (projected delusional or paranoid hostility), SC (self criticism), and DG (delusional guilt). There are also scales measuring outwardly directed and inwardly directed hostility.

Procedure

Since January 1999, the longer questionnaire, the PROQ2, has been routinely administered to potential patients at the MSU. From an early stage, it was also administered at three, nine, 15, 21, and 24 months after admission, and at yearly follow-ups. Even though the shorter PROQ3 became available in 2001, for the sake of consistency the longer PROQ2 has continued to be used in the MSU. Since 2001 the PROQ3 has been routinely administered in a number of prison therapeutic communities, but, apart from a comparison sample that will briefly be referred to, all of the data for the present study were from the same therapeutic community. Here it was planned to administer it on admission, at the end of nine months, and at the end of 18 months. Incidentally, for a proportion of the prisoners, the HDHQ was also administered on admission and at discharge.

When comparing patients with general population-based non-patients, all patients were included in the comparisons. When comparing patients at assessment and at different stages of therapy, the patients not admitted and the patients who were prematurely discharged were not included in the comparisons.

Analyses

Mean scores and standard deviations were calculated for all samples and at all stages. Independent-samples *t* tests were used to compare PROQ scores between samples and paired-samples *t* tests were used to compare PROQ scores of the samples at different times. *T* values were reported for all comparisons, as were 95% confidence intervals based on Gaussian theory. Reliable change analysis (Jacobson & Truax, 1991) was used to assess changes in both PROQ2 and PROQ3 scores over time. All calculations were made using SPSS version 12.

Results

Medium secure unit

The mean PROQ2 scores of the 81 patients who were admitted to the unit and the 45 who were not were compared. There was no significant difference between the groups on any of the scales.

Table 1. Mean PROQ2 scores for the sample assessed for the MSU ($n = 126$) and a male general population sample ($n = 50$; from Birtchnell & Evans, 2004).

	UN	UC	NC	LC	LN	LD	ND	UD	Total
MS unit	14.3	15.8	12.9	17.4	13.7	12.9	19.3	14.3	120.7
SD	8.2	8.2	8.3	8.8	7.8	7.8	7.3	8.2	38.3
Male	14.5	18.3	10.3	10.3	12.2	9.9	12.2	10.7	98.5
population									
SD	5.2	7.0	6.4	7.6	6.0	6.4	5.5	5.5	28.4
95% CI	-2.2-1.8	-4.9-0.1	0.3-4.9	4.5-9.7	-0.6-3.7	0.8-5.3	5.1-9.1	1.5-5.6	11.8-32.5
t	0.20	2.03	2.25	5.30	1.38	2.65	7.01	3.33	4.21
p	.840	.046	.026	.000	.170	.009	.000	.001	.000

The mean PROQ2 scores at the time of pre-admission assessment of the patients who were discharged before the end of therapy were compared with the mean scores of those who completed the course. The ones who completed the course had a significantly higher mean LN score (17.1, *SD* 6.9, compared with 13.4, *SD* 7.9; $t = 2.17, p = .033$.)

The mean PROQ2 scores for the entire MSU sample and for a male general population sample (from Birtchnell & Evans, 2004) are shown in Table 1. The patients had a significantly higher total mean score and they scored significantly higher on six out of the eight scales (UC, NC, LC, LD, ND, and UD).

Table 2 shows the mean PROQ2 scores of 61 patients in the MSU at the pre-admission assessment stage and at three months after admission. Even after the relatively short period of three months in the unit, the patients' mean scores had improved significantly on four scales (LC, LN, LD, and ND) and on the total score. Three of the scales on which the mean scores had improved significantly were scales on which the patients had higher mean scores than the male general population sample. The reliable change index was used to measure changes in PROQ2 scores over time. At the end of the three months, using each patient's total score as the criterion, 18.0% showed reliable improvement (indicated by a total score which decreased by 49 or more), 80.3% showed no reliable change, and 1.6% showed deterioration (indicated by a total score which increased by 49 or more). The reliably improved patients showed significant improvements on all the scales.

For the relatively small number (38) who were tested at both three months and nine months, the mean scores were lower at nine months (e.g., the total score had improved from 109.4 to 102.3), but the difference was not significant. A test of statistical power indicated that this was not a consequence of the small sample size.

