Characteristics of Community Mental Health Clinics Associated With Treatment Engagement

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Objectives: **Past literature documents many individual predictors of treatment engagement among mental health clients in community settings, but few studies have examined clinic characteristics that may be associated with treatment engagement. With data from a patient activation and self-management trial, this study examined the variation in demographic and clinic characteristics across community mental health clinics and whether this variation predicted differences in treatment engagement in mental health services.** ***Methods:*** **Chart reviews were conducted for 638 clients of 12 community mental health clinics. Client attendance records were collected for a one-year period to examine engagement (defined as the ratio of kept versus scheduled appointments). Adjusting for client variability, the investigators examined which clinic-level characteristics were associated with treatment engagement.** ***Results:*** **Clinics varied significantly in their clients' demographic characteristics and engagement in mental health care. Providing case management and offering transportation vouchers or free parking at the clinic were associated with lower engagement. However, offering outreach was associated with greater engagement.** ***Conclusions:*** **The results of this study suggest that certain clinic characteristics are associated with engagement in mental health services. These results demonstrate the difficulties faced by community mental health clinics in reducing no-show rates even in the face of strong efforts to improve engagement. (*Psychiatric Services* 65:1020–1025, 2014; doi: 10.1176/appi.ps.201300231)**

Despite the increased availability of empirically supported treatments for mental health diagnoses, most people with mental illness underutilize mental health care services (1). Almost 20% of adults in mental health treatment drop out before completing their recommended course of treatment (2). Although there is awareness among mental health providers regarding barriers to treatment engagement (3), particularly in community settings, there is a paucity of literature exploring the clinic and client variables that influence clinical engagement—attending scheduled visits—in mental health services. The extant literature focuses primarily on individual sociodemographic characteristics as predictors of treatment utilization, finding that racial-ethnic minority background, unemployment, low educational achievement, low income, social deprivation, and lack of health insurance are predictors of poor utilization of mental health services (4).

Although such sociodemographic characteristics play a significant role in the treatment patterns of mental health care clients, few studies have examined the role of clinic characteristics that may help clients overcome these individual barriers to care and lead to better treatment engagement. For example, several authors have noted that certain clinic characteristics have a role in improving engagement of mental health clients. These characteristics include assertive outreach (4,5), case management (5), provider-client match in ethnic background and language spoken in the clinic visit (4), flexible hours (4), and transportation support (6). Most of

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this research has been largely theoretical, qualitative, or based on single clinic samples (4,6), with few studies examining the effects of these characteristics on treatment utilization across different community clinics.

More investigation is needed to explore the clinic-specific characteristics that may influence patterns of treatment engagement among community mental health clients and, in particular, among Latinos, who make up 17% of the U.S. population (7). Although poor engagement in treatment is a universal problem, Latino clients demonstrate worse engagement in treatment than non-Latino whites (8). In particular, the lack of culturally sensitive or bilingual services may hinder engagement in treatment (9). However, as noted above, this literature is sparse, and no studies have quantitatively examined which clinic characteristics predict treatment engagement among Latinos.

Research into clinic characteristics could identify factors that are modifiable and in turn reveal ways in which community mental health clinics can increase the level of treatment engagement. To achieve this goal, we had two main objectives in this study. The first was to compare across sites whether there was significant variability in treatment populations and treatment engagement by examining the rates of kept versus scheduled appointments, and the second was to examine whether clinic characteristics suggested by qualitative research (specifically, offering case management, outreach, parking, and bilingual providers) are significantly associated with treatment engagement.

Methods

Study overview

The data for this study came from a multisite, randomized controlled trial of client activation and a self-management intervention set in 13 community mental health clinics across the country and in one U.S. territory (10). Clients participated in three research interviews and gave consent to have their medical records reviewed for diagnoses, treatment type, and appointments scheduled and attended. Although the trial included 13 sites, one site was excluded from the analysis because of its limited sample size (N=9). Because the intervention did not show significant effects in treatment engagement, the entire sample (N=638) across the 12 sites was included in these analyses. Institutional review board (IRB) approval was obtained by the lead research team and by the IRBs for each site when necessary.

Measures

Outcome data. Treatment engagement was calculated as the ratio of kept to scheduled therapy appointments, psychopharmacology appointments, or both types, as has been defined in previous studies (11). This aspect of treatment engagement was selected because of its importance to health care access and to the financial functioning of community mental health clinics. Attendance data (scheduled and kept appointments) were collected through chart reviews for each client at each site over a 12-month period.

