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Measuring a Community-based Mental Health Organization's Culture and Climate Scores
Stability

Abstract. This project builds on the work of Glisson et al., (2008) and the knowledge learned from community-based mental health organization's internal structures (e.g., culture and climate), which possibly impede the implantation and adoption of new technologies. The Organizational Social Context (OSC) Model measurement system is guided by a model of social context that composes both organizational and individual level constructs, including individual and shared perceptions that are believed to mediate the impact of the organization on the individual. Although the OSC has been developed and validated over time, the literature does not provide guidance on test-retest reliability of the scale.

Key Words: Organizational Culture; Organizational Climate; Test-retest reliability; Evidence-based Practice; Community-based Mental Health Organizations

Introduction

This project builds on the work of Glisson et al., (2008) and the knowledge learned from community-based mental health organization's (CBMHOs) internal structures (e.g., culture and climate), which possibly impede the implantation and adoption of new technologies. After many years of organizational research, specific ingredients within an organization's culture and climate have been identified as increasing the likelihood that new technologies will be adopted (Glisson et al., 2002; Hemmelgarn et al., 2006). The Organizational Social Context (OSC) Model measurement system is guided by a model of social context that composes both organizational (structure and culture) and individual (work attitudes and behavior) level constructs, including individual and shared perceptions (climate) that are believed to mediate the impact of the

organization on the individual (Glisson, 2002). Although the OSC has been developed and validated over time, the literature does not provide guidance on test-retest reliability of the scale.

Background

Organizational culture and climate have emerged as probable concerns not only related to client outcomes, but also when attempting to implement new innovative technology into existing community-based mental health organizations (CBMHO). This is important because those organizations with less than ideal cultures and climates (e.g., defensive cultures and climates) not only impact quality of client care and outcomes, but they also erect barriers to new service technologies designed to improve overall client health outcomes (Glisson, 1996). Ideal organizations tend to be safe places to try new ideas and practices and supports staff's activities during the implementation of new technologies (1996).

Organizational Culture

Socializing workers in how to behave and go about their work stem from organizational norms and individual attitudes. Theoretical models useful in understanding organizational acculturation include Bandura's (1977) social learning theory, Miner's (1980) expectancy theories as well as James, et al., (1990) cognitive processing models. When new workers enter the organization, they are educated by means of direct observation; modeling along with personal experiences followed by rewards, punishments, and expected outcomes following one's work behavior (Hemmelgarn et al., 2006). According to Hemmelgarn and researchers (2006) mental representations or as they refer to as schemas, are developed by workers and aid in gaining meaningful understandings of how organizations work. As a result, workers become acculturated to a set of organizational beliefs and expectations helping to guide their interpretation of organizational stimuli, the decisions they make, and behaviors in which they engage (2006).

Basically, culture can be defined as the normative beliefs and united behavioral expectations in an organizational service unit (Cooke & Szumal, 1993).

Psychological and Organizational Climate

The definition of psychological climate is the employee's, specifically as an individual, perception of the psychological impact of the work surroundings on their own well being (James & James, 1989; James et al., 1990; James & Jones, 1974). Individuals evaluate what is personally important to them and their personal welfare whether or not aspects of their jobs provide this importance (1990). Edmondson (1999) provides an expansive concept of climate explaining that there is a sense of safety within teams. This sense of safety and confidence that the team will not embarrass, reject, or punish someone for disagreeing with that team allows for the perception that one's environment is non-threatening and safe for errors to be expressed, mistakes can be addressed and solutions can be forthcoming. These indicators underscore a general higher order evaluation factor on whether or not work environments are good or bad for one's own personal well being (Hemmelgarn et al., 2006).

Organizational Culture and Climate Scale Reliability

The Organizational Social Context Measurement Model (OSC), developed by Dr. Charles Glisson is guided by a model of social context that comprises both organizational (e.g., structure and culture) and individual (e.g., work attitudes and behavior) level constructs, including individual and shared perception (e.g., organizational climate) that are believed to mediate the impact of the organization on the individual worker. The OSC measurement tool contains 105 items that form four domains, 16 first order factors and seven second order factors confirmed in national samples in 99 social and mental health service organizations with approximately 1,200 individuals. The self-administered, Likert scale survey takes approximately

20 minutes to complete and is situated on a scanable bubble sheet. In OSC validation studies, principal components analysis confirmed the tool's factor structure; coefficient alpha reliability showed acceptable levels of psychometric internal consistency.