Table 3 shows the mean PROQ2 scores of 36 patients at the pre-admission assessment stage and at nine months after admission. The mean improvements remain the same as at three months, and although the sample size was smaller the level of significance was comparable.

Prison therapeutic community

The mean scores on admission of the prisoners who were returned to their prison of origin as being unsuitable for treatment were compared with those who stayed the full 18 months. The prisoners who were returned early had significantly lower LD scores (5.0, *SD* 3.0, compared with 6.3, *SD* 4.0; $t = -3.02, p = .003$) and significantly higher UD scores (8.1, *SD* 4.2, compared with 7.0, *SD* 4.4; $t = 2.04, p = .043$).

The mean scores for the entire PTC PROQ3 sample and for a male PROQ3 general population sample (from Birtchnell et al., submitted) are shown in Table 4. The prisoners had a significantly lower mean score

Table 2. MSU mean PROQ2 scores pre-admission and at three months post-admission ($n = 61$).

	UN	UC	NC	LC	LN	LD	ND	UD	Total
Pre-admission	14.8	15.9	13.2	18.0	14.1	13.3	20.1	14.0	123.5
SD	8.0	8.3	8.9	8.7	8.0	7.8	6.8	8.3	34.9
Three months	13.2	15.6	11.4	14.4	12.0	10.4	17.0	13.5	107.6
SD	7.1	7.3	8.2	7.4	6.8	7.3	6.5	7.0	31.0
95% CI	-0.2-3.4	-1.9-2.5	-0.2-3.7	1.9-5.3	0.4-3.9	1.4-4.3	1.4-4.6	-0.9-2.0	7.9-23.9
<i>t</i>	1.77	0.25	1.80	4.25	2.46	3.95	3.78	0.76	3.99
<i>p</i>	.083	.804	.077	.000	.017	.000	.000	.449	.000

Table 3. MSU mean PROQ2 scores pre-admission and at nine months post-admission ($n = 36$).

	UN	UC	NC	LC	LN	LD	ND	UD	Total
Pre-admission	14.3	16.4	14.2	18.2	14.8	13.8	19.4	13.4	124.5
<i>SD</i>	7.9	9.0	9.3	8.4	7.5	7.3	7.0	8.2	33.7
Nine months	12.1	15.3	12.5	13.9	12.3	10.2	14.4	11.0	102.3
<i>SD</i>	6.8	6.5	8.9	8.9	7.5	6.7	7.1	6.4	34.3
95% CI	-0.9-4.2	-1.8-3.9	-1.9-4.3	1.2-7.3	0.2-5.0	1.6-6.5	2.2-7.9	-1.0-4.1	7.3-34.5
<i>t</i>	1.29	0.74	0.75	2.85	2.16	3.39	3.61	1.26	3.12
<i>p</i>	.206	.465	.457	.007	.038	.002	.001	.216	.004

Table 4. Mean PROQ3 scores for the entire PTC sample ($n = 410$) and a male general population sample ($n = 59$; Birtchnell et al., submitted).

	UN	UC	NC	LC	LN	LD	ND	UD	Total
PTC	5.8	4.6	4.7	7.7	5.8	5.7	8.6	7.3	50.2
SD	4.0	4.2	4.1	4.3	3.7	3.7	4.0	4.3	19.9
Male population	9.3	4.1	3.8	5.7	4.8	4.9	6.9	7.1	46.5
SD	3.3	3.6	3.4	3.9	3.7	3.1	3.7	3.4	16.6
95% CI	-4.6--2.4	-0.5-1.5	-0.2-2.0	0.8-3.2	-0.0-2.0	-0.2-1.8	0.6-2.8	-0.9-1.3	-1.6-9.0
t	6.41	0.87	1.61	3.38	1.94	1.58	3.08	0.41	1.36
p	.000	.385	.108	.001	.053	.114	.002	.685	.174

on UN and a significantly higher mean score on LC and ND, but there was no significant difference between the two samples on the total mean score.

