Relationship between Therapeutic Climate and Treatment Outcome in Group-based Sexual Offender Treatment Programs

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Abstract

The aim of the study was to examine the relationship between therapeutic climate and the effectiveness of CBT treatment for sexual offenders in U.K. prisons. To this end a measure of group atmosphere was administered to members and leaders of 12 treatment groups running the same prison-based sexual offender treatment program. Treatment outcome was measured using a case-by-case methodology - clinically significant change analysis – to identify the percentage of individuals within each group who had significantly changed on measures of pro-offending attitudes targeted in treatment. The results of the group process measure indicated leaders generally viewed groups more positively than members. Clear differences were also found between groups (ostensibly running the same treatment program) in terms of group climate. Analysis of members’ process data indicated that there was a clear relationship between how cohesive the members reported the group to be and the extent to which freedom of action and expressions of feelings were encouraged in groups, as well as treatment outcome as measured by significant reductions in pro-offending attitudes. These results are discussed in terms of what they say about attitudes and goals of those involved in running treatment and how the effectiveness of treatment programs can be maximized.

KEY WORDS: Group process; group climate, sexual offenders, treatment outcome, clinically significant change.
INTRODUCTION

There have been a number of recently reported studies that have demonstrated effectiveness of cognitive-behavioral group-based treatment for sexual offenders (Friendship, Mann & Beech, 2003; Hanson et al., 2002). However, despite the positive results of group-based CBT, Marshall et al., (2003) note that there is relatively little research investigating the role of therapeutic style and group processes. Therefore, while treatment style has been an important empirical issue in the general psychotherapy literature it has generally not been addressed in sexual offender treatment (Beech & Mann, 2002; Houston, Wrench & Hosking, 1995). Further, when treatment style has been described, therapists have generally emphasized the importance of confrontation over co-operation (see Salter, 1988). However, more recently, professionals have begun to question the validity of this approach (Beech & Mann, 2002; Marshall Anderson & Fernandez, 1999), in a similar manner to the change that occurred some years ago in treatment approaches to addiction (e.g., Miller & Rollnick, 1991).

It is now generally recognized that direct, confrontational approaches to the treatment of sexual offenders will be likely to lead to increased resistance as opposed to change (Kear-Colwell & Pollack, 1997). In contrast, respect, support, confidence, emotional responsivity, self-disclosure, open-ended questioning, flexibility, positive reinforcement and the use of humor are indicated (Marshall et al., 2003), and have been linked to group participation, improved perspective-taking, coping skills, taking responsibility and accepting future risk (Fernandez, 1999). A study within UK prisons (Thornton, Mann & Williams, 2000) found reductions in levels of denial and minimization and levels of pro-offending attitudes (i.e., rape myths and child offence supportive beliefs) in both of two groups. These two groups were exposed to either a) warm and supportive therapists, or b) hostile questioning. However, reductions in less directly targeted areas such as entitlement thinking, distrust of women, subjective personal distress, and impulsiveness were found only in those men who had been treated by ‘warm’ therapists.

In terms of the relationship between therapeutic style and group processes, many authors emphasize the importance of leadership in producing cohesiveness, appropriate group norms and the instillation of hope for the future as these are of particular importance in running effective groups and inculcating change in group members (Belfer & Levendusky, 1985; Yalom, 1975). Therefore, in early sessions the leaders’ most useful intervention may be to facilitate active
involvement and participation by all members (Nichols & Taylor, 1975). For example, in a study of six therapeutic community groups in Norway, Karterud (1988) found that leaders in the highest functioning group were more supportive and less aggressive. In the less effective groups a number of serious problems were observed in leadership style. In these problematic groups therapists did not support interaction between group members and often resorted to an aggressive confrontational style.

Thus, it would seem to be appropriate to utilize these approaches with sexual offenders, where resistance to change might be expected to be high. Development of a cohesive group leads to higher engagement (Yalom, 1975), an environment conducive to disclosure (Clark & Erooga, 1994) through feelings of maintaining confidentiality, and development of hope that their situation can change (Couch & Childers, 1987). In support of this, Sawyer (2000) indicates that the relationships and level of support within a group for sexual offenders are instrumental in developing it as a rich therapeutic experience for the offender.

