

12-Step Involvement and Peer Helping in Day Hospital and Residential Programs

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This study compares peer helping and 12-step involvement among participants receiving chemical dependency treatment at day hospital (N = 503) and residential (N = 230) programs, and examines relationships between both variables and outcomes. Findings show that residential (vs. day hospital) participants reported significantly more peer helping and 12-step involvement during treatment, and marginally more 12-step involvement at 6 months. Both peer helping and 12-step involvement predicted higher odds of sobriety across follow-ups; helping showed an indirect effect on sobriety via 12-step involvement. Results contribute to the 12-step facilitation literature; confirm prior results regarding benefits of mutual aid; and highlight methodological issues in helping research. The study's limitations are noted.

Keywords helping; mutual help; Alcoholics Anonymous (AA); 12-step groups; social model; peer helping

Introduction

A common lay perception is that the active component in treatment¹ for chemical dependency is delivered to clients by their professional therapists; relationships among clients are considered much less important. Historically, this perception has also been common among treatment professionals. However, research increasingly suggests a therapeutic value for relationships among recovering individuals. Decreased substance use has been reliably associated with greater involvement in 12-step groups, such as AA (Alcoholics Anonymous) and NA (Narcotics Anonymous), even when accounting for the impact of treatment length of stay (Emrick, Tonigan, Montgomery, and Little, 1993; McIntire, 2000; Tonigan, Toscova, and Miller, 1996). Further, a growing body of evidence

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¹The reader is reminded that the term *treatment* continues to be an empowered and mystified container concept, which is rarely defined albeit its being understood both by care-givers who represent 4 basic treatment models (tradition-based, professional-based, mutual-help-based, and self-help based, or “natural recovery”) and the care recipients. A simple definition of *treatment* would be a planned, goal directed process of intervention-change. From this perspective each of the treatment models includes the relevant person(s), posited etiologies, diagnostic-screening processes and tools, goal selection, techniques, sites, change agents, policies, criteria for success and failure, etc. In any given culture, time, and place there are no unique “treatments” for substance users—of whatever types—which are not also used with and for nonsubstance users although issues such as treatment availability, accessibility, parity, and opportunity for use may, and all-too-often do, differ. Editor’s note.

associates greater peer helping among individuals recovering from substance abuse² with better outcomes (Magura, Laudet, Mahmood, Rosenblum, Vogel, et al., 2003; Pagano, Friend, Tonigan, and Stout, 2004, 2004; Pagano, Phillips, Stout, Menard, and Piliavin, in press; Zemore, Kaskutas, and Ammon, 2004).

Despite the fact that mutual aid activities are important to recovery, we know little about how either peer helping or 12-step involvement are affected by environmental factors, such as encouragement from friends, encouragement from a counselor, or program modality (our focus here). For example, we know that clients treated at 12-step-oriented programs are more likely to become involved with AA or NA after treatment than those treated in cognitive-behavioral programs (Tonigan, Connors, and Miller, 2003), but it is likely that within the broad category of 12-step treatment there is also variation in subsequent client engagement in AA and NA. Yet no quantitative research that we know of addresses variation in 12-step involvement within 12-step-oriented programs. This question is important because identifying the factors that lead individuals to engage productively with their peers in recovery could lead to interventions enhancing these behaviors, and hence, better recovery outcomes.

In view of this goal, the current paper presents quantitative data comparing seven residential programs to five day hospital programs, all influenced by 12-step principles, on the extent of (1) 12-step involvement during and post-treatment, and (2) peer helping during treatment. The paper also addresses whether and how 12-step involvement and peer helping related to treatment outcome, and to each other. These analyses extend the currently sparse literatures on 12-step facilitation and helping activities.

Although we recognize considerable variation in clients' mutual aid activities within residential programs and within day hospital programs, we expect reliable differences between the residential and day hospital programs in our selected sites because of their divergent approaches to treatment. The study's seven public residential sites, which are typical of residential programs developed by members of mutual help programs for substance case problems (Borkman, Kaskutas, Room, and Barrows, 1998), demonstrate a strong commitment to the social model orientation (discussed later in this paper). Indeed, all residential study sites were evaluated using the Social Model Philosophy Scale (Kaskutas, Greenfield, Borkman, and Room, 1998; Room, 1996) and met stringent criteria for social model classification. In contrast, the study's five day hospital sites, delivering intensive outpatient services and representing mainstream private chemical dependency treatment programs modeled on the 28-day Minnesota model treatment (Gerstein and Harwood, 1990; Institute of Medicine, 1990), show a relatively stronger commitment to the medical model orientation (also described later in this paper). These divergent emphases—that is, the strong emphasis on social model principles at the residential programs, when compared with the emphasis on medical model principles at the day hospital programs—are reflected in the environment and staffing patterns at both sites (see site descriptions). Program differences in orientation also suggest that clients' participation in mutual aid activities should differ across the two modalities, as we argue below.

Before moving on, we point out that because modality (day hospital vs. residential) and orientation (medical model vs. social model) are perfectly confounded in the present study, we are really comparing medical-model-oriented, day hospital programs to residential, social model programs. Results should, thus, not be generalizable to day hospital programs that are not medical model in orientation, nor to residential programs that are not social model in orientation (such as therapeutic communities/TCs). However, most day hospital

²The journal's style utilizes the category *substance abuse* as a diagnostic category. Substances are used or misused; living organisms are and can be *abused*. Editor's note.

programs derive from Minnesota model programs (Institute of Medicine, 1990), and thus, show commitment to the medical model orientation; meanwhile, many residential programs are social model in orientation. Hence, we feel that our results do speak to differences in client processes and outcomes across treatment modalities.

