Predictors and treatment outcomes of perceived ward atmosphere among therapeutic community residents

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ABSTRACT

Poor retention has been an impediment to the effectiveness of therapeutic communities (TCs) for substance use disorders. We assessed the impact of the resident's perception of the therapeutic environment through the Ward Atmosphere Scale (WAS) on TC retention and examined predictors of the WAS in order to better understand this construct. Among a sample of admissions ($N = 123$) to a 9-month residential TC, forward entry logistic regression analyses using WAS, demographic and clinical variables revealed that heightened perceptions of the orderliness of the therapeutic environment (i.e., the WAS domain of system maintenance) best predicted treatment completion. Furthermore, scores on WAS variables were best explained by the formal therapeutic elements of the TC (as measured by the Survey of Essential Elements Questionnaire) using linear regression. Efforts to improve the resident's perception of these aspects of the ward atmosphere may assist in improving TC completion rates.

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1. Introduction

Originally developed to promote healthy socialization among psychiatric patients (Main, 1947), therapeutic communities (TCs) have been widely used as treatment programs for a variety of mental health problems, including substance abuse. While TCs vary in their duration, participant sub-population (e.g., military veterans, offenders, co-occurring disorders, personality disordered), and setting (e.g. prison-based, community-based), they are typically highly structured and intensive milieu-based programs (DeLeon, 2000). Among substance abuse treatment programs in particular, TCs emphasize the social environment as an important feature of recovery from drug use (DeLeon, 2000). Specifically, the key ingredients of community decision-making, individual responsibility, and recovered peer staff members are important influences to facilitate healing (Bratter, Bratter, Radda, & Steiner, 1993). More empirical research has extended this theoretical underpinning. Melnick and De Leon (1999) surveyed program directors of TCs and identified the essential elements of these programs. The authors developed a scale designed

to assess these core features, which has proven effective in differentiating traditional from modified TCs (Melnick, De Leon, Hiller, & Knight, 2000).

TCs have been found to be effective treatments for reducing substance abuse and criminal outcomes, however not significantly more than other treatment modalities (Prendergast, Podus, Chang, & Urada, 2002). Both length of time in treatment and treatment completion have been shown to be important predictors of longer term successful outcomes of TC programs (Condelli & Hubbard, 1994; Gossop, Marsden, Stewart, & Rolfe, 1999; Hubbard, Craddock, Rynn, Anderson, & Etheridge, 1997; Malivert, Fatseas, Denis, Langlois, & Auriacombe, 2012). Several studies have found that TC completion was significantly predicted by the absence of a personality disorder (Ravndal, Vaglum, & Lauritzen, 2005; Samuel, LaPaglia, Maccarelli, Moore, & Ball, 2011), older age, and being under some form of criminal justice supervision on admission (Messina, Wish, & Nemes, 1999). More positive perceptions of TC social processes (e.g., having a sense of community responsibility) during the first week of admission predicted first month retention. Improvement in these perceptions during the first month predicted retention at 3, 6 and 9 months (Mandell, Edelen, Wenzel, Dahl, & Ebener, 2008). More recently, research on the social networks of TCs has shown that residents who give more corrective feedback (i.e., "pull ups"), and reciprocate this feedback are more likely to graduate. Residents who receive more of this feedback, and who are more often the subject of reciprocal feedback, are less likely to graduate (Warren, Hiance, Doogan, De

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Leon, & Phillips, 2013). The perception of the therapeutic environment itself, or ward atmosphere, of TCs is an understudied area of research and will be assessed in the present investigation in terms of its person and environment predictors and its importance to treatment completion and retention.

The concept of the ward atmosphere, as articulated by Moos and Houts (1968), is the perception of the therapeutic environment as experienced in the interaction between characteristics of the individual and the social surroundings. This construct, as measured by the Ward Atmosphere Scale (WAS; Moos, 1974), has been shown to be sensitive to structural differences between psychiatric wards with different levels of security and coercion (Middelboe, Schjùdt, Byrsting, & Gjerris, 2001; Moos & Houts, 1968) as well as the use of consultation designed to improve patient–staff communication (Blumenthal, Ruszczynski, Richards, & Brown, 2011). Furthermore, the introduction of TC principles, such as inviting psychiatric inpatients to treatment planning sessions, resulted in increased perceptions of relationship quality and personal growth as assessed by the WAS (Hansen & Slevin, 1996).

Other environmental (e.g., the percentage of psychotic patients residing on the unit) and person (i.e., age) variables have been assessed in their relationship to several aspects of the ward atmosphere (Friis, 1986). In the largest study on this subject, Pedersen and Karterud (2007) assessed the predictive weight of a host of demographic variables including age, gender, educational status as well as psychological characteristics such as the presence of personality disorders and interpersonal problems. They found that none of the variables significantly predicted scores on a modified version of the WAS. These results were similar to those of Moos and Bromet (1978) who found no relationship between 18 patient background, social functioning and alcohol-related variables and WAS scores. To date, examinations of person variables which may account for perceptions of the therapeutic environment have been largely unsuccessful. However, given its sensitivity to situational variables, including level of medication coerciveness (Middelboe et al. 2001), it is possible that the level of criminal justice coercion experienced by residents will influence their perception of the ward atmosphere.