These factors are grouped by the domains of structure, culture, psychological and organizational climate, and work attitudes. Structure describes the centralization of power and formalization of roles within the organization; culture describes the norms and values that drive behavior in the organization; climate describes the psychological impact of the work environment on the individual; and work attitudes describe the individuals' morale as defined by job satisfaction and commitment to the organization. First order scales (alpha) consist of Centralization (.79), Formalization (.71), Responsiveness (.90), Competence (.89), Apathy (.79), Suppression (.72), Emotional Exhaustion (.91), Role Conflict (.85), Role Overload (.83), Personalization (.72), Personal Accomplishment (.75), Growth and Advancement (.85), Role Clarity (.86), Cooperation (.80), Job Satisfaction (.84), and Organizational Commitment (.92). The second order scale (alpha are, Rigidity (.81), Proficiency (.94), Resistance (.81), Stress (.94), Engagement (.78), Functionality (.90), and Morale (.93), (Glisson, 2002). Together, these dimensions provide a comprehensive profile of an organization's social context that can be compared with national norms and used in variety of service system intervention efforts and effectiveness studies.

The overall purpose of this study was to evaluate the short-term stability of culture and climate scores obtained from the operating units of a small CBMHO. Using Glisson's (2002) OSC survey instrument, this project measured the organization's culture and climate at two points separated by an approximate six month interval. The innovation of this proposal is that although Glisson's OSC survey has been developed over many years, it has been used to date as

a one-time (static) score and not been tested longitudinally. In order to follow Glisson et al.'s organizational-level research recommendations (see Glisson et al., 2008; Hemmelgarn et al., 2006) it is important to know if the scales properties remain stable over time.

Method

The Community-based Mental Health Organization

The community-based mental health organization (CBMHO) participating in this study is located in the Buffalo, NY area and provides a range of health and mental health services such as addiction counseling, mental health assessments and treatments, and dual disorder services, with multiple funding streams, to children, adults, and families. The diversity of services offered was an important factor in its selection. At the time of the study the CBMHO employed 134 persons at eight locations, one of which houses administrative staff only.

Employees of the CBMHO were eligible to participate in the study provided they were: (a) aged 18 years or older, (b) employed by the CBMHO during the baseline assessment, (c) had direct clinical contact with clients, and (d) could read and understand English sufficiently to complete informed consents and data collection forms. Employees having program oversight responsibilities as well as carrying an active client caseload were eligible; however, employees having only managerial responsibilities were not. Of the 134 employees, 92 provided direct client services with the remaining 42 employees making up the support or administrative staff.

Participants

Seventy-nine of the 92 eligible employees (87%) participated in the initial survey. About 71% of participants were female; the majority were white (81%) or African American (10%); and the average was about 45 years of age. Participants had about 16 years of full-time work experience in human service agencies including about eight years in the present agency. A

Masters degree was held by 45% of participants and Bachelors degree by an additional 36%. Social Work had been the major of 45% of participants while an additional 33% had majored in a field other than education, nursing, or psychology.

Measures

Participants completed Organizational Social Context (OSC) survey instrument (Glisson, 2002). The OSC is self-administered and consists of 105 items assessing the participant's perceptions of their work group's culture and climate and their own morale and a short set of demographic questions (gender, age, ethnicity, education level and major, and years of social services experience). Participants use a five point Likert scale (e.g., Never to Always) to respond to the culture, climate and morale items. Responses are recorded in a scanable booklet and the whole survey takes approximately 20 minutes to complete.

Completed surveys were processed and scored by Glisson and associates. Surveys were deleted if more than ten percent (i.e., 11) of the 105 OSC items were missing or if a unit had fewer than four respondents. Accepted surveys were scored to yield unit-level (i.e., clinic location) t-scores for the three culture and three climate scales and worker-level t-scores for the morale scale that were then returned to the investigator along with participants' demographic data. The t-scores were computed from Glisson et al's (2008) sample of 100 CBMHOs, which established the first national norms for describing and profiling organizational culture and climate. The T1 coefficient alphas for this sample were Proficiency, .84; Rigidity, .76; Resistance, .83; Engagement, .77; Functionality, .89; and Stress, .91.

Procedures

Participants were assessed twice with six months between the two assessments. They were invited to participate in the study during an agency-wide training at which attendance was

required. Those who volunteered were consented with all managerial-level staff not present. The second assessment was conducted at a voluntary agency-wide social event.