Peer Engagement In and Out of Focus

Distinctions between the “social model” and “medical model” orientation were described over 15 years ago by the Institute of Medicine (IOM; Institute of Medicine, 1990). According to the IOM, the *social model* perspective views alcohol problems as the result of socialization in a particular social and cultural milieu. Thus, social model programs tend to stress the environment of substance use and misuse, with providers encouraging clients to consider the value of new social structures and relationships supportive of an abstinent lifestyle. Social model programs are usually residential and community-based, which facilitates their explicit emphasis on substance use along with other dimensions of life functioning (such as relationships), and provides more opportunities for peer feedback and interaction. The *medical model* perspective, in contrast, sees alcoholism as a progressive disease caused by physiological functioning. Hence, medical model treatment has traditionally tended to emphasize individual-level psychological and medical problems over social-environmental influences (although, as discussed later in this paper, this distinction has blurred over time). Medical model programs are based in hospitals or clinical settings, and provide inpatient, day hospital (intensive outpatient), and outpatient treatment. Treatment is delivered by, or under the supervision of, a physician and degreed staff. It is important to recognize that differences between the social and medical model orientation do reflect relative rather than exclusive areas of emphasis, however. For example, both models acknowledge that alcoholism is a disease affected by the environmental context. Further, most medical model programs now adhere to the Minnesota Model approach (McElrath, 1997), blending professional practices with 12-step philosophy and employing some recovering, nondegreed counselors. Likewise, many social model programs now include one or more psychologist on staff (Kaskutas, Keller, and Witbrodt, 1999). Because of this overall blurring, differences associated with underlying program philosophies are expected to be subtle. Table 1 summarizes major differences between the social and medical model orientations (see Kaskutas, 1998, 7742).

Qualitative research comparing residential programs adhering to a social model approach with medical model, hospital programs has suggested that a hallmark distinguishing social model programs from their alternative is the opportunity for, and encouragement

Table 1
Comparison of program orientations along dimensions of the Social Model Philosophy Scale (SMPS)

	Physical environment	Staff role	Authority base	View of solution	Governance	Community integration
Social model	Homelike	Ensure a safe environment	Experiential	Recovery program	By peer and staff	Very high
Medical model	Clinical	Provide treatment	Professional	Treatment program	By staff	Moderate

of, peer interactions about recovery (Barrows, 1998; Borkman et al., 1998; Kaskutas, Bond, Humphreys, 1998; Kaskutas, Greenfield, Borkman, et al., 1998; Room, 1998). Room, Kaskutas, and Piroth (1998) comment that, consistent with the social model orientation's roots in 12-step principles, "A key feature of the SMP (social model program) is its focus on the helper therapy principle, and thus on peer helping. The essence of the SMP is the staff's insistence that their job is not to "conduct treatment' but rather to provide an environment in which participants *learn how to help themselves and one another*" (p. 653, italics added).³ Consistent with this aim, social model programs actively facilitate conversation among residents within groups, between groups, and during service work directed at program upkeep. Social model programs also strive to build connections with program alumni and 12-step members from the community, who may visit the program frequently. Medical model programs, as noted, may likewise emphasize 12-step principles and participation, and many of their staff may be in recovery. However, these programs tend to emphasize professional over experiential knowledge. Ethnographic observations in one of our study's metropolitan areas provide an example of how this deemphasis on experiential knowledge plays out: Analyses revealed that staff at the day hospital program did not share their personal recovery experiences with clients during any of the groups we observed, while this was common practice at the residential programs (Wolf, Ammon, and Kaskutas, 2006). Still, whether and how these philosophical differences translate into differential behavior on the part of clients remains an open question.

Mutual Help and Treatment Outcomes

Research on the roles of 12-step involvement and peer helping in recovery point to the high strong value of studying program effects on these behaviors. Evidence clearly shows that treatment populations who become involved in 12-step groups are more likely to maintain abstinence than their peers who do not, and that higher levels of involvement are associated with better treatment outcomes (Emrick et al., 1993; McIntire, 2000; Tonigan et al., 1996).⁴ Although self-selection biases cannot be completely discounted as an explanation for these associations, evidence for mediating mechanisms (such as changes in social networks, coping strategies, and/or overall psychological functioning) (Humphreys and Noke, 1997; Kaskutas, Bond, and Humphreys, 2002; Longabaugh, Wirtz, Zweben, and Stout, 1998) does support a causal role⁵ for 12-step involvement, as does evidence suggesting that individuals with higher initial severity are more (rather than less) likely to affiliate with 12-step groups (Brown, O'Grady, Farrell, Flechner, and Nurco, 2001; Emrick et al., 1993; Humphreys et al., 1998; Humphreys, Mavis, and Stöffelmayr, 1991).

Emerging evidence also suggests an important role for peer helping—a critical component of 12-step involvement—in recovery. In a study of 310 members of Double Trouble in Recovery (a 12-step group for dually diagnosed individuals), Magura and colleagues

³This approach, characterized by a deemphasis on staff-driven treatment planning in favor of client-driven recovery planning, is discussed in some detail by Borkman (1998).

⁴In studies on 12-step involvement, involvement has been operationalized in a variety of ways. Investigators typically measure the number of meetings attended and may also ask about other relevant experiences and activities, such as doing service work and reading the literature; several items are often analyzed as a composite.

⁵The reader is referred to Hills's criteria for causation which were developed in order to help assist researchers and clinicians determine if *risk factors* were causes of a particular disease or outcomes, or merely associated (Hill, 1965). The environment and disease: associations or causation? *Proceedings of the Royal Society of Medicine*, 58, 295–300. Editor's note.

(2003) found that more positive attitudes toward helping predicted a higher likelihood of abstinence at the 1-year follow-up. Suggestive results also emerged from Project MATCH, where individuals who indicated sponsoring another member in AA or completing AA's Twelfth Step were less likely than those who had done neither to relapse in the year following treatment (Pagano et al., 2004). (The Twelfth Step involves carrying the message of 12-step recovery to other alcoholics). A third study (Zemore et al., 2004) assessed helping activities directly and independently of 12-step involvement, and produced convergent results. That study sampled 279 treatment seekers and used a 7-point scale to measure the amount of time participants spent helping others by sharing experiences, explaining how to get help, and giving advice on housing and employment. Results showed that more helping during treatment predicted a lower probability of high-volume drinking at the 6-month follow-up among those who continued to drink. Meanwhile, studies of a range of mutual help groups have found that higher levels of peer helping predict more positive mental health outcomes, including higher group satisfaction (that is, self-reported general satisfaction with the self-help group), higher subjective well-being, higher self-esteem, and lower depression; groups have included a group focusing simultaneously on substance use and psychiatric problems (Magura et al., 2003), a group for serious mental illness (Roberts et al., 1999), and mixed self-help groups in the United States (Maton, 1988) and Israel (Schiff and Bargal, 2000).