Apart from research utilizing the WAS as an outcome, several studies have investigated the utility of this measure for predicting objective treatment outcomes. Less favorable patient perceptions of the ward atmosphere have predicted higher dropout rates from mental health programs (Moos, 1974). Specifically, Moos (1973) reported VA psychiatric patients' perception of lower involvement, support, order and organization, and program clarity were associated with patient wards ranked higher in terms of dropout rates, with some suggestion of a moderating influence of ethnicity (Linn, Shane, Webb, & Pratt, 1979).

Melnick, Hawke, and Wexler (2004) reported on the psychometric properties of an instrument, termed the Multimodal Quality Assurance instrument (MQA; Melnick & Pearson, 2000), which was designed to evaluate participant perceptions of prison-based TC programs. The MQA assesses perceptions of the program climate (a construct describing a positive sense of community) and the activities of the program (e.g., use of TC, 12-step, and cognitive–behavioral therapy principles). Using a sample of 1,059 prison TC inmates, they found that higher levels of these characteristics of prison TC settings were related to better self-reported participation and satisfaction with the program. Similar results have been found in other research where positive evaluations of the ward atmosphere were related to greater patient (Jorgensen, Romma, & Rudmo, 2009) and staff satisfaction (Rossberg, Melle, Opjordsmoen, & Friis, 2008; Timko & Moos, 1998).

The ward atmosphere, therefore, has been a useful construct in predicting objective treatment outcomes (i.e., retention) within mental health settings, and it has also been useful in predicting subjective outcomes (i.e., client satisfaction and participation) within

substance abuse treatment programs. Only one study could be found which assessed the WAS with regard to objective treatment outcomes among substance abusers. McKellar, Kelly, Harris, and Moos (2006) found that lower perceived levels of staff support and higher perceived levels of staff control significantly predicted participant dropout from 28-day substance abuse rehabilitation facilities. In addition to these treatment perception variables the authors found that younger age, lower cognitive functioning, more drug use and lower severity of alcohol dependence significantly predicted dropout from treatment.

The results of McKellar et al. (2006) are important with regard to ward atmosphere conditions conducive to treatment completion. While it may be tempting to extend these results to other models of substance abuse treatment programs, the environment and course of treatment in TC substance abuse programs is longer and more intensive. Thus it is possible that greater perceived staff control provides a sense of unit stability which could predict greater retention over the long term. There is a need, therefore, for an investigation of ward atmosphere characteristics which predict retention among TC participants.

As mentioned previously, the use of coercive therapeutic interventions has resulted in psychiatric patient perceptions of a ward atmosphere with greater anger and aggression and less autonomy (Middelboe et al. 2001). This raises the question about the effect of other forms of coercion, such as criminal justice involvement, on patient perceptions of the ward environment. Thus, for this study we expect greater criminal justice system pressure to result in more unfavorable perceptions of ward relationship quality and greater perceptions of ward characteristics of orderliness and being controlled. It is further expected that, given the findings of Hansen and Slevin (1996), greater adherence to essential elements of the TC environment would result in more favorable perceptions of the ward atmosphere.

The present study aims were twofold: 1) to determine the relative importance of criminal justice coercion on resident perceptions of the ward atmosphere among long-term TC substance abuse residents. It was hypothesized that more serious legal problems, reflecting greater legal coercion, would predict less favorable perceptions of certain aspects of the ward atmosphere; 2) to evaluate the relative importance of the WAS to treatment completion and retention among residents of a long-term substance abuse TC facility. Prior research on TC completion has identified several relevant variables (including age, personality dysfunction, and psychiatric dysfunction) which were assessed in this study to determine their importance relative to the ward atmosphere.

2. Materials and Method

2.1. Participants

Study participants were 123 patients treated in a long-term residential TC in an urban area of the northeast United States. They were recruited as part of a clinical trial of a psychotherapeutic intervention and were randomly assigned to one of two adjunctive therapy conditions. A full description of the participants and outcomes was reported by Ball, Maccarelli, LaPaglia, and Ostrowski (2011). In summary, of the overall eligible sample approached in the clinical trial ($N = 164$), full baseline data were available on approximately 75% ($N = 123$) of participants, representing the sample utilized in the present study. In the clinical trial, 64% of eligible participants ($N = 105$) were ultimately randomized to treatment. Participants were excluded from randomization for a variety of reasons including that they left before the study was explained, lacked sufficient literacy, left before completing baseline measures, or refused due to study burden (Ball et al. 2011).