Staff Reports Of Program Structure In Relation To Client Retention, Alliance, And Drug Alcohol Outcomes

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INTRODUCTION

Therapeutic alliance, treatment satisfaction, and treatment participation have been associated with patient outcomes in substance abuse treatment programs[1,2,3,4]. Available literature contends treatment outcomes are impacted on multiple levels by the interaction of patient-, clinician-, and program-level variables. Evidence suggests relationships between:

- Patients' engagement in treatment and program characteristics[1] and functioning[2]
- Treatment quality and clinicians' caseload size[5]
- Organizational functioning and patients' treatment satisfaction and therapeutic alliance[1,2]

Results from the present study support previous findings on the relationship between organizational functioning and patient outcomes, operationalized as patients' ratings of therapeutic alliance, treatment satisfaction, treatment duration, and self-reported substance use. Results provide further evidence on clinician-level variables, such as clinicians' background and demographics, impact on patient engagement in treatment and abstinence from substances.

STUDY DESIGN

The present study used baseline data from an ongoing study of a performance improvement intervention known as the Patient Feedback (PF) Study. The PF study is a quality improvement (QI) mechanism designed to examine the effect of providing clinicians with feedback reports displaying patients' self-reported ratings of therapeutic alliance, treatment satisfaction, and self-reported substance use. Clinicians (n=106) were counselors at participating outpatient substance abuse treatment programs (n=20) who led at least one group per week and signed informed consent to participate in the present study. Patients (n=1,579) were clients in group therapy at participating programs and completed the brief, anonymous PF survey during the last five minutes of group therapy on a weekly basis.

CLINICIAN DEMOGRAPHICS	
Female	72.1%
Hispanic	7.5%
African American	17.0%
White	68.0%
Other	7.5%
Age, *mean (range)*	41.1 (23-70)
Length of time at clinic (present job)	
0 - 6 months	16.2%
6 - 11 months	14.3%
1 to 3 years	40.0%
3 to 5 years	12.4%
> 5 years	17.1%

CLINICIAN TRAINING	
Highest degree earned	
High School Diploma	1.9%
Any College/ Associate's degree	9.5%
Bachelor's degree	33.3%
Master's degree	53.3%
Doctoral degree	1.9%
Certification status in addiction field	
Not certified or licensed	55.3%
Previously certified or licensed	1.3%
Currently licensed or certified	42.7%
Intern	1.0%

PATIENT DEMOGRAPHICS	
Female	34.0%
Hispanic	10.5%
African American	37.9%
White	48.7%
Other	2.9%
Age, mean (range)	39.6 (18-87)
Length of treatment duration at clinic	
< 1 month	29.2%
1 - 3 months	25.6%
> 3 months	45.2%

MEASURES

Organizational Readiness for Change (ORC) is a self-report measure of organizational functioning comprised of 18 subscales (scores range from 10 - 50) representing four domains, Organizational Climate (7 subscales), Motivation for Change (3 subscales), Institutional Resources (5 subscales), Staff Attributes (4 subscales). Clinicians completed the ORC as part of baseline assessment at participating outpatient treatment programs (n=20) during the pre-intervention phase of the PF study.

PF Survey is a brief, anonymous, self-report measure administered to patients at the end of weekly group therapy sessions. Patients rate therapeutic alliance (4 -items) and treatment satisfaction (3 -items) with a group clinician on a 5-point Likert-type scale. Survey items also include demographic information (age, gender, race, and ethnicity) and patients' self-reported alcohol and drug use in the past week.

DATA ANALYSES

- Correlations were used to examine the relationship between ORC scales and clinician demographics, treatment duration, alliance, and treatment satisfaction.
- The relationship between ORC scales and drug and alcohol use (no use vs. any use) was evaluated using Odds Ratios with corresponding 95% confidence intervals.

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RESULTS

CLINICIAN-LEVEL CORRELATIONS

- Clinicians' level of education was correlated with organizations' communication, stress, mission, and change subscales as well as staffs' adaptability.
- Clinicians' average caseload size was inversely correlated with cohesion, communication, mission and staffing needs.
- Clinicians' caseload size was positively correlated with stress.
- Programs' access to equipment was related to certification status, experience in addiction field, time at present job, and average caseload size.
- Correlations revealed moderate effect sizes for three of four Staff Attributes subscales and clinicians' demographics; clinicians' perceived influence was associated with clinicians' certification status, years of experience in addiction field, and length of time at present job; adaptability was associated with clinicians' gender, race, and educational attainment; efficacy was related to clinicians' ethnicity and certification status.
- For Motivation for Change subscales, program needs and pressure for change were correlated with clinicians' race.