Although prior work relates greater helping to better recovery outcomes, the association appears to be complex. Recent evidence suggests, indeed, that at least some of the positive effects of peer helping on recovery outcomes may be attributable to the association between greater peer helping and *higher engagement in 12-step groups*. Zemore et al. (2004) (described previously) found that more helping during treatment predicted higher odds of abstinence in their general treatment sample (as well as lower odds of binge drinking among drinkers) at follow-up, but also, that this effect for helping *disappeared* when 12-step involvement, assessed at the same time point, was also included in the model. In other words, the study indicated an indirect effect for helping, via 12-step involvement, on abstinence. This preliminary evidence may imply that spending time helping others during treatment contributes to preparing people for the social give and take that is valued and expected in 12-step groups, so that subsequent 12-step involvement, and hence positive recovery outcomes, comes more easily. If so, then fostering helping activities during treatment could be an important means to improving clients' outcomes. The current research examines whether the current data likewise support an indirect association between helping during treatment (via an effect on 12-step involvement) and recovery outcomes.

Hypotheses

The preceding discussion suggests the following core hypotheses:

1. Residential clients will, relative to day hospital participants, report greater (a) 12-step involvement during and after treatment, and (b) peer helping during treatment.
2. Greater peer helping during treatment will be associated with higher concurrent and subsequent 12-step involvement.
3. Higher odds of total sobriety at follow-ups will be (a) directly predicted by greater 12-step involvement during and after treatment, and (b) indirectly associated with greater helping during treatment, via the association between greater helping and higher subsequent 12-step involvement.

Method

Sample

Data for the current study were collected between May of 2000 and July of 2003 as a part of our second Social and Medical Model Addiction Recovery Trial (SMMRT-2),⁶ a health services study comparing day hospital and residential recovery programs on services, outcomes, cost effectiveness, and cost offset (For a more complete description, see, Witbrodt et al., 2007). SMMRT-2 was conducted via collaboration with a private, nonprofit, managed health care plan and its contracted residential recovery program sites.

The study included two treatment arms (randomized and nonrandomized) as well as two treatment modalities (day hospital and residential). Participants were recruited from three intake units serving five chemical dependency recovery programs. Clients entering intake during the recruitment period and aged 18 and over were considered eligible for the study if they met level III patient placement criteria (PPC) for low intensity residential treatment on five of the six assessment dimensions identified by the American Society of Addiction Medicine (ASAM; American Society of Addiction Medicine, 2001). ASAM specifies PPC for four levels of care increasing in intensity and setting restrictiveness, including outpatient (Level I), intensive outpatient (Level II), residential (Level III), and inpatient (Level IV); the six dimensions of symptom severity are used to assign patients to levels. Consistent with ASAM's criteria for Level III care, then, clients were considered eligible for the study if they exhibited (a) minimal to no risk for acute withdrawal symptoms (Dimension 1); (b) no acute or chronic medical issues (Dimension 2); (c) no current psychiatric conditions or complications distracting to recovery (Dimension 3); (d) no treatment resistance with at least minimal recognition of the severity of their problem (Dimension 4); and (e) a history suggesting relapse potential at a lower level of care (Dimension 5). Additionally, clients were considered eligible for *randomization* if they showed low environmental risk of relapse (Dimension 6, level III). Clients at high environmental risk of relapse (e.g., due to social isolation or abuse) and meeting the other five criteria were considered eligible for the study, but not for randomization. These clients were referred by physicians and intake clinicians directly to a community residential treatment program, and they participated in the study (if they assented) as nonrandomized participants.

Eligible participants were invited to participate in the study by a trained recruiter, who explained that the purpose of the study was to "look at how patients do in treatment." Clients were informed that participation was optional and would not affect their treatment; they were also told that they could withdraw from the study at any time. Of 1,144 eligible clients who were approached, 733 (470 men, 263 women) agreed to be in the study and were enrolled (see Table 2 for sample characteristics). Forty percent of that number ($N = 293$) agreed to be randomized, using computerized urn randomization balanced on gender and ethnicity, to either the day hospital program at the parent program or a contracted residential program in the area. The remaining 60% ($N = 440$) participated as a nonrandomized group. This group (again) included participants who wanted to choose their treatment modality and clients ineligible for randomization. Nonrandomized participants completed assessments in parallel with the randomized group, attending (likewise) either day hospital or residential services. The trial thus included two arms (randomized and nonrandomized) and two program modalities (residential and day hospital). Assessments included an in-person

⁶The study reported here is not affiliated with the SMART Recovery® program (SMART Recovery, 2006).

Table 2
Sample characteristics at baseline (N = 733)

Variable	
Female	36%
White	54%
Hispanic	17%
Black	23%
Other	6%
Married/partnered	36%
Alcohol dependent only	35%
Drug dependent only	30%
Alcohol and drug dependent	31%
Undiagnosed	4%
Age M (SD)	41.1 (10.9)
ASI Alcohol severity M (SD)	.44 (.33)
ASI Drug severity M (SD)	.14 (.12)
ASI Medical severity M (SD)	.26 (.34)
ASI Psychiatric severity M (SD)	.44 (.24)
ASI Legal severity M (SD)	.12 (.20)
ASI Employment severity M (SD)	.41 (.27)
Follow-up rates	
% Found at 2 weeks	78%
% Found at 4 weeks	71%
% Found at 8 weeks	72%
% Found at 6 months	79%
% Found at 12 months	74%

baseline conducted at the treatment site, and follow-ups at 2 weeks, 4 weeks, 8 weeks, 6 months, and 12 months post baseline; response rates ranged from 71% to 79%. Follow-ups were conducted either in-person and onsite (if clients were still receiving treatment), or by telephone. Respondents were given \$80 for the baseline interview and \$15 for each of the 6- and 12-month follow-ups.

Study Sites

Study sites included five day hospital, intensive outpatient chemical dependency programs situated in three large metropolitan areas in the United States and affiliated with a large prepaid health plan. The health plan provides integrated care for chemical dependency and general health services. The residential study sites were seven state-licensed community treatment programs under contract with the day hospital programs in each of these three metropolitan areas.

The five day hospital sites are representative of mainstream private chemical dependency programs that are modeled on 28-day Minnesota Model treatment (see Gerstein and Harwood, 1990) and conform to ASAM (American Society of Addiction Medicine) patient placement criteria for intensive outpatient/partial hospitalization (American Society of Addiction Medicine, 2001). Treatment includes didactic and counseling groups in

a mixed-gender setting, although gender-specific groups are also offered. Drug tests are randomly administered. Less than half of the staff is in recovery. Services are delivered by psychiatrists, primary care physicians, masters-level social workers and therapists, registered nurses, and certified/licensed alcohol and drug counselors (i.e., “CADACS,” most of whom are in recovery).