Results

Of the 79 staff members who participated in the initial survey, 71 (90%) completed the second survey six months later. However, two T1 surveys and one T2 survey were deleted due to excessive missing data and two T1 surveys and one T1 survey were deleted due to fewer than four respondents in their unit. The resulting 75 T1 and 68 T2 participants were spread across the same 6 organizational units. The number of persons per organizational unit varied between five and 30. The six units differed significantly on two staff demographic variables: years in present agency, $F(5, 59) = 4.29, p = .002$, and white ethnicity $X^2(5, N = 59) = 12.64, p = .027$.

Essentially, the average years of experience in the present agency ranged between 10 and 13 for three units and between 3 and 7 for the other three units. Sixty and sixty-six percent of the staff were white in two units; 80% and 92% were white in the remaining two units; and all staff were white in the three remaining units.

Irrespective of whether workers give a high or low rating to their workgroup on a culture or climate dimension, workers may hold similar or differing views. A measure of within-group consistency reported by Glisson and associates for each unit and scale is the within-group interrater agreement, r_{wg} , (James, Demaree, & Wolf, 1993). The values of this statistic ranged between .87 and .99 (mode = .97) at T1 and between .93 and .99 (modes = .96, .97) at T2.

Table 1 reports the T-scores by organizational unit (i.e., clinic location) at both time points on the culture domain subscales and the climate domain subscales. T-scores are scaled to a mean of 50 and a standard deviation of 10. As shown there, of the 36 Time 1 scores (six units by six subscales), 17 are within one standard deviation (SD) of the mean, 17 are one or more SD

above the mean and two are one or more SD below the mean. At Time 2, 14 of the 36 scale scores are one or more SD above the mean and none are one or more SD below the mean. As a point of reference, if subscale scores were uncorrelated and units were independent of one another—which they are not, one might expect 68% (about 24) of subscale scores to be within one standard deviation of the mean and 96% to be within two standard deviations

 Insert Table 1 about here

Scale scores above the mean might be expected on the Proficiency, Engagement, and Functionality scales and below the mean on the Rigidity, Resistance, and Stress scales, both in 'good' organizations. Assuming that all units are 'good', 15 of the 36 scales scores were in the expected direction at time 1 and 13 at time 2. Good direction unit scores were most evident on the Proficiency and Functionality scales at both time points and least likely on the Rigidity, Resistance, Engagement, and Stress scales at both time points. Applying Glisson et al.'s (2008) definition of an ideal organization's profile of culture scores (a Proficient score two or more SDs above both Rigid and Resistant scores) shows that one unit (101) met this criterion at Time 1 and none at Time 2. Conversely, however, none of the units showed the profile of a less-than-ideal organization (the mirror image of the ideal profile) at either time point. None of the units had either an ideal climate profile (Engaged and Functional scores two or more SDs above the Stressful score) or a less-than-ideal profile (the mirror image of the ideal profile) at either time point.

Table 1: Unit level and summary OSC scale scores (T-scores) at Time 1 and Time 2

		Culture	Culture	Culture	Climate	Climate	Climate
Unit	Time	Proficiency	Rigidity	Resistance	Engagement	Functionality	Stress
101	T1	67.1	47.7	42.0	60.6	82.9	49.6

101	T2	62.5	49.7	55.7	56.0	78.2	51.0
102	T1	53.2	58.2	61.7	36.2	59.8	62.8
102	T2	57.6	59.8	60.5	44.3	66.3	55.0
103	T1	53.2	58.4	63.9	45.0	64.1	58.3
103	T2	48.4	61.7	65.1	48.6	63.1	60.1
104	T1	47.9	57.4	79.5	53.2	65.8	60.6
104	T2	43.7	51.4	55.2	45.1	70.8	46.5
105	T1	52.0	57.7	68.4	46.1	63.3	55.1
105	T2	51.7	57.2	67.5	46.9	64.1	54.2
106	T1	43.3	60.7	57.8	39.0	62.7	54.4
106	T2	49.1	53.4	53.6	50.3	65.1	53.0
Mean	T1	52.8	56.7	62.2	46.7	66.4	56.8
Mean	T2	52.2	55.5	59.6	48.5	67.9	53.3
SD		7.42	4.68	9.65	7.07	7.11	4.63
ES		-0.08	-0.25	-0.27	0.27	0.21	-0.75

Note. ES (effect size) is for the Time1-Time 2 difference. The SDs are the square root of the average of the Time 1 and Time 2 scale score variances.