CLINICIAN-LEVEL DEMOGRAPHICS AND ORC SUBSCALE CORRELATIONS, (N=106)

	Gender	Ethnicity	Race	Degree status	Certification status	Yrs exp in field	Time at present job	Size of avg caseload
Cohesion	0.05	0.09	0.00	-0.09	-0.04	-0.10	-0.10	-0.23 *
Autonomy	-0.09	0.00	-0.10	-0.18	0.12	0.12	0.09	-0.12
Communication	-0.09	0.10	-0.01	-0.22 *	-0.01	-0.06	-0.03	-0.20 *
Stress	0.17	0.00	-0.07	0.24 *	-0.15	0.01	-0.07	0.36 **
Mission	-0.02	0.16	0.01	-0.20 *	0.09	-0.06	-0.03	-0.21 *
Change	-0.05	-0.05	-0.09	-0.20 *	-0.03	-0.03	-0.02	-0.19
Program needs	0.17	0.17	0.29 **	0.07	-0.06	-0.01	-0.07	0.15
Training needs	0.04	-0.03	0.12	-0.04	-0.12	-0.07	0.01	0.08
Pressure for change	0.09	0.16	0.26 **	0.01	-0.07	-0.07	-0.05	0.02
Offices	-0.18	0.11	-0.12	-0.14	-0.15	-0.11	-0.12	-0.09
Staff	-0.15	-0.02	-0.14	-0.19	0.06	-0.12	0.01	-0.26 **
Training	0.03	-0.11	0.01	-0.06	0.02	-0.13	0.00	-0.03
Equipment	0.10	-0.05	-0.12	-0.11	-0.25 *	-0.26 **	-0.20 *	0.21 *
Internet	0.20 *	-0.14	-0.01	0.15	-0.28	-0.23	-0.24	-0.10
Growth	-0.11	0.10	0.05	0.01	0.18	0.12	0.05	-0.18
Efficacy	0.05	0.20 *	0.07	0.02	0.22 *	0.06	0.07	-0.05
Influence	-0.15	0.07	-0.06	-0.15	0.31 **	0.38 **	0.33 **	-0.02
Adaptability	0.21 *	0.13	0.29 **	0.22 *	0.04	-0.13	-0.11	-0.06

* p < .05
** p < .01
*** p < .001
**** p < .0001

CLINICIAN-LEVEL ODDS RATIOS

- Alcohol use was predicted by 11 ORC subscales while drug use was predicted by six ORC subscales.
- Institutional resources (offices, staffing, training, equipment, and internet access) predicted alcohol and drug use.
- Clinicians' level of education, ethnicity and length of time at present job were greater predictors of patients' substance use than organizational functioning.

CLINICIAN-LEVEL ORC PREDICTION OF SUBSTANCE USE, (N=106)

	Abstinence from Alcohol			Abstinence from Drugs		
ORC Scale	Odds Ratio	Lower Bound (95% Confidence Interval)	Upper Bound (95% Confidence Interval)	Odds Ratio	Lower Bound (95% Confidence Interval)	Upper Bound (95% Confidence Interval)
Cohesion	1.31 ***	1.13	1.51	1.25 ***	1.10	1.43
Offices	1.22 **	1.08	1.39	1.17 *	1.00	1.36
Autonomy	1.21 *	1.02	1.43	1.16 *	1.01	1.32
Change	1.17	1.00	1.37	1.16 **	1.04	1.29
Equipment	1.16 *	1.03	1.32	1.15	0.97	1.37
Internet	1.16 **	1.05	1.28	1.14	0.96	1.34
Training	1.14 **	1.03	1.27	1.14 *	1.03	1.26
Training needs	1.02	0.89	1.17	1.08	0.94	1.25
Mission	1.02	0.89	1.17	0.99	0.86	1.14
Communication	1.00	0.89	1.13	0.98	0.85	1.12
Stress	0.96	0.86	1.07	0.96	0.84	1.10
Growth	0.96	0.84	1.10	0.93	0.82	1.04
Influence	0.93	0.79	1.09	0.92	0.76	1.10
Staffing	0.85 *	0.73	0.98	0.91	0.80	1.04
Pressure for change	0.83 *	0.70	0.97	0.90	0.76	1.06
Adaptability	0.79 *	0.66	0.95	0.89	0.76	1.06
Program needs	0.74 ****	0.64	0.84	0.87	0.72	1.06
Efficacy	0.70 ***	0.58	0.85	0.83 *	0.72	0.97
Clinician Demographic	Odds Ratio	Lower Bound	Upper Bound	Odds Ratio	Lower Bound	Upper Bound
Degree status	4.45 **	1.71	11.60	7.68	0.93	63.73
Gender	1.82	0.23	14.50	6.72 ***	2.53	17.82
Average caseload size	0.52	0.23	1.17	2.60	0.53	12.70
Years experience in addiction field	0.45 *	0.21	0.97	1.67	0.73	3.85
Certification status	0.41	0.16	1.05	1.49	0.54	4.15
Length of time at present job	0.21 ***	0.09	0.47	0.52	0.24	1.16
Race	0.20 *	0.05	0.84	0.18 ****	0.08	0.40
Ethnicity	0.00 ****	0.00	0.03	0.01 ****	0.00	0.15