In contrast, the study’s contracted residential sites are typical of residential programs developed by members of mutual help programs for substance use problems (Borkman et al., 1998). Only two are mixed-gender (another two are female-only, and the remaining three are male-only). Clients participate in daily living chores, sober recreational events, and meditation in addition to attending didactic and counseling groups. Clients are tested for drug use only occasionally (either randomly or on suspicion of use). Non-degreed counselors in recovery comprise a majority of the staff. Most programs have several state-certified alcoholism and drug user counselors on staff (and at some, all counselors are certified). Some of the staff are longstanding program graduates, and volunteers with long-term sobriety often lead recovery-oriented groups.

Primary Measures

Twelve-Step Involvement. Surveys included items from a standard 12-step involvement scale (Humphreys et al., 1998) inquiring about meeting attendance and seven 12-step-related behaviors, beliefs, and experiences, as follows: considering yourself a member of Alcoholics Anonymous (AA), Narcotics Anonymous (NA), or Cocaine Anonymous (CA); calling an AA, NA, or CA member for help; having a sponsor; being a sponsor; reading program literature; having had a spiritual awakening; and doing service (“Twelfth Step work”). Involvement was assessed at baseline, during treatment (i.e., at 8 weeks), at 6 months, and at 12 months (alphas = .83, .75, .82, and .84, respectively). Scales were identical except that the during-treatment scale omitted the question on sponsoring. Composite, continuous scores were created by (a) recoding meetings attended into 0, .25, .50, .75, and 1.00, based on quartile splits, (b) coding the remaining questions so that yes = 1 and no = 0, and (c) averaging across items. Ranges for scales at all time points were 0 to 1. Means and standard deviations were as follows: baseline ($M = .30$, $SD = .28$), during treatment ($M = .53$, $SD = .28$), 6 months ($M = .47$, $SD = .28$), and 12 months ($M = .42$, $SD = .29$).

Helping. During-treatment surveys also included a 13-item helping scale assessing peer-helping activities (alphas at 2, 4, and 8 weeks = .70, .75, and .72, respectively). Participants were asked to indicate how much time they had spent in the 7 days prior sharing experiences and knowledge with other clients, offering support and encouragement to other clients, and volunteering at the program. Responses were averaged across items and log-transformed; we then generated a composite, continuous measure by averaging across 2-week, 4-week, and 8-week measures. The scale range was 0–4.37 ($M = 1.39$, $SD = 1.05$). Substantiating the scale is validity, helping scores were positively associated with likelihood of doing 12-step service work during treatment, number of people the participant “reached out to help” during treatment, and frequency of doing the same (all p ’s < .05). As in prior work (Zemore and Kaskutas, 2004), helping activities were also positively related to measures of spiritual involvement: More helping was associated with higher baseline and 12-month scores on the Religious Background and Behaviors scale (RBB; Connors, Tonigan, and Miller, 1996); higher ratings of the subjective importance of religion; and presence of a spiritual awakening in the context of AA/NA/CA between baseline and the 12-month

follow-up (all p 's < 0.05). However, helping was related to neither baseline religious denomination nor self-identification as spiritual, religious, unsure, agnostic, or atheist.

Demographics and Other Covariates. A range of demographic characteristics (e.g., sex, age, race, income, education, employment status, and initial diagnosis) were assessed at baseline and dummy-coded as appropriate. Length of stay for the index treatment episode was collected from program records.

Program Modality. Program modality (residential vs. day hospital), recorded at baseline, was dummy-coded.

Treatment Outcomes. The study's key outcome was 30-day abstinence from alcohol and drugs, assessed at 6 and 12 months.

Analyses

Analyses involved linear regressions and repeated-measures generalized estimating equations (GEE's), which (like repeated-measures regressions) account for intraindividual covariation and (unlike repeated-measures regressions) maximize power by including all individuals with outcome data at least at one time-point.

Multivariate analyses of mutual aid and substance use outcomes incorporated a set of carefully selected covariates. Preliminary, bivariate analyses were conducted to establish the relationships between outcomes and a wide range of individual-level variables (i.e., gender, age, race, income, education, employment status, diagnosis, and baseline ASI severity in seven domains) and program variables (i.e., randomization status, program modality, and length of stay). To avoid overburdening the models and destabilizing parameter estimates, *variables that were not significantly associated with a given outcome were not included as covariates in equations for that outcome.* Note that both randomization status and program modality were excluded from models predicting substance use outcomes on that basis. Nevertheless, exploratory analyses were conducted for all hypotheses to test whether results replicated across randomized and nonrandomized arms. Although length of stay was a significant predictor of both 12-step involvement across time points and helping during treatment, it was excluded from equations modeling these variables and including treatment modality as a predictor (see Tables 3 and 4), since preliminary analyses suggested that length of stay interacted with program modality to influence these outcomes (in violation of the model's assumptions). Multivariate equations modeling 12-step involvement included baseline 12-step involvement as a covariate, so parameters for helping reflect the effects of helping during treatment on *increases in 12-step involvement* from baseline to follow-up. For the GEE equation modeling sobriety across follow-ups (Table 6), we entered follow-up point as a covariate. This variable was a dummy variable coded to contrast the 12-month assessment wave with the 6-month assessment wave.

Estimating the effects of the program was complex because a substantial number of participants ($N = 120$) did not pursue treatment exclusively at their assigned program. During the 8-week treatment period, many participants assigned to residential programs actually received day hospital treatment exclusively or in addition to residential treatment ($N = 85$), and several participants assigned to day hospital programs actually received treatment at residential programs ($N = 35$). Among the former, some ($N = 20$) attended services at the day hospital following residential treatment, in accord with standard recommendations for a continuum of care. To produce the clearest possible picture of program effects

Table 3
Twelve-step involvement as a function of program modality

	12-step involvement during treatment: Stand. beta	12-step involvement at 6 months: Stand. beta	12-step involvement at 12 months: Stand. beta
Bivariate model			
Residential (vs. outpatient) assignment	.12*	.13**	.06
Multivariate model			
Residential (vs. outpatient) assignment	.12*	.08[†]	.04
12-step involvement at baseline	.38***	.40***	.37***
Income	.07	.07	.00
Some college (vs. no) education	.05	.04	.12*
ASI drug severity at baseline	.13**	.08 [†]	.03
ASI legal severity at baseline	.02	.11*	.06
ASI employment severity at baseline	-.11*	-.07 [†]	-.04
ASI psychiatric severity at baseline	.01	.07	.06
Multivariate model statistics	R = .46*** R ² adj = .20	R = .48*** R ² adj = .21	R = .43*** R ² adj = .17