The mean PROQ3 scores of the PTC sample were compared with those of a different male prison therapeutic community ($n = 234$). The mean scores of the second sample were significantly lower than those of the present sample on five scales (UC, NC, LC, LN, and UD) and on the total score. Compared with the general population sample, they too had a significantly lower mean score on UN ($t = 5.34, p < .000$) and a significantly higher mean score on ND ($t = 2.96, p < .003$).

Table 5 shows the mean PROQ3 scores of 172 prisoners (130 tested on all three occasions plus 42 tested on only the first two) in the prison therapeutic community on admission to the assessment unit and at nine months after admission. After nine months the prisoners' scores had improved significantly on seven out of the eight scales and on the total score. The one scale on which there was no significant improvement (UN) was one on which the prisoners had not had a higher mean score than the general population sample; thus there were four scales (UC, NC, LD, and UD) and the total score on which there was a significant improvement even though their mean scores had not been significantly higher than those of the general population sample.

Table 6 shows the mean PROQ3 scores of the 130 prisoners who were tested at both nine months and 18 months. There were further significant improvements on three scales (UC, LC, and LN) and on the total score ($p = .01$). Thus, although most improvement occurred during the first nine-month period, further improvement did occur during the second nine-month period.

Table 7 shows the mean PROQ3 scores of the 141 prisoners who were tested at both admission and at 18 months; that is, the 130 who were tested on all three occasions plus the 11 who were tested only on admission and at 18 months. There were significant improvements on six scales. The two scales on which there was no significant improvement were UN and UD. The UN scale has shown no significant improvement in any of the comparisons, but the UD scale had shown significant improvement over the first nine months. Using the reliable change index, it was found that at the end of the 18 months, using each prisoner's total score as the criterion, 22.0% showed reliable improvement (indicated by a total score that decreased by 27 or more), 76.6% showed no reliable change, and 1.4% showed deterioration (indicated by a total score that increased by 27 or more). The 31 reliably improved prisoners showed significant improvements on all the scales. These reliably improved prisoners had also shown significant improvements on all the scales after nine months.

The 56 prisoners who had completed the HDHQ on admission and at discharge showed significant improvements on all its scales and on the total score. The reliable change index was used to measure changes in HDHQ scores over time. Using each prisoner's total score as the criterion, 41.0%

Table 5. PTC mean PROQ3 scores on admission and nine months post-admission. N = 172.

	UN	UC	NC	LC	LN	LD	ND	UD	Total
Admission	5.9	4.6	4.8	8.1	5.8	6.3	8.6	7.4	51.7
SD	4.1	4.2	4.3	4.5	3.7	3.9	3.9	4.6	20.08
Nine months	5.8	3.0	3.7	6.7	4.9	5.2	7.2	6.5	42.9
SD	3.6	3.8	3.8	4.4	3.5	3.2	4.0	3.6	19.1
95% CI	-0.4-0.7	1.0-2.2	0.6-1.7	0.8-2.1	0.4-1.5	0.5-1.6	0.8-2.0	0.3-1.5	5.8-11.6
t	.47	5.23	4.04	4.34	3.48	3.65	4.45	2.94	5.93
p	.640	.000	.000	.000	.001	.000	.000	.004	.000

Table 6. PTC mean PROQ3 scores at nine months and at 18 months ($n = 130$).

	UN	UC	NC	LC	LN	LD	ND	UD	Total
Nine months	5.8	3.2	3.7	6.6	4.8	5.2	6.9	6.4	42.6
<i>SD</i>	3.7	3.9	3.8	4.5	3.4	3.2	3.9	3.7	19.4
18 months	5.7	2.6	3.4	5.5	4.1	5.1	6.6	6.5	38.8
<i>D</i>	3.5	3.4	3.5	3.7	3.3	3.3	9.0	3.4	18.0
95% CI	-0.4-0.7	0.1-1.2	-0.3-0.9	0.4-1.7	0.1-1.3	-0.5-0.7	-1.2-1.7	-0.6-0.4	0.9-6.6
<i>t</i>	0.44	2.16	1.03	3.16	2.38	0.36	0.36	0.44	2.63
<i>p</i>	.663	.033	.307	.002	.019	.723	.715	.663	.010

Table 7. PTC mean PROQ3 scores on admission and at 18 months ($n = 141$).