Beech and Fordham (1997) reported one of the few studies that have attempted to identify the effect of process on treatment change. They used the Group Environment Scale (GES, Moos, 1986) which measures the following aspects of group processes: relationships within the group, personal growth of members, and structure of the group. The GES was administered to members and leaders of a number of probation-based sexual offender treatment groups in the U.K. Results suggested there was a relationship between the atmosphere of a group and treatment change. Beech and Fordham found that a group producing the most effective changes in men had a GES profile that was cohesive, well-organized and well-led, encouraged the open expression of feelings, produced a sense of group responsibility and instilled a sense of hope in members. It appeared that over-controlling leaders had a detrimental effect upon group climate. This is consistent with discussions of Yalom (1975), and Belfer and Levendusky (1985). However, in the Beech and Fordham (1997) study, there were a number of different groups providing group treatment in number of different ways. It is therefore necessary to investigate group processes where a consistent package of treatment is provided.

In the U.K., the Prison Service of England and Wales introduced the Sex Offender Treatment Program (SOTP) in 1991 (Mann & Thornton, 1998) which is currently run in 26 prisons. The research reported here was part of an examination of the response to treatment of child abusers finishing the SOTP (see Beech, Fisher & Beckett, 1999 for more details).
Treatment change was measured by whether an individual moved on measures of pro-offending attitudes to a level that was indistinguishable from non-offenders.

It was hypothesized that group climate would have an effect upon the level of treatment change across groups. Although no specific hypothesis was formulated, the authors were also interested in which aspects of group process, measured by the GES, had the clearest relationship with treatment outcome.

METHOD

Procedure

A measure of group atmosphere was completed by both the group leaders and the group members of 12 sexual offender treatment groups at six different medium security prisons in the UK. These groups took place in specialized sexual offender units. Pre- and post-intervention measures were also taken to assess treatment-induced change in pro-offending attitudes. The GES was administered to all groups one month before the end of treatment in order that a mature group could be measured.

Sample description

The sample consisted of both members (volunteers for the programs) and leaders of the 12 groups. The member sample consisted of 100 men who had been convicted of serious sexual offences. In terms of the breakdown of this sample by offence(s) committed: 82 men had committed offences against children (mean age: 43.7 years, SD = 11.3); 14 men had committed offences exclusively against adults (mean age: 34 years, SD = 8.6); and four men had committed offences against both adults and children (mean age: 28.8 years, SD = 7.8). The average length of sentence for the total sample was 4.9 years (SD = 2.2). Despite the fact that all participants were guaranteed anonymity, not all of the sample completed the GES measure; in total 88 members completed the measure and 12 refused.

Group description
At the time of the research there was a changeover from the original 80 hour SOTP group format to a group program of 160 hours of treatment (Beech et al., 1999). Table 1 shows the number of clients and therapists, whether the original or the revised program was delivered (6 groups completed each), the average number of hours per group and number of each category of offender on each group. As can be seen from Table 1 the revised group comprised of roughly twice as many treatment hours as the original core programme.

Table 1 about here

Measures

The Group Environment Scale (GES; Moos, 1986). This instrument was used to measure group processes in the 12 groups examined. The GES contains a number of scales that describe and compare the climate of different groups. There are 10 sub-scales in the GES:

1. **Cohesion scale** measures the member's group involvement, commitment to the group, and concern and friendship they show for each other;
2. **Leader Support scale** measures the help and friendship shown by group leaders;
3. **Expressiveness scale** measures the extent to which freedom of action and expressions of feelings are encouraged in the group;
4. **Independence scale** measures the encouragement of independent action and expression;
5. **Task Orientation scale** assesses the emphasis placed on practical tasks and decision making in the group;
6. **Self-discovery scale** assesses the extent to which the group encourages members to reveal and discuss personal information;
7. **Anger and Aggression scale** measures the tolerance of open expression of negative feelings and inter-member disagreement;
8. **Order and Organization scale** measures the structure of the group and the explicitness of its rules;
9. **Leader Control scale** measures leader direction and enforcement of the rules;
10. **Innovation scale** measures leaders’ encouragement of change during group activities. Each of these scales has been standardized based on a large number of groups enabling interpretation of group profiles. The scales assess the following dimensions of group atmosphere: relationships within the group (Scales 1 to 3); personal growth of group members (Scales 4 to 7); and system maintenance and system change (Scales 8 to 10).

The following scales were used to measure changes in pro-offending attitudes:

**Victim Empathy Distortions Scale** (Beckett & Fisher, 1994). This questionnaire measures an offender’s understanding of the effect his abuse has had on his own victim(s) and how the victim(s) felt about such sexual contact. Beech (1998) reported the internal reliability of this scale to be high (Cronbach’s alpha = .89) in 140 untreated child molesters and the test-retest reliability to be $r = .95$ in 46 untreated child molesters.