Note. ***p < .001, **p < .01, *p < .05, [†]p < .10.

on mutual aid activities for Hypothesis 1, we analyzed the data (1) excluding all 120 of these participants, and (2) excluding all but the 20 residential participants who subsequently attended day hospital. Since the results of these analyses were almost identical and since the former analysis is conceptually cleaner, we present results from that analysis. Analyses for Hypotheses 2 and 3 include the entire sample since program was not included in those

Table 4
Peer helping during treatment as a function of program modality

	Helping during treatment: Stand. beta
Bivariate model	
Residential (vs. outpatient) assignment	.35***
Multivariate model	
Residential (vs. outpatient) assignment	.35***
Female (vs. male)	.11**
Income	.11**
ASI drug severity at baseline	.07 [†]
ASI social/family severity	.09*
Multivariate model statistics	R = .40*** R ² adj = .15

Note. ***p < .001, **p < .01, *p < .05, [†]p < .10.

models. (There were null effects for program on sobriety even excluding the 120 people described above.)

Results

An initial set of analyses showed that rates of 30-day total abstinence were 72% and 67% among residential and day hospital participants, respectively, at the 6-month follow-up ($p = .33$), and 66% and 61% for the same at the 12-month follow-up ($p = .36$). Residential participants attended treatment an average of 5.57 weeks ($SD = 2.56$), and day hospital participants averaged 1.61 weeks ($SD = 1.07$; $p < .001$).

Hypothesis 1

Hypothesis 1 suggested that residential clients would report higher 12-step involvement during and after treatment than day hospital participants. Consistent with this hypothesis, residential clients reported higher levels of 12-step involvement during treatment and at 6 months in both bivariate and multivariate analyses, although the multivariate effect for involvement at 6 months was only marginally significant (see Table 3). Hypothesis 1 also suggested that residential clients would report greater peer helping during treatment than day hospital clients. This expectation was confirmed in both bivariate and multivariate analyses (see Table 4).

Hypothesis 2

Hypothesis 2 proposed that greater peer helping during treatment would be associated with higher concurrent and subsequent 12-step involvement. Bivariate and multivariate analyses confirmed these effects: Greater peer helping during treatment predicted higher levels of 12-step involvement during treatment, at 6 months, and at 12 months, even accounting for covariates (see Table 5).

Hypothesis 3

Hypothesis 3 suggested that higher odds of total sobriety at follow-ups would be predicted by both higher 12-step involvement (directly) and greater peer helping during treatment (indirectly, and via the association between peer helping and 12-step involvement). If so, then both 12-step involvement and peer helping should be associated with higher odds of sobriety at follow-ups; further, the effects for peer helping should disappear when 12-step involvement is included in the model. To test this hypothesis, preliminary analyses involved multivariate logistic regressions predicting 6- and 12-month outcomes from 12-step involvement and helping during treatment (separately) while controlling for age, baseline diagnosis (dependence on both alcohol and drugs vs. other), and length of stay (not shown). Sobriety at 6 months was reliably predicted by 12-step involvement during treatment ($p < .001$), 12-step involvement at 6 months ($p < .001$), and helping during treatment ($p < .05$). Twelve-month sobriety was significantly associated with 12-step involvement at all 3 time points (during treatment, at 6 months, and at 12 months; all p 's $< .001$), while during-treatment helping showed a marginally significant positive effect ($p = .09$).

Table 5
Twelve-step involvement as a function of peer helping activities

	12-step involvement during treatment: Stand. beta	12-step involvement at 6 months: Stand. beta	12-step involvement at 12 months: Stand. beta
Bivariate model			
Time spent helping during treatment	.39***	.33***	.29***
Multivariate model			
Time spent helping during treatment	.29***	.24***	.24***
12-step involvement at baseline	.35***	.38***	.35***
Income	.04	.04	.00
Some college (vs. no) education	.03	.02	.09*
ASI drug severity at baseline	.13***	.06	.03
ASI legal severity at baseline	.04	.11**	.09*
ASI employment severity at baseline	-.09*	-.09*	-.05
ASI psychiatric severity at baseline	-.01	.05	.05
Length of stay	.07 [†]	.05	-.01
<i>Model statistics</i>	R = .56*** R ² adj = .30	R = .53*** R ² adj = .27	R = .50*** R ² adj = .23

Note. ***p < .001, **p < .01, *p < .05, [†]p < .10.

These analyses guided and were confirmed by our multivariate, repeated-measures generalized estimating equations (GEE's; see Table 6). In a first equation, we established a positive effect for more helping during treatment on odds of total sobriety through follow-ups. However, as expected, a second equation adding 12-step involvement at 6 months to the model produced a nonsignificant effect for helping and a robust effect for 12-step involvement.

Table 6
Odds of sobriety across 6- and 12-month follow-ups as a function of helping and 12-step involvement

Predictor	Odds of Total Sobriety (CI) (Model Excludes 12-step Variable)	Odds of Total Sobriety (CI) (Model Includes 12-step Variable)
Age	1.02* (1.00, 1.03)	1.01 [†] (1.00, 1.03)
Baseline dependence on both alcohol and drugs (vs. other)	0.73 (0.52, 1.03)	0.56** (0.39, 0.81)
Length of stay	1.10* (1.02, 1.19)	1.09* (1.00, 1.19)
12-month (vs. 6-month) assessment wave	0.80* (0.66, 0.96)	0.77* (0.62, 0.96)
Time spent helping during treatment	1.22* (1.03, 1.44)	0.99 (0.82, 1.19)
12-step involvement at 6 months	—	17.74*** (9.18, 34.27)

Note. Table reports OR's and 95% CI's. ***p < .001, **p < .01, *p < .05, [†]p < .10.

We also used Sobel's test (Sobel, 1982) to test the indirect effects for helping during treatment on total sobriety at 6 and 12 months via 6-month 12-step involvement. The tests revealed significant indirect effects for helping on both 6-month abstinence ($Z = 5.77$, $p < .001$) and 12-month abstinence ($Z = 5.39$, $p < .001$).