The temporal stability of the OSC scales were examined by computing level stabilities and rank stabilities. Level stability was examined by computing a paired t-test for each scale.

None of the t-tests were significant; however, with an N of 6, an ES (effect size) of from 2.70 to 3.55, depending on the test-retest correlation, would have been required for significance.

Averaging over the six units within each time point (see Table 1) shows that scores for four of the six scales exhibited a 'small' (ES = 0.2) change between times 1 and 2, based on the sample SD. Only one scale, Stress, showed a 'large' (ES = 0.8) change. Although more scale scores change in a positive direction (e.g., more proficiency or less rigidity), the percentage that do, 58%, is not strikingly large. Computing the subscale score changes by unit from Time 1 to Time 2, shows that most scores change by 'tiny' (ES less than 0.2, based on an SD = 10) amounts ($n = 14$) or 'small' (ES = 0.2 to 0.5) amounts ($n = 11$). Only six scores changed by a 'large' (ES greater than 0.8) amount, but four of these had quite large changes of ES = 1.1 to 2.4 in absolute terms.

While most units showed some variability in their change scores, one unit (105) showed changes

of less than 0.1SD on all scales. That this unit had the largest number of participants (28) may be relevant only to the extent that more respondents tend to average out 'extreme' views.

Rank stability was assessed by the test-retest correlation for each scale and the results showed a surprising, and unexpected, variability. Two scales exhibited a very high stability (Proficiency: $r = .81$ and Functionality: $r = .90$), both of which were significant at $p < .05$; two scales exhibited moderate stability (Rigidity: $r = .55$ and Engagement: $r = .58$); and two scales exhibited low stability (Resistance: $r = .24$ and Stress: $r = .09$). While the range of the correlations may be striking, it must also be borne in mind that tiny sample size means the sampling error is quite large. That said, it is important to note that for the Proficiency and Functionality scales, the Time 1 and Time 2 scores generally differ by about 0.4 SD or less in either direction across the six units. In contrast, the Resistance and Stress scales show a combination of differences of 0.2 SD or less and differences of 1.4 SD or more in both directions. Thus, the low test-retest correlations may be a consequence within-unit processes.

Discussion

The purpose of this study was to investigate the short-term test-retest stability of Organizational Social Context scores from a small CBMHO. Staff members with direct client contact were surveyed twice at a six month interval. Among the 87% of eligible staff that participated, there was a high level of intra-group agreement. The values found here were slightly higher than those reported by Glisson et al.'s (2008) sample of 100 clinics. Over the six month period, there was evidence of mostly a small degree of change, an ES of about .25 in absolute value, in t-scores on most OSC scales when averaged over the six units. Important exceptions were the Proficiency and Stress scales, which showed a change about one-third as large and about three times as large, respectively. Culture domain scores worsened while climate

domain scores, except for Stress, improved. Test-retest correlations showed considerable variability with two scales, Stress and Resistance, having quite small test-retest values, less than .30, two scales, Rigidity and Engagement, having moderate values, between .55 and .60, and the remaining two scales, Proficiency and Functionality, having values over .80. In summary, it appears that while work group members agree with one another about the group's climate and culture, work group members also report that group's climate and culture changed to some extent over the six month interval.

The single most important limitation in this study is sample size. With only an *N* of six units, none of the level stability comparisons are significant and only the .90 test-retest correlation for Functionality is significant at the .05 level. A related aspect of the sample size is that while the sizes of each of the six units in the participating CBMHO were similar to the sizes of the clinics in Glisson et al.'s sample, the six units come from a single CBMHO. Possibly, the Glisson study would have regarded this organization as a single subject rather than as six subjects. That said, each of the six units have a middle management that stands between the caseworker staff and the senior management. To the extent that these data are replicated in similarly structured organizations, the variability points to the 'localness' of culture and climate.

The participation rate, particularly in a small sample study, is also a concern. Although our participation rate was 11 percentage points larger than Glisson et al.'s average of 76%, we can not rule out the possibility that had the 13 non-participating workers actually taken part, the results might have been different. However, for that to happen it those 13 workers would have to have systematically responded to the survey items quite differently from their peers.