**Cognitive Distortions Scale** (from the Children and Sex Questionnaire, Beckett, 1987). This scale was designed to measure the extent to which abusers portray their victims as in some way responsible for encouraging or initiating sexual contact. Thornton (personal communication, November 1993) reported the internal consistency to be alpha = .90 in a sample of 270 child molesters. Beech (1998) found the test-retest reliability to be $r = .77$ in 45 untreated child molesters.

**Emotional Identification with Children** (from the Children and Sex Questionnaire, Beckett, 1987). This scale measures the emotional significance of children to the offender. Thornton (personal communication, November 1993) reported the internal reliability to be alpha = .90 in a sample of 270 child molesters. Beech (1998) reported the test-retest reliability to be $r = .63$ in 45 untreated child molesters.

Measuring treatment change

Treatment impact was assessed by looking at whether child abusers in the sample had shifted significantly in their attitudes following treatment on the three measures described above. The methodology used here is termed “clinically significant change” (Hansen & Lambert, 1996). Responses are examined at an individual level to ascertain whether someone has moved from a score more likely to be found in a dysfunctional distribution of scores (e.g., child abuser
attitudes) to a score more likely to be found in a functional distribution of responding (non-child abuser attitudes).

This methodology was chosen as it is a standard method used in a number of other areas to assess the impact of therapy (Kazdin, 2003) and has an extensive literature on its implementation (Tingey, Lambert, Burlongame & Hansen, 1996). There are a number of systems to assess individual change (see Kendall, 1999), however the method used here is that described by Jacobson and his colleagues (Jacobson, Follette & Revenstorf, 1984; Jacobson & Traux, 1991). Jacobson suggests that in order to assess significant change, two things need to be evaluated: (a) the cut-off point between normal and dysfunctional responding on a particular measure of interest, and (b) whether that change is statistically reliable. The cut-off between dysfunctional and functional responding is assessed as follows in the Jacobson system:

\[
\text{cut-off} = \frac{(SD_1)(\text{MEAN}_2^2) + (SD_2)(\text{MEAN}_1^1)}{SD_1 + SD_2}
\]

Where \(\text{MEAN}_1^1\) and \(SD_1\) are the mean and the standard deviation of functional group s (i.e., non-offenders) and \(\text{MEAN}_2^2\) and \(SD_2\) are the mean and the standard deviations of a dysfunctional group (i.e., child abusers).

The Reliability of Change Index (RC) has been described by Jacobson et al. (1984) as:

\[
\text{RC} = \frac{(\text{post-treatment}) - (\text{pre-treatment})}{S_E}
\]

Here any pre-post change is significant at \(p < .05\) if RC is greater than 1.96.

The method of calculating \(S_E\) is as follows:

\[
S_E = SD_x \sqrt{(1 - r_{xx})} \quad \{\text{where } r_{xx} = \text{the test-retest reliability of the measure and } SD_x \text{ is the pre-treatment standard deviation for the measure in the offender sample}\}
\]
In the analysis of treatment change only the first part of the clinical change methodology was used (i.e., whether at post-treatment the scores of the child abusers in the sample were within the cut-off for a particular measure so that their scores were indistinguishable from non-offenders). The second part of the clinical change analysis was not used as it assumes that an individual will show significant change in treatment. Some men in sexual offender treatment do not have the level of deficits, in these areas necessary to demonstrate the required level of change. Therefore, for the purpose of this analysis, treatment was assumed to be effective if the post-treatment scores were within the normative range after treatment without regard to what they were prior to treatment.

RESULTS

Here, in the Results section it should be noted that despite the number of statistical tests this was in essence an exploratory study of the relationship between group process and treatment outcome.

Group process data analysis

An overall MANOVA was initially carried out on the data. This consisted of using two grouping variables (Member/Leader and Treatment Group) and the 10 GES scales as multiple dependent variables. Significant main effects were found in the Member/Leader factor and the Group factor. No significant interaction was found between these factors.
Comparison between members and leaders. A highly significant difference was found in the Member/Leader variable, $F(10,90) = 3.6, p < .001$ indicating that members and leaders perceived the group differently. Univariate F-tests within the MANOVA showed significant differences on three of the sub-scales: Independence, $F(1,99) = 5.7, p < .05$; Leader Control, $F(1,99) = 8.7, p < .01$; and Order and Organization, $F(1,99) = 7.4, p < .01$. Examination of the mean scores of members and leaders on these scales suggests that the leaders saw: a) themselves as more controlling than did the members (leaders: 6.8 (SD = 1.6), members: 5.9 (SD = 2.0)); b) the groups as better organized than did members (leaders: 6.77 (SD = 1.6), members: 5.9 (SD = 2.0)); and c) themselves as promoting more independent activity in members than members did (leaders: 6.6 (SD = 1.4), members: 5.9 (SD = 1.6).