Replication of Results Across Study Arms

Because the randomized and nonrandomized samples differed on baseline characteristics and mode of treatment entry,⁷ we also tested whether our results replicated across study arm. The general pattern of associations held across arms, although not all effects remained significant, perhaps because of reduced sample sizes. This was particularly true of effects for program modality on AA involvement during treatment, at 6 months, and at 12 months: All three effects became nonsignificant when disaggregating by study arm. These findings point to a cautious interpretation of the relationship between program modality and 12-step outcomes.

Discussion

Implications

Ethnographic research comparing social model to medical model programs suggests that social model programs are defined by their strong emphasis on mutual aid (Barrows, 1998; Borkman et al., 1998; Kaskutas, Bond, Humphreys, 1998; Kaskutas, Greenfield, Borkman et al., 1998; Room, 1998). Because our residential sites are firmly rooted in social model principles, we expected greater engagement in both 12-step groups and peer helping among residential (vs. day hospital) clients. The current data provided tentative support for this expectation—particularly regarding peer helping. Participation in residential treatment was strongly related to greater peer helping during treatment in both bivariate and multivariate analyses: Individuals attending treatment at residential facilities spent much more time than their counterparts at day hospital sharing their experiences about recovery and other problems, providing general emotional support, and contributing to program upkeep. This makes sense not only in view of the divergent program emphases but also considering that residential clients live among their peers in treatment, and hence, are likely to be exposed to many more opportunities to help than are clients attending day hospital. Other important predictors of peer helping (in the multivariate analyses) were female gender, higher income, higher family/social severity at baseline, and higher severity of drug problems at baseline (the latter being marginally significant). Findings for gender are consistent with the broader literature suggesting that women tend to score higher than men on self-reported empathy and prosocial behavior in the context of close relationships—although men may be more likely than women to offer instrumental support, especially when interacting with strangers (Eagly and Crowley, 1986; Jaffee and Hyde, 2000; Skoe et al., 2002). Findings for more helping among those higher on family and drug severity may indicate that those who have experienced serious problems tend to have more compassion for peers or more to share in regard to recovery.

⁷At intake, the randomized sample was significantly higher than the nonrandomized sample on five of seven problem domains of the Addiction Severity Index (ASI; McLellan, 1980, including drug use severity ($p < 0.05$), psychiatric severity ($p < 0.05$), family severity ($p < 0.001$), legal severity ($p < 0.001$), and employment severity ($p < 0.05$). The randomized sample was also (at intake) relatively less likely to be diagnosed with drug dependence ($p < 0.05$), younger ($p < 0.001$), lower on income ($p < 0.001$), and less likely to be employed ($p < 0.01$).

Some evidence also suggested that 12-step involvement was (as expected) higher among residential than day hospital clients. Residential assignment was a significant predictor of 12-step involvement during treatment and at 6 months in both bivariate and multivariate analyses (although the multivariate effect on 6-month involvement was only marginally significant). Program modality predicted 12-step involvement even when controlling for covariates that could have been important confounds, including scores on all measures of baseline severity identified (in preliminary analyses) as predictors of 12-step involvement (and namely, drug, legal, employment, and psychiatric severity). This suggests that differences in baseline severity cannot explain effects for program modality on 12-step involvement. These findings support our hypotheses and suggest enduring distinctions between residential programs rooted in the social model orientation and medical model-oriented, day hospital programs derived from the Minnesota model. They also dovetail with prior analyses of these same data indicating that, early in treatment, residential clients participated in more sober recreational events and engaged in more informal interaction with peers than day hospital clients did, consistent with the social model orientation (Zemore and Kaskutas, 2006). Future work might, toward better understanding how to facilitate 12-step involvement broadly, consider how social model programs maximize 12-step involvement among their clients.

However, two points bear mention in connection with the findings for program effects on 12-step involvement. One point is that effects were relatively weak and nonsignificant in analyses disaggregating by study arm. This recalls our expectation that program effects would be “subtle,” given the blurring of distinctions between social model and medical model programs, and suggests some caution in drawing conclusions about the effects of program modality on 12-step involvement. Second, it is important to note that there may be qualitative differences in involvement that the overall findings favoring residential programs mask. Indeed, other analyses of these same data have examined specific aspects of involvement and found that, although residential participants in our study were more involved in *curricular* 12-step meetings throughout treatment, they attended fewer *optional* 12-step meetings and reported *lower* rates of having a sponsor through the first month, relative to day hospital participants (Zemore and Kaskutas, 2007). Further, this same set of analyses found that measures of optional meeting attendance, but not curricular attendance, predicted higher odds of total sobriety at 6 months. This may help explain why residential participants did not fare better on recovery outcomes at follow-ups than day hospital participants, despite overall higher rates of 12-step involvement (see Witbrodt et al., 2007).

We also found that reporting more time of helping during treatment was a robust predictor of greater 12-step involvement at all three time points and across multivariate analyses. These results parallel results from a prior study of treatment seekers using similar measures, which indicated that higher levels of peer helping during treatment predicted higher levels of 12-step involvement posttreatment (Zemore et al., 2004). Both studies may imply that engaging in helping activities during treatment contributes to preparing people for the kind of active, reciprocal engagement that is the hallmark of mutual help groups—as we have argued previously (Zemore et al., 2004). In fact, this result begs the question of whether the higher rates of 12-step involvement observed among residential (vs. day hospital) participants are attributable to their greater engagement in peer helping during treatment. It may be that forming reciprocal and mutually rewarding relationships during residential treatment laid the groundwork for residential clients’ relatively stronger engagement in AA and other mutual help groups. This question would be a worthy target for future work.

Again replicating findings from our 2004 study (Zemore et al., 2004), we also found that greater peer helping during treatment predicted higher odds of total abstinence across follow-ups—but only indirectly, by way of a positive association with 12-step involvement at 6 months (itself a strong predictor of sobriety). These data, then, are consistent with the argument that individuals who help their peers during treatment tend to enjoy better treatment outcomes posttreatment because these same individuals are more prepared for 12-step groups posttreatment. Thus, the data support conclusions that both peer helping and 12-step involvement are important components of an effective treatment program. Although treatment programs already tend to emphasize (or even require) 12-step participation, peer helping is less often an explicit focus—perhaps especially in medically oriented programs, as we have seen. Our results suggest that peer helping may play an important role in building sustainable recovery practices and should be directly facilitated within treatment.