Clinic characteristics. Information regarding clinic characteristics was collected via a survey that was e-mailed to the principal investigator at each participating clinic site. The survey comprised 16 questions assessing the types of services offered at the clinic, clinic office hours, location, and transportation questions. These questions were culled from past studies on clinic characteristics that were associated with treatment engagement (3–5). Data were either provided by each site's principal investigator or collected by a trained clinic staff research assistant over the phone. All of the questions were dichotomous (for example, "Does your clinic offer case management?"), with the exception of the percentage of clinicians who were bilingual. A first-pass examination of the data revealed that variability was not sufficient across sites in 11 of the characteristics (for example, in offering extended clinic hours, offering child care, and providing substance abuse treatment services), and these variables thus were not retained for the analysis. For example, 92% of the clinics had waitlists and were close to community centers, and 83% were attached to larger clinics or hospitals and offered extended hours in some capacity (outside of the standard 9 a.m. to 5 p.m.). All of the community mental health centers offered psychopharmacology, individual therapy, and family therapy, and all sites were located close to public transportation.

Analysis. Aim 1 was examined through chi square tests of variability on the treatment population and on engagement across the 12 clinics. Generalized estimating equations were used to model engagement and accounted for the clustering effect of clinics. We ran a total of five models, one for each clinic characteristic. In order to examine whether clinic characteristics were associated with engagement, a "predictive margins" method (12), also known as the "recycled predictions" method (13–15), was used. In this method, model parameters from the original population were used to predict engagement for each clinic characteristic, with adjustment for all other observed individual-level characteristics (age, gender, diagnosis, insurance status, disability days, interview language, and intervention status). This method generates predictions in an interpretable scale (percentage points) based on the clinic-level characteristic of interest. It identifies the association between the clinic-level characteristic and engagement by testing the significance of the difference in predicted outcomes among hypothetical populations with and without the characteristic. Variance estimates for each prediction were calculated with bootstrap methodology (15) in order to test the significance of the difference in predicted engagement with and without the clinic characteristic of interest. Using an identity link function, we modeled engagement as a normal distribution. Because of the collinearity between clinic characteristic variables, we entered these variables in separate models rather than simultaneously.

To examine the effects of bilingual providers, a subset of aim 2, only Latino clients were included in the analysis to test whether having a large portion of Spanish-speaking providers influenced treatment engagement. Because the predictions were based on hypothetical populations with or without the characteristic, the variable representing the number of bilingual providers was required to be dichotomous. We

dichotomized whether a clinic was staffed more than 50% with bilingual providers, which led to about half the clinics coded as demonstrating this characteristic.

Results

The clients in these analyses were primarily Latino (67% of the total sample) and Spanish speaking (61% of the total sample) (Table 1). The rest of the sample primarily consisted of non-Latino whites (15%) and blacks (11%), with a small percentage identifying with another race or ethnicity (7%). A majority of the sample was female (69%). Age range was roughly distributed equally among 18–34 years (N=194, 30%), 35–49 years (N=254, 40%), and ≥50 years (N=190, 30%). Most clients identified their working status as unemployed (N=436, 68%). Only 11% reported having private insurance; 59% received public insurance, and 29% had no insurance. A large majority of the sample carried a primary diagnosis of a mood or adjustment disorder (72%). The next most frequent primary diagnosis was an anxiety disorder (10%), and the remaining 103 (16%) were classified as having an "other" disorder (eating disorder, psychotic disorder, or substance use disorder).

Before testing the two aims of the study, we examined whether there was significant variation in the samples at each clinic. As shown in Table 1, the sites differed significantly in their distribution of sociodemographic characteristics (p values varied from <.001 to .005). For example, half the sites served primarily Latino clientele (75% or more of their clients), whereas other sites served a diverse clientele (site 4) or primarily non-Latino white clients (site 8). Insurance status also varied widely within the sample. Most of the clinics consisted of clients without insurance (sites 2, 9, and 10) or clients utilizing public insurance (sites 1, 7, and 8), with no site identifying a majority of its clients on private insurance. For the total sample, in one year clients attended a mean±SD of 17.8±13.9 sessions and attended 72% of their scheduled appointments (engagement) (Table 2). Regarding aim 1, we found that the sites varied significantly in terms of engagement

Table 1

Sociodemographic characteristics of study participants at 12 community mental health clinics[a]