Differences between treatment groups. There was a significant effect in the Treatment Group variable, $F(110,990) = 2.0, p < .0001$, indicating that the climate was different across groups. Univariate F-tests within the MANOVA showed that this effect was due to significant differences on eight scales: Anger and Aggression, $F(11,99) = 3.4, p < .001$; Cohesion, $F(11,99) = 2.5, p < .01$; Expressiveness, $F(11,99) = 2.7, p < .01$; Innovation, $F(11,99) = 2.1, p < .05$; Leader Control, $F(11,99) = 4.1, p < .0001$; Leader Support, $F(11,99) = 3.3, p < .01$; Self Disclosure, $F(11,99) = 3.0, p < .01$; and Task Orientation, $F(11,99) = 2.2, p < .05$. The only scales where no significant differences were found were Independence, and Order and Organization. Interestingly these are both system maintenance/system change dimensions suggesting that these are very tightly structured groups that do not vary on this dimension.

Members’ perceptions of groups. As there were significant overall differences between the scores of members and leaders, further analyses were carried out on the members’ data ($N = 88$) only, since presumably it is their views that influence change. Initial analysis consisted of employing a MANOVA with one grouping variable (Treatment Group) and using the 10 GES scales as multiple dependent variables. A significant main effect was found in the Treatment Group variable, $F(110,760) = 2.03, p < .0001$, indicating that climate ratings of members varied across the groups. Univariate F-tests, within the MANOVA, found significant differences on eight of the scales: Cohesion, $F(11,76) = 3.7, p < .0001$; Leader Support, $F(11,76) = 3.0, p < .001$; Expressiveness, $F(11,76) = 3.2, p < .001$; Task Orientation, $F(11,76) = 2.0, p < .05$; Self Discovery, $F(11,76) = 3.8, p < .0001$; Anger and Aggression, $F(11,76) = 5.8, p < .0001$; Order and Organization, $F(11,76) = 2.4, p < .0001$; Leader Control, $F(11,76) = 6.5, p < .0001$; and
Innovation, F(11,76) = 3.2, p < .001. Standardized scores for all of the significant GES subscales by group are shown in Table 2.

Table 2 about here

Treatment impact analysis

Here a simple analysis was carried out on the scores generated by the child abusers (n=76) on the three pro-offending attitude measures (i.e., Victim Empathy Distortions, Cognitive Distortions; Emotional Identification with Children). Offenders were deemed to have been effectively treated if their scores on all three measures were within normative limits after treatment. Table 3 reports the number of child abusers in each of the groups and the number and percentage who showed significant change. Number of treatment hours and type of group (original/ revised) are also shown in Table 3.

Table 3 about here

It can be seen from Table 3 that treatment effectiveness varied considerably: for the original groups treatment efficacy ranged from 29% of the members in Group M to 80% in Groups C and L; for the revised groups treatment ranged from 56% in Group B to 75% in Groups A, F and H. In fact, no significant relationship was found between length of therapy and amount of treatment change.

Another potential variable that might have had an impact upon effectiveness of treatment with the child abusers sample was the presence of men in the group who were not child abusers. However, no relationship was found between the number of rapists in the group, or total number of non-child abusers, and treatment change.

Group climate and treatment effectiveness

In order to assess whether group process had an effect upon treatment outcome, correlation analyses were carried out between the variables identified as being significantly
different between the various groups and the treatment outcome data. The results of this analysis together with correlations between the various group process measures are shown in Table 4.

Table 4 about here

It can be seen from Table 4 that a significant relationship was found between treatment outcome and group cohesiveness \( (r = .65, p<0.05) \) and expressiveness \( (r = .65, p<0.05) \). These observations suggest that group involvement by members and their commitment, concern and friendship for each other, plus the extent to which freedom of action and expressions of feelings are encouraged within the group, are strongly related to treatment outcome. As might be expected a number of correlations were also found between most of the GES variables, although no other GES variables correlated with treatment change.