	UN	UC	NC	LC	LN	LD	ND	UD	Total
Admission	5.7	4.8	5.0	8.0	5.8	6.3	8.5	7.0	51.2
SD	4.2	4.2	4.2	4.4	3.7	4.0	3.9	4.4	20.3
18 months	5.7	2.7	3.4	5.7	4.2	5.1	6.7	6.5	39.6
SD	3.6	3.5	3.5	3.8	3.5	3.3	8.8	3.4	18.4
95% CI	-0.6-0.7	1.4-2.8	0.9-2.1	1.6-3.1	0.5-1.9	0.5-1.9	0.4-3.2	-0.1-1.1	8.3-14.9
t	0.173	6.20	4.79	6.46	4.62	3.45	2.49	1.57	6.93
p	.863	.000	.000	.000	.000	.001	.014	.118	.000

showed reliable improvement (indicated by a total score that decreased by 11 or more), 57.1% showed no reliable change, and 1.8% showed deterioration (indicated by a total score that increased by 11 or more).

Discussion

This research shows that forensic men tend to have higher mean PROQ scores than men from the general population. The difference between the forensic men and the general population men was much more marked for the MSU sample, using the PROQ2, than for the PTC sample, using the PROQ3. An earlier study (Birtchnell & Shine, 2000) used the PROQ2 to assess a different sample from the same therapeutic community, and the mean scores from that sample were also consistently lower than those from the present MSU sample (total score = 110.1, *SD* 33.7, compared with 119.6, *SD* 39.2), so it is reasonable to conclude that the MSU sample were the more deviant. This may be due to a more rigorous selection process.

In both the present samples the forensic scores were significantly higher than the general population scores on LC and ND; these two scales appear to differentiate most clearly between forensic and non-forensic men. In the Birtchnell and Shine study (2000), the LC scale showed significant correlations with all 10 PDQ-4 scales (Hyler, 1994), and the ND scale showed significant correlations with the schizoid, paranoid, schizotypal borderline, and avoidant scales. The LC scales of both the PROQ2 and the PROQ3 have also been shown to differentiate clearly between psychotherapy patients and general population samples. It is noteworthy that the mean PROQ3 scores of the second therapeutic community sample were lower than those of the first (Table 4), and that when those in the second PTC sample were compared with the general population sample, only the ND scale was found to be significantly higher. Clearly different PTCs have different admission policies, and the second PTC is known to have a different policy.

For both the PTC samples the mean UN score was significantly lower than that in the male general population sample. This would appear to be a feature of the PROQ3; a similar difference was found when a psychotherapy sample was compared with a general population sample (Birtchnell et al., submitted).

Forensic men appear not to score as highly as men attending clinical psychotherapy departments. The mean total PROQ3 score for male psychotherapy patients ($n = 69$) was 58.5 (*SD* 16.5) (previously unpublished data), compared with 50.2 (*SD* 19.9) and 46.1 (*SD* 19.5) for the two PTC samples. A similar difference between forensic men and men seeking psychotherapy was observed in the Birtchnell and Shine (2000) study using the PROQ2. This is not entirely unexpected, since those with a criminal history do not necessarily have the kinds of inter-personal problems of men who seek psychotherapy – or perhaps they are less aware of them. Also, it

has been reported that prison populations are more inclined than clinical populations to underreport their psychopathology (Lees, Evans, Freestone, & Manning, 2006).

A notable feature of the two centres in the study is the high proportion of men who were discharged before the end of therapy. This would have been for a variety of reasons, the most likely being non-compliance. In the MSU the only difference between those who were returned and those who were not was that those who were not scored higher on LN. In the PTC, those who were not scored higher on LD and lower on UD. Lower scales would be more associated with compliance, and UD would be more associated with stubbornness and an antisocial personality (Birtchnell & Shine, 2000).