	Site 1 (N=70)		Site 2 (N=47)		Site 3 (N=52)		Site 4 (N=30)		Site 5 (N=41)		Site 6 (N=71)		Site 7 (N=74)		Site 8 (N=52)		Site 9 (N=62)		Site 10 (N=76)		Site 11 (N=36)		Site 12 (N=27)		Total (N=638)		
Characteristic	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	p
Female	43	61	37	79	37	71	17	57	23	56	52	73	64	87	30	58	42	68	50	66	23	64	22	82	440	69	.005
Race-ethnicity																											
White	5	7	8	17	2	4	13	43	10	24	6	9	0	—	37	71	0	—	3	4	13	36	0	—	97	15	<.001
Latino	17	24	27	57	43	83	4	13	27	66	53	75	73	99	7	14	61	98	70	92	19	53	27	100	428	67	
Black	39	56	3	6	3	6	9	30	3	7	4	6	1	1	2	4	0	—	1	1	3	8	0	—	68	11	
Other	9	13	9	19	4	8	4	13	1	2	8	11	0	—	6	12	1	2	2	3	1	3	0	—	45	7	
Insurance status																											
Private	1	1	8	17	6	12	2	7	5	12	1	1	1	1	11	21	7	11	8	11	13	36	8	30	71	11	<.001
Public	60	86	15	32	26	50	20	67	29	71	69	97	69	93	39	75	5	8	8	11	22	61	12	44	374	59	
Other	0	—	2	4	1	2	1	3	0	—	0	—	0	—	0	—	0	—	1	1	0	—	0	—	5	1	
No insurance	9	13	22	47	19	37	7	23	7	17	1	1	4	5	2	4	50	81	58	76	1	3	7	26	187	29	
Spanish speaking	14	20	25	53	38	73	4	13	19	46	45	63	68	92	2	4	60	97	67	88	18	50	27	100	387	61	<.001
Primary diagnosis																											
Mood	49	70	39	83	36	69	20	67	32	78	58	82	46	62	36	69	39	63	58	76	33	92	12	44	458	72	<.001
Anxiety	1	1	6	13	9	17	4	13	4	10	4	6	6	8	7	14	2	3	4	5	2	6	1	4	66	10	
Other	17	24	2	4	7	14	6	20	4	10	8	11	22	30	6	12	3	5	14	18	1	3	13	48	103	16	
Missing	3	4	0	—	0	—	0	—	1	2	1	1	0	—	3	6	2	3	0	—	0	—	1	4	11	2	

[a] All between-site differences except gender were significant at p<.001.

(F=15.71, df=1 and 11, p<.001), with a range from 63% to 86%.

In terms of auxiliary services that clinics offered, 50% of the sites (N=6) offered case management and 67% had dedicated outreach staff (N=8) (Table 2). In evaluating transportation barriers, 42% of the sites (N=5) offered travel vouchers and 67% provided free parking (N=8). At seven clinics more than 50% of providers spoke Spanish, and three clinics were fully staffed with Spanish-speaking providers.

After a multilevel model estimation, we predicted rates of engagement for clients attending clinics with and without the clinic characteristic of interest, adjusting for individual-level factors (Table 3). Whereas case management (mean difference=–.089, p<.001), travel vouchers (mean difference=–.085, p<.001), and free parking (mean difference=–.044, p=.001) were associated with lower engagement, outreach (mean difference=.026, p=.03) was associated with improved engagement. Thus the percentage of kept appointments compared with scheduled appointments improved by 3% if the clinic had outreach staff but decreased by 9% when clinics offered case management, 9% when clinics offered travel vouchers, and 4% when they offered free parking. Analysis of whether clinics with ≥50% Spanish-speaking providers improved outcomes for Latino clients indicated that this service did not predict engagement.

Discussion

To our knowledge, this study is one of only a few that have quantitatively explored the role of clinic characteristics in treatment engagement. Our study indicates that, beyond the contribution of individual characteristics, clinic characteristics were associated with treatment engagement.