Study's Limitations

The forgoing conclusions should be tempered by several limitations. To begin with, as the introduction notes, the current results should generalize only to medical-model-oriented, day hospital programs, and to social model, residential programs. However, within these bounds we feel relatively confident that we have chosen representative programs. The day hospital programs under study are representative of the dominant outpatient treatment model in the United States; that is, group format, Minnesota-model, abstinence-oriented treatment. Further, the residential programs studied here can be considered representative of social-model-oriented programs in the United States based on their scores on the Social Model Philosophy Scale (Kaskutas et al., 1998; Room, 1996).

A second limitation concerns our choice of outcome variable: that is, 30-day total abstinence prior to the follow-up. One problem with this variable is the short time window capturing substance use, which suggests that the measure may not be a strong indicator of sustained abstinence. However, 30-day abstinence capitalizes on clients' presumably better recall for shorter time periods and is a standard outcome variable derived from the widely used ASI, which has high reliability (McLellan, 1985, 3352). A second problem associated with the variable is that it captures neither reductions in substance use (since all individuals who have used at follow-up are aggregated) nor functioning in domains other than substance use (such as social functioning or mental health). These changes are also important targets for outcome research. Nevertheless, we believe that abstinence is an appropriate outcome variable for the current research because abstinence is the explicit goal of the treatment programs under study and a treatment goal widely endorsed by treatment programs nationally.

A third limitation is that the current study included no measures of treatment quality (Magura, 2000). This means that, theoretically, the associations between receiving residential treatment and higher involvement in peer helping and 12-step groups could be accounted for by a difference in treatment quality favoring the residential programs. Still, the evidence argues against such differences in treatment quality, since outcomes were equivalent across modality (see bivariate analyses in the results of this paper and Witbrodt, 2007). In addition, we observed treatment regularly using protocols that have detected problems with treatment quality in prior studies (Kaskutas, 2004), and did not observe any variation in quality across sites. Hence, we are not especially concerned about this confound for the current study, although it might be worthwhile to examine the impact of

treatment quality on mutual aid activities in the future. Our own research indicates that treatment quality can vary and may well impact whether and how treatment works (Kaskutas, 2004).

A last limitation is that the precise nature of the relationship between helping and mutual help group participation cannot be determined based on the current study's data. It may be that a third variable accounts for the association; that (for example) an inclination to help others is simply an indicator of other characteristics that facilitate 12-step involvement, such as psychological health. Our earlier work on peer helping found no relationship between psychiatric severity and helping in two other samples (Zemore and Kaskutas, 2004; Zemore et al., 2004), however; further, the current multivariate analyses regressing 12-step involvement on helping during treatment controlled for psychological severity at baseline. This suggests (at least) that psychological health does not explain the association between greater helping and more 12-step involvement, although there may be other factors at play. In relation to this, there may be self-report biases, such as the desire to create a positive impression, underling associations between high rates of peer helping and 12-step involvement. This is a problem common to all self-report studies. Still, because participants in the current study were informed that they could be selected for participation in urinalysis to verify their self-reports, distortions in self-reported consumption should have been minimal. Finally, the relationship between helping and mutual help group may run in the direction opposite to that hypothesized (that is, with mutual help group involvement causing greater peer helping, and not the other way around). We can have some confidence that causality flows from helping during treatment to mutual help group involvement, at least in addition to the other way around, because equations predicting mutual help group involvement during and post-treatment controlled for baseline 12-step involvement, so that if the association between helping and 12-step involvement were purely a function of 12-step involvement prior to treatment, helping should have been a nonsignificant predictor in those equations (and yet it was significant). Nonetheless, these issues could be clarified substantially by further research manipulating helping. More objective measures of helping (e.g., observer ratings) would also help in terms of avoiding the potential for self-report bias in our current measure.⁸

Whatever the case, the current study does underline the importance of assessing mutual help group involvement whenever peer helping is investigated, as what looks like a direct effect for helping on recovery outcomes could really be attributable to a shared association with mutual help group involvement. The extent to which mutual help group involvement accounts for the effects of helping activities generally probably depends on how, when, and what kind of helping activities are measured.

RÉSUMÉ

Participation dans les programmes de 12 étapes et aide à ses pairs en hôpital de jour et programme résidentiel

L'étude compare l'aide à ses pairs et la participation en groupe de 12 étapes parmi des participants recevant le traitement pour la dépendance de drogue en hôpital de jour (N = 503) et en programme résidentiel (N = 230), et examine les associations entre type de

⁸Readers might refer to (Hill, 1965) for a more extended discussion around establishing causality in science.

programmes et résultats. Les résultats ont prouvé que compare aux patients en hôpital de jour, les participants en résidentiel ont rapporté sensiblement plus d'aide a leurs pairs et plus de participation en 12-étapes pendant le traitement, et marginalement plus de participation dans les groupes de 12 étapes au suivi de 6 mois. L'aide aux autres et la participation dans les groupes de 12 étapes prédisaient toutes deux un taux plus élevé de sobriété à tous les suivis; aider a montre un effet indirect sur la sobriété via la participation dans les 12-étapes. Les résultats contribuent à la littérature sur la facilitation de 12-étapes (12-step facilitation), confirme les résultats antérieurs concernant des avantages d'aide mutuelle et soulignent des points méthodologiques dans la recherche sur l'aide mutuelle.

RESUMEN

Participación en los programas de 12 etapas y ayuda a sus pares en hospital de día y los programas residenciales

El estudio compara la ayuda a sus pares y la participación en grupo de 12 etapas entre participantes que reciben el tratamiento para la dependencia de droga en hospital de día ($N = 503$) y en programa residencial ($N = 230$), y examina a las asociaciones entre tipo de programas y resultados. Los resultados probaron que compara a los pacientes en hospital de día, los participantes en residencial dan mas ayuda a sus pares y tienen más participación en 12-etapa durante el tratamiento, y marginalmente más participación en los grupos de 12 etapas en el seguimiento de 6 meses. La ayuda a los otros y la participación en los grupos de 12 etapas predecían toda una dos tipos más elevado de sobriedad a todos los seguimientos; ayudar tiene reloj un efecto indirecto sobre la sobriedad mediante la participación en las 12-etapas. Los resultados contribuyen a la literatura sobre la simplificación de 12-etapa (12-step facilitation), confirman los resultados previos refiriéndose a ventajas de ayuda mutua y destacan puntos metodológicos en la investigación sobre la ayuda mutual.