These results show that in this CBMHO certain culture and climate dimensions seem more stable than others. These results may have significance for the organization's senior

management to the extent that they confirm their observations and they can relate intra-organization and external events to apparent changes in perception. To the question of whether the culture and climate constructs hypothesized by Glisson and associates have the stability imputed to them, these data can not provide an answer. As such these data are simply one data point in what must be a large sample of similar data points.

References

- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Cooke, R.A., & Lafferty, J.C. (1994). *Organizational culture inventory*. Plymouth, MI: Human Synergistic International.
- Cooke, R.A., & Szumal, J.L. (1993). Measuring normative beliefs and shared behavioral expectations in organizations: The reliability and validity of the Organizational Culture Inventory. *Psychological Reports*, 72, 1299-1330.
- Frambach, R.T., & Schillewaert, N. (2002). Organizational innovation adoption: A multi-level framework of deterrents and opportunities for future research. *Journal of Business Research Special Issue: Marketing Theory in the Next Millennium*, 55, 163-176.
- Glisson, C. (1996). Judicial and services decisions affecting children in state custody: The limited role of mental health. *Social Services Review*, 70(2), 257-281.
- Glisson, C. (2002). The organizational context of children's mental health services. *Clinical Child and Family Psychology Review*, 5(4), 233-253.
- Glisson, C., & James, L.R. (2002). The cross-level effects of culture and climate in human services teams. *Journal of Organizational Behavior*, 23, 767-794.

- Glisson, C., Landsverk, J., Schoenwald, S., Kelleher, K., Hoagwood, K.E., Mayberg, S., & Green, P. (2008). Assessing the Organizational Social Context (OSC) of Mental Health Services: Implications for Research and Practice, *Administration and Policy in Mental Health and Mental Health Services Research*, 35, 98–113.
- James, L.R., Hater, J.J., Gent, M.J., & Bruni, J.R. (1978). Psychological climate: Implications from cognitive social learning theory and interactional psychology. *Personnel Psychology*, 31, 783-813.
- James, L.A., & James, L.R. (1989). Integrating work environment perceptions: Explorations into the measurement of meaning. *Journal of Applied Psychology*, 74, 739-751.
- James, L.R., James, L.A., & Ashe, D.K. (1990). The meaning of organizations: The role of cognition and values. In B. Schneider (Ed.), *Organizational climate and culture* (pp. 40-84). San Francisco: Jossey-Bass.
- James, L.R., & Jones, A.P. (1974). Organizational climate: A review of theory and research. *Psychological Bulletin*, 81(12), 1096-1112.
- James, L.R., & Sells, S.B. (1981). Psychosocial climate: Theoretical perspectives and empirical research. In D. Magnusson (Ed.), *Toward a psychology of situations: An interactional perspective* (pp. 275-450). Hillsdale, NJ: Erlaum.
- Klien, K.J., & Sorra, J.S. (1996). The challenge of innovation implementation. *Academy of Management Review*, 21, 1055-1080.
- Harmsen H., Grunert, K.G., & Declerck, F. (2000). Why did we make that cheese? An empirically based framework for understanding what drives innovation activity. *R&D Management*, 30 (2), 151–166.

- Hemmelgarn, A.L., Glisson, C., & James, L.R. (2006). Organizational culture and climate: Implications for services and interventions research. *Clinical Psychology: Science and Practice, 13*(1), 73-89.
- Miner, J.B. (1980). *Theories of organizational behavior*. Hinsdale, IL: The Dryden Press.
- Nadler, D.A., & Tushman, M.L. (1997). A diagnostic model for organizational behavior. In J.R. Hackman, E.E. Lawler III, & L.W. Porter (Eds.), *Perspectives on behavior in organizations* (pp. 85-98). New York: McGraw-Hill.
- Nijssen, E.J., & Frambach, R.T. (2001). Determinants of the adoption of new product development tools by industrial firms. *Journal of Product Innovation Management, 18*(2), 125-126.
- Rogers, E.M. (1995). *Diffusion of innovation*. (4th ed.). New York: Free Press.
- Rousseau, D.M. (1997). Technological differences in job characteristics, employee satisfaction and motivation: A synthesis of job design research and sociotechnical systems theory. *Organizational Behavior and Human Performance, 19*, 18-42.
- Verbeke, W., Volgering, M., & Hessels, M. (1998). Exploring the conceptual expansion within the field of organizational behavior: Organizational climate and organizational culture. *Journal of Management Studies, 35*, 303-329.