Having dedicated outreach staff was associated with having fewer missed appointments, and in fact, the predicted engagement was 3% greater than without dedicated outreach staff. Although this percentage is small, it translates to fewer missed appointments, which can be costly for community mental health clinics in that every missed appointment is lost revenue. This finding is consistent with past research suggesting that outreach efforts

Table 2

Characteristics of 12 community mental health clinics, by site and total

Characteristic	Site 1 (N=70)	Site 2 (N=47)	Site 3 (N=52)	Site 4 (N=30)	Site 5 (N=41)	Site 6 (N=71)	Site 7 (N=74)	Site 8 (N=52)	Site 9 (N=62)	Site 10 (N=76)	Site 11 (N=36)	Site 12 (N=27)	Total (%) (N=638)
Engagement[a]													
M	66%	84%	65%	72%	75%	63%	65%	71%	86%	80%	78%	67%	72%
SD	16%	11%	15%	16%	15%	15%	16%	14%	13%	16%	18%	16%	17%
Offer case management	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	50%
Have outreach staff	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	67%
Offer free parking	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	67%
Offer travel vouchers	No	No	Yes	No	Yes	Yes	Yes	Yes	No	No	No	No	42%
% of staff that speaks Spanish	26%	19%	83%	20%	50%	67%	67%	8%	100%	100%	26%	100%	56%
>50% of providers speak Spanish	No	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	No	Yes	58%

[a] Proportion of scheduled appointments attended

Table 3

Predicted rates of engagement in mental health care after adjustment for individual-level characteristics[a]

Clinic characteristic	Yes (N=620) N	Yes (N=620) %	No (N=620) N	No (N=620) %	Difference (%)
Has outreach staff	452	73	436	70	2.6*
Has a case management program in place	421	68	476	77	–8.9**
Has free parking	438	71	466	75	–4.4**
Offers travel vouchers for clients	418	67	471	76	–8.5**
Has ≥50% Spanish-speaking providers[b]	305	73	304	73	.4

[a] Predicted rates were generated by the "recycled predictions" method, which generates predictions with and without the area-level predictor of interest after adjustment for individual-level factors.
[b] The sample size was 417 because the comparison was limited to Latinos.
*p<.05, **p<.001

are associated with improved treatment utilization among clients from racial-ethnic minority groups (16).

Clinics that offer outreach services may be more integrated in their communities, leading clients to feel more connected to the clinic's services and resulting in fewer missed appointments. Outreach staff may themselves have close community ties and thus help reduce the stigma often associated with mental health treatment among clients from minority groups by serving as a familiar, more accessible face for the clinic. In addition, outreach staff may conduct reminder calls and reschedule appointments. Because our engagement variable was a ratio of kept-to-scheduled appointments, the findings suggest that having outreach staff led to a decreased no-show rate at these specific clinics. However, there likely was variability in the training and duties of outreach staff across sites; thus future research should examine what aspects of outreach lead to improved treatment engagement.

Our results also indicate that some clinic factors thought to improve treatment engagement were in fact associated with worse outcomes. Specifically, case management services and travel vouchers were associated with lower rates of engagement. Although we adjusted for individual-level characteristics at each of the clinics, the study's cross-sectional nature did not allow us to disentangle the temporal nature of these associations. It is likely that clinics enact some services as a way to address difficulties with engagement. Moreover, clinics offering case management and travel vouchers may be serving populations that are more difficult to engage (in which substance use, chronic mental illness, or homelessness is prevalent) (17–19). Thus these services may be associated with clinics that treat more difficult-to-treat populations, which is why we found that these practices predicted worse outcomes. In addition, case management at some sites was associated with targeting a clientele that inherently had more barriers to care, and thus it is not surprising that these clinics reported worse treatment engagement. Future longitudinal research would be needed to address these questions and whether the addition of these services would improve treatment engagement within each clinic.

As a final point, our results support existing literature suggesting that lower English proficiency among clients is a barrier to mental health service use. However, we did not find an increase in engagement among sites with a greater percentage of Spanish-speaking providers. This may be due to the fact that most Spanish-speaking participants in this study had access to bilingual care and that, as a result, this treatment barrier had already been addressed.

Conclusions

Understanding the clinic factors that predict treatment engagement is critical to implementing appropriate clinical practices that help reduce the burden faced by many community mental health clinics of high no-show rates and poor treatment utilization. This is the first study to our knowledge to empirically test whether clinic characteristics indeed affect community mental health engagement above and beyond the effects of individual characteristics. In times of fiscal tightening, our study lends support to the implementation of outreach staff in improving treatment engagement and as way to help reduce the financial burden of no-shows in community mental health clinics. This study is an important first step in delineating clinic-level factors, and future work should examine these questions longitudinally to determine causality as well as to identify the specific characteristics of outreach that lead to better treatment engagement.

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