* p < .05
** p < .01
*** p < .001
**** p < .0001

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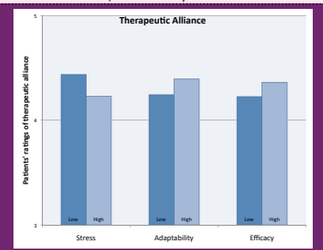
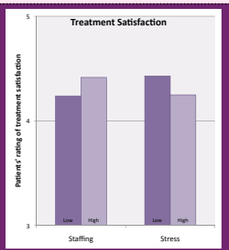
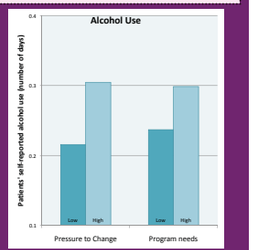
CLINICIAN-LEVEL SIGNIFICANT CORRELATIONS

To descriptively illustrate the relationship between ORC scales and patient outcomes, the ORC measures were split at the sample median. Mean values for the patient outcomes were then calculated for high and low values of the ORC scales and are displayed in the bargraphs for selected significant findings from the correlational analyses.

- **Therapeutic Alliance**: Stress (median = 35.00 ,mean = 35.00, SD = 9.44), Adaptability (median = 40.00, mean = 38.71, SD = 5.57), Efficacy (median = 40.00, mean = 40.36, SD = 5.10)
- **Treatment Satisfaction**: Staffing (median = 32.00, mean = 31.25, SD = 6.76), Stress (median = 35.00 ,mean = 35.00, SD = 9.44)
- **Alcohol Use**: Pressure to change (median = 31.43, mean = 30.94, SD = 6.61, Program needs (median = 30.00, mean = 30.15, SD = 7.28)







PATIENT-LEVEL CORRELATIONS

- Patients' ratings of therapeutic alliance (mean = 4.28, SD = .81) and treatment satisfaction (mean = 4.31, SD = .79) were remarkably high. Treatment duration was approximately one month (mean = 4.73, SD = 1.58) and, on average, patients' self-reported less than one day of substance use in the past week (alcohol use: mean = .33, SD = 1.02; drug use: mean = .37, SD = 1.23).
- Large effect size were found for the correlation between therapeutic alliance and treatment satisfaction (.78).
- Drug use and therapeutic alliance were negatively correlated (-.09).
- Treatment duration was correlated with therapeutic alliance (.06) and treatment satisfaction (.07) but not with substance use. Treatment duration was also correlated with clinicians' demographics and background.
- No correlation was found between therapeutic alliance and clinicians' demographics and clinical experience.
- Patients' satisfaction with treatment was correlated only with clinician's ethnicity.
- Patients' alcohol use was correlated with clinicians' ethnicity, education level, certification status, and experience in addiction field.
- Clinicians' level of education was inversely related to patients' substance use; only clinicians' education level was correlated with drug use.

PATIENT-LEVEL CORRELATIONS OF PATIENT OUTCOME VARIABLES AND CLINICIAN DEMOGRAPHICS (N=1,579)

Clinician Demographic	Alliance	Length Tx	Tx Satisf	Alc Use	Drug Use
Gender	0.01	0.03	-0.01	-0.01	-0.05
Ethnicity	-0.05	-0.06 *	-0.06 *	0.09 *	0.04
Race	-0.01	-0.12 ****	-0.04	0.04	-0.04
Educational degree status	0.01	0.07 *	-0.04	-0.09 **	-0.07 **
Certification status	-0.01	-0.12 ****	-0.01	0.06 *	0.00
Years experience in addiction field	-0.03	-0.04	-0.01	0.07 *	0.05

* p < .05
** p < .01
*** p < .001
**** p < .0001

PROGRAM-LEVEL ANALYSIS

- No relationship between organizational functioning and patients' therapeutic alliance and treatment satisfaction was found.
- Organizational functioning was related to patients' duration in treatment and self-reported substance use.
- Program-level correlations revealed large effect size between patients' treatment duration and cohesion (.68), communication (.46), program needs (-.46), and offices (.49).
- Medium effect sizes emerged for correlations between alcohol use and program needs (.49) and between drug use and stress (.45), mission (-.53), and change (-.48).
- Effect sizes were stronger for program-level correlations of organizational functioning and patient outcomes than for clinician-level correlations.

CONCLUSIONS

The present study found that clinician demographics, educational attainment, and clinical experience were more predictive of patient outcomes than was organizational functioning. Previous research5 has noted that while licensure and credentialing ensure clinicians are knowledgeable about substance abuse treatment it does not ensure that clinicians have the necessary therapeutic skills. The present study found that clinician demographics, educational attainment, and clinical experience were more predictive of patient outcomes than was organizational functioning. One limitation to the study is the small number of participating treatment programs. Therefore, further exploration in to the relationship between clinicians' training and patient outcomes is necessary.