In the MSU sample, there was a marked improvement in PROQ2 scores after only three months (Table 2). The improvement was highly significant on LC, LN, LD, the ND, plus the total score, but not at all on the remaining four scales. There was a comparable, though more extensive, improvement (covering seven out of the eight scales plus the total score) in the PTC sample between the time of admission and after nine months of treatment (Table 5). It is difficult to compare these two results because the men in the MSU were not tested on admission, and the PTC men were not tested either at the time of assessment or after three months, so there is no way of telling how soon after admission the improvement for the PTC men had occurred.

In the MSU in particular, it is surprising that the improvement was so marked so quickly. PROQ scores are not that easy to change. A study of psychotherapy patients has shown that high PROQ2 scores did not improve significantly over a nine-month waiting period, and that patients' scores sometimes did not improve even after several months of therapy (Birtchnell, 2002b). It could be argued that the improvement was simply the effect of the men moving from a stressful prison environment to more sympathetic surroundings. On the other hand, anecdotal evidence suggests that patients sometimes find a therapeutic community more stressful than prison. There was evidence in both therapy settings that the improvement was sustained subsequently. Perhaps it was a consequence of the careful selection of patients for therapy and the prompt removal of patients who appeared not to be responding to therapy. Similar improvements in scores have been recorded for samples of psychotherapy outpatients, using both the PROQ2 (Birtchnell, 2002b) and the PROQ3 (Birtchnell et al., submitted). Here the timing was different again, for the patients were tested at the start and at the end of therapy and the therapy lasted for variable periods.

It is important to acknowledge that not all prisoners start with the same admission score. Of the 130 PTC men who were tested at all three time points, 43 had a total admission score below 40. Since the mean total score

for the male general population sample is 46.5, this could be regarded as a modest score. Those prisoners with this low admission score tended to remain low scorers, and only eight of them ever reached a total score of over 40 – although one did go from 28 to 73. Should it be concluded from this that these men did not need to be in a therapeutic community? If they did, how would it be possible to measure their improvement? As was the case with the MSU sample, there might be a case for including the PROQ3 as part of the selection procedure for the PTC, and for offering admission only to men who had a total PROQ3 score of over 40. On the other hand, PROQ3 score is not the only criterion indicating a need for treatment, and these men might have scored higher on a different measure.

At the other end of the spectrum, 42 of the PTC men had a total admission score of over 60. This is way above the mean total score for the prisoners (50.2, *SD* 19.9). These men tended not to stay at this high level; only 10 never dropped below 60. Of course, it is necessary to start with a high score in order to make a major improvement in scores. The mean total score at admission of the reliably improved prisoners was 70.1 (*SD* 16.9). That of the reliably improved MSU patients was 154.3 (*SD* 17.3), compared with 120.7 (*SD* 38.3) for the entire sample (remember that the maximum total score for the PROQ2 is twice that for the PROQ3). Thus, prisoners with very high scores on admission are capable of considerable improvement, although there remained a nucleus of high scorers who appeared to be resistant to the therapy offered in these settings. It would have been useful to determine the extent to which the changes recorded with the PROQ corresponded with changes recorded with other measures. Unfortunately, in neither of the two therapy centres was it possible to administer a battery of tests over the same test periods. However, in the PTC unit, the HDHQ findings on 56 of the prisoners did confirm that significant improvement, at least within the parameters of the test, was possible.

It was particularly striking that, even though the mean scores of the PTC sample were not greatly different from those of a general population sample (showing significantly higher mean scores on only two of the eight scales), at the end of the first nine months the prisoners had registered improvements on seven of the eight scales, with a mean total score lower even than that of the general population sample. Further improvements were registered over the subsequent nine-month period, with significant improvements on three scales, and the total score now substantially less than that of the general population sample. Detailed examination of individual prisoners indicated that while many showed the greater improvement over the first nine months, others showed a steady improvement throughout the entire 18 months and a proportion showed the greater improvement over the second nine months. This points to the desirability of keeping prisoners for the full 18 months. In fact, Shuker and Newton (in press) recently observed that while mental health scores improve relatively early in treatment, significant improvement

on criminogenic risk-related scales occurs only in those prisoners who stay for a year or more.

Acknowledgements

We would like to thank Lauren Mason, Nedra Pereira, Andrew Downie, Lesley Jones, and Patrick Mandikate for their help in data collection and Alan Miller for supplying the PROQ3 data from another PTC.

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