DISCUSSION

This study was concerned with the effect group climate would have upon the level of treatment change across groups and which aspects of group process had the clearest relationship with treatment outcome. Interestingly, no relationship was found between treatment length (80 versus 160 hours) or mix of sexual offenders within groups (i.e., adults only or both adults and children). As might be expected the results of the group process measure indicated leaders generally viewed groups more positively than members. Clear differences were also found between groups in terms of group climate, despite the fact that they are ostensibly running the same treatment program. This highlights the importance of interpersonal interactions within the group. Most notably, the findings indicate that Leader Support has a clear effect upon Cohesion and Expressiveness and the other positive group processes. In contrast, Leader Control was related only to Anger and Aggression. Overall, this suggests that overt or lack of leader control does not affect other group processes, but leader support does. The importance of a supportive leader is consistent with previous findings (e.g., Marshall et al., 2003; Thornton et al, 2000).

The data also indicate a clear relationship between how cohesive the members reported the group to be (Cohesion sub-scale), the extent to which freedom of action and expressions of feelings were encouraged in groups (Expressiveness sub-scale) and reductions in pro-offending
attitudes. The correlations between both the Cohesion and Expressiveness sub-scales and treatment effectiveness were at the $r = .65$ level, suggesting that these qualities account for over 40% of the variance in the effectiveness of treatment in the groups examined. Interestingly, this figure is not dissimilar to that quoted by Marshall et al. (2003) for quality of therapist alliance in general therapy. These results can also be considered to be quite robust, in that many potentially confounding variables, such as content of therapy and measurement of change were kept constant as essentially the same treatment program was run in the 12 groups examined in the study.

Having a cohesive group where there is involvement and commitment to the group as well as concern and friendship for each other appears to strongly relate to treatment efficacy. In such a highly cohesive group appropriate challenges by members of the group were carried out in an atmosphere where members felt supported rather than attacked. In these circumstances offenders appear more likely to accept what is said about their crimes than would be so in less cohesive groups. This is particularly important in engaging sexual offenders in assessment and treatment, given their reasons for engagement (e.g., aiming for parole) and generally poor motivation to change (Beech & Mann, 2002).
The finding that the encouragement of emotional expression facilitates treatment change is consistent with observations in the general psychotherapeutic literature (Klein, Mathieu-Coughlan & Kiesler, 1986; Orlinsky & Howard, 1986). Saunders (1999) not only demonstrated that the expression of feelings by clients determined the impact each treatment sessions had, he also found that such expressions were best facilitated by the emotional expressiveness of the therapist.

The activation of good group processes has to be therapist-led. However, as Beech and Mann (2002) note there has been little written about the qualities of an effective sexual offender therapist and even less about training. In terms of training, one difficulty arises from the varied background and skills different therapists present with. H.M. Prison Service does provide an assessment of competency and training for treatment providers (Beech & Mann, 2002). The features assessed include: warmth and empathy; impartiality; flexibility of style; questioning skills; maintenance of boundaries; participation and open coping style; and openness to feedback. Overall, the purpose of the training is to provide consistency across treatment groups (Beech & Mann, 2002). However, further research is needed to determine whether this group leader training is related to treatment outcome.
References


Sawyer, S. (2000). Some thoughts about why we believe group therapy is the preferred modality for treating sex offenders. ATSA Forum, 12, 11-12.


Table 1: Length of therapy and make-up of treatment groups (N=100)

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<th>Group</th>
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<th>Adult offenders n</th>
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Table 2: Standardised scores on the *eight* GES sub-scales where significant differences were found*

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<th>Group</th>
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<th>Task Orientation</th>
<th>Self Discovery</th>
<th>Anger &amp; Aggression</th>
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*Independence and innovation are excluded – no significant differences were found.*
Table 3: Percentage of child abusers showing significant change in the 12 groups (n=76)

<table>
<thead>
<tr>
<th>Group</th>
<th>Type</th>
<th>N. of child abusers in sample</th>
<th>N. showing clinical change</th>
<th>Percentage treatment change</th>
<th>Treatment hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
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<td>8</td>
<td>6</td>
<td>75</td>
<td>160</td>
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<tr>
<td>B</td>
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<td>5</td>
<td>56</td>
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<td>4</td>
<td>80</td>
<td>90</td>
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<tr>
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Table 4: Correlations between treatment change and the *eight* GES sub-scales where significant differences were found

<table>
<thead>
<tr>
<th>Group</th>
<th>Cohesion</th>
<th>Leader Support</th>
<th>Expressiveness</th>
<th>Task Orientation</th>
<th>Self Discovery</th>
<th>Anger &amp; Aggression</th>
<th>Order &amp; Organisation</th>
<th>Leader Control</th>
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<td>.65*</td>
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<td>-.36</td>
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</tr>
</tbody>
</table>

* p < .05  
** p < .01  
*** p < .001  

*Indepedence and innovation are excluded – no significant differences were found.