THE AUTHORS



Lee Ann Kaskutas, is a Senior Scientist at the Alcohol Research Group in Emeryville, California (formerly in Berkeley), a national alcohol research center. She is an Adjunct Associate Professor at the School of Public Health at the University of California, Berkeley, where she teaches their core survey research methods course and is co-instructor of the longstanding Advanced Alcohol Research Seminar. Dr. Kaskutas is the Director of Training for the joint ARG-UCB NIAAA training grant "Graduate Research Training on Alcohol Problems" now in its 28th year. Dr. Kaskutas's overarching public health interest is in solutions to alcohol- and drug-related problems that can complement professional interventions but that

do not necessarily require professionally trained individuals for implementation. For example, she has conducted two NIH-funded clinical trials that compared the costs and outcomes of clinical and social model treatment programs. Social model programs stress peer learning and reentry into dry social networks and Alcoholics Anonymous. She is studying the long-term "careers" of Alcoholics Anonymous meeting attendance among treated and untreated

substance abusers, and how these careers relate to abstinence. She also developed a group-oriented, manual-guided intervention designed to increase patient involvement with the people in AA and other 12-step groups, and is conducting a health services trial to study its effectiveness in real-world treatment programs in northern and southern California. The intervention is called MAAEZ (Making AA Easier) and is delivered by treatment staff who are active members of AA or NA (Narcotics Anonymous). In addition to this work on treatment and mutual aid, Dr. Kaskutas has another line of research, studying drinking during pregnancy. She has completed a study of urban pregnant minority (Native American and African American) women's responses to health warnings about drinking during pregnancy, and whether these messages were culturally meaningful and had a behavioral impact. The study also looked at whether women were drinking standard drinks; they were not: the heavier drinkers especially were having larger-than-standard drinks. Results from that study have informed another clinical trial testing the effectiveness of a computer-based prenatal intervention in a large HMO, focusing on drink size and beverage strength. Dr. Kaskutas received the Research Society on Alcoholism Young Investigator Award in 1998. She has a doctorate degree in Public Health from the University of California, Berkeley. She did her dissertation on Women for Sobriety, a non-12-step alternative to Alcoholics Anonymous for women. **Fields of Interest:** Self-help/mutual aid groups, peer support, social networks, measuring alcohol consumption, drinking during pregnancy, and treatment outcome.



Dr. Sarah Zemore, Associate Scientist, completed her doctorate in Social Psychology at the University of Massachusetts, Amherst. Her research interests include treatment seeking, treatment outcomes, and epidemiology, with special focus on gender, race, and social-cognitive models and methodology. Her work at ARG has investigated the roles of Alcoholics Anonymous, peer helping, and spirituality in recovery. She has also examined factors related to alcohol use and treatment utilization among Latinos in the United States, including gender, acculturation, racial discrimination, and socioeconomic status.

Glossary

12-step group: Any mutual help or support group based on overcoming addictive, compulsive, or otherwise harmful behaviors through an adaptation of the 12 Steps initially put forward by Alcoholics Anonymous. Examples include Narcotics Anonymous, Overeaters Anonymous, and Gamblers Anonymous.

Confound: An extraneous variable that, as a result of its relationships with two other variables, explains a (spurious) association between those variables (which might otherwise be thought to be causally related). For example, age is a confound that could explain a spurious association between shoe size and scores on a math test. Also known as “confounder.”

Cost offset: Is achieved when utilization of behavioral health services results in a reduction in expenditures for other medical services. A total offset occurs when healthcare savings exceed the cost of behavioral services, such that the treatment effectively is paying for itself.

- Dual diagnosis*: A condition in which the patient is diagnosed with substance abuse/dependence *and* one or more mental health disorders simultaneously. Dual diagnosis does *not* refer to patients who are addicted to both drugs and alcohol.
- Minnesota Model*: A hybrid treatment model that addresses both medical/biological and psychosocial factors in substance use and abuse. The Minnesota Model incorporates 12-step philosophy; medical, and psychiatric support; both degreed clinicians and nondegreed counselors who are in recovery; and family and peer-based aftercare.
- Mutual help group*: A group designed to provide members with nonprofessional, nonmaterial help for a shared problem. Members in mutual help groups help each other by providing relevant information, relating personal experiences, listening to the experiences of others, providing understanding and support, and establishing social networks. Mutual help groups are fully organized and managed by their members. Alcoholics Anonymous is an example of a mutual help group. Mutual help groups are sometimes called “self-help” groups, although this latter term belies the groups’ typically strong emphasis on reciprocal helping among members.
- Peer helping*: Helping another individual in recovery by providing emotional or instrumental support.
- Recovery*: Used (narrowly) in this paper to refer to the achievement of total abstinence from alcohol and drugs and (in the case of alcohol-dependent populations) of “moderate” drinking. These outcomes reflect generally accepted societal prescriptions for appropriate substance use among individuals formerly dependent on alcohol and/or drugs. We acknowledge that there is some disagreement on whether “moderate” usage is an appropriate goal for individuals who are dependent on alcohol (and likewise for total abstinence), and that operationalizations of both moderation and abstinence can vary. We also acknowledge that different outcomes and different operationalizations of recovery may be appropriate for different purposes. Hence, we make no prescriptions here for a general definition of recovery. For example, “moderate” drinking may be an appropriate outcome variable for moderation-based programs, whereas total abstinence might be more appropriate for abstinence-based programs. Similarly, the measurement of social functioning might be appropriate for programs explicitly addressing social functioning—although it may make sense to classify outcomes unrelated to substance use separately (as we do here) for the sake of precision and clarity. Although recovery is overwhelmingly framed in dualistic terms and operationalized (simply) as total abstinence from all alcohol and nonprescription drugs, it is understood that individuals may actually be positioned along a continuum of recovery at any given time point (i.e., that they may be experiencing greater or lesser success regarding the goals under study). We also use the descriptive “in recovery” to refer to individuals who were once diagnosable as alcohol- or drug-dependent, but would no longer be diagnosed as such.
- Sobel’s Test*: An equation used to determine the extent to which an intermediate variable (or mediator) carries the influence of an independent (or predictor) variable on a dependent (or outcome) variable.
- Therapeutic Community (TC)*: A long-term residential alcohol and/or drug treatment approach in which residents are expected to provide guidance, teaching, healing, and support for one another. Therapeutic communities were heavily influenced by Synanon, and thus incorporate confrontation from the community of peers as a key therapeutic mechanism. TCs historically have not been 12-step oriented, though some values, such as rigorous honesty about one’s mistakes, do reflect AA’s ideals.

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