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Predictors of On-Site Vocational Support for People with Schizophrenia in Supported Employment

Wayne Zito, Psy.D.¹, Tamasine C. Greig, Ph.D.¹, Bruce E. Wexler, M.D.¹, and Morris D. Bell, Ph.D.^{1,2}

¹ Yale University School Of Medicine, Department of Psychiatry

² VA Connecticut Healthcare System

Abstract

This study examined predictors of intensity of vocational specialist support for clients with schizophrenia or schizoaffective disorder in supported employment. Sixty-nine outpatients with schizophrenia or schizoaffective disorder were recruited from a community mental health center for 12 months of vocational and cognitive rehabilitation. Neuropsychological test scores, symptom ratings, illness severity, and employment history were used to predict vocational support intensity, expressed as hours coached in ratio to total hours worked over 12-months for each client. Weekly work hours were inversely correlated with intensity of vocational support ($r = -.55$). Half of the sample averaged 10 to 40 hours of work per week and received significantly lower proportions of on-site job coaching than the lowest quartile, which averaged 2 to 5 hours of work per week. Regressions predicting support intensity from neuropsychological composite scores, educational / vocational, and hospitalization history were not significant. Significant regressions included PANSS, SANS, and SAPS subscales, after which individual symptoms responsible for explained variance were isolated. SANS social inattention and PANSS active avoidance together predicted 23 percent of the variance in support intensity. A one-way ANOVA comparing work participation quartiles on these symptoms revealed significantly higher levels of active avoidance and social inattention for participants working less than ten hours per week. A profile emerged of the high intensity client as a socially inattentive or avoidant individual requiring a limited work schedule. Results suggest that these clients require more specialist contact because of failure to adequately engage natural supports at work.

Correspondence to: Wayne Zito.

Wayne Zito, Psy.D., Yale University School Of Medicine, 34 Park St., New Haven, CT. 06519, (203) 974-7520, Wayne.Zito@Yale.edu, Fax number: (203) 974-7881

Tamasine C. Greig, Ph.D., Yale University School Of Medicine, 34 Park St., New Haven, CT. 06519, (203) 974-7505, Tamasine.Greig@Yale.edu, Fax number: (203) 974-7881

Bruce.Wexler, M.D., Yale University School Of Medicine, 34 Park St., New Haven, CT. 06519, (203) 974-7339, Bruce.Wexler@Yale.edu, Fax number: (203) 974-7881

Morris D. Bell, Ph.D., West Haven VA Medical Center, 950 Campbell Ave., 116B, West Haven, CT. 06516, (203) 932-5711 ext. 2281, Morris.Bell@Yale.edu, Fax number: (203) 937-4883

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Keywords

schizophrenia; supported employment; support intensity; symptom predictors

Supported employment (SE) is an evidence-based psychosocial treatment for persons with severe mental illness (Drake et al., 2000; Bond et al., 2001). In particular, the Individual Placement and Support (IPS) model of SE has demonstrated superiority to alternative forms of vocational rehabilitation for SMI clients (Drake et al., 1996; Clark et al., 1998; Drake et al., 1999) and to psychosocial rehabilitation programs incorporating transitional employment services (Mueser et al. 2004).

Studies have identified critical components of IPS program fidelity related to successful work outcome. Among these is the use of full-time employment specialists (Becker et al., 2001). From the client perspective, effective SE is personified in the vocational specialist, who facilitates a fit of client interests to vocational setting and provides on-going job support. Leff et al., (2005) found that job development increased the likelihood of acquiring competitive employment and that job support was associated with retention of competitive employment.

In the IPS model, the vocational specialist provides on-site client support as needed. For clients initially requiring full-time support, job coaching can usually be tapered as they gain autonomous skills or engage natural supports (e.g. helpful co-workers or supervisors). IPS fidelity guidelines specify a maximum caseload of only 25 active clients per vocational specialist at any one time to accommodate clients who require ongoing support at higher intensity, but little is known about client characteristics that may predict support intensity.

Client characteristics associated with vocational outcomes are a logical starting point for the identification of such predictors. Razzano et al., (2005) found that a diagnosis of schizophrenia was associated with less work activity, and that higher levels of negative symptoms and more frequent hospitalizations were associated with less work and reduced likelihood of achieving competitive employment.

Cognitive impairments in schizophrenia have been identified as “rate-limiting” factors in social and occupational domains (Lieberman, 1996). McGurk and Meltzer (2000) found that better performance on executive function, working memory and vigilance distinguished full-time from part-time and unemployed work status, and found poor premorbid function, negative symptoms, and cognitive dysfunction to be significantly associated with unemployment. Bell & Bryson (2001) found that up to 79% of the variance in improvement in work performance could be predicted from baseline cognitive performance. Evans et al., (2004) reported that baseline measures of verbal learning and memory, and symptoms of cognitive disorganization were modestly related to work performance in a schizophrenia sample enrolled in stepwise and IPS programs. Lysaker et al., (2005) found that schizophrenic participants in vocational rehabilitation without impairments in processing speed and executive function showed superior work performance over time compared to participants with impairments in one or both domains.

To date however, only two published studies have examined predictors of vocational specialist contact. Jones, Perkins, and Born (2001) found that intake demographic variables of gender, age, diagnosis, hospitalization history, GAF scores, prior work history, and amount of disability entitlements were not predictive of total SE service hours used prior to work by a sample of 576 clients (276 with a diagnosis of schizophrenia) from diverse community mental health centers. Using an outpatient sample of 30 clients with schizophrenia or schizoaffective disorder in an SE program, McGurk et al., (2003) found that better baseline performance on neuropsychological measures of executive function, attention, and psychomotor speed were

significantly associated with fewer on-site job supports and less contact with job specialists, while higher levels of positive symptoms were associated with more supports and greater frequency of contacts.

Recently, McGurk and Mueser (2004) have suggested that SE may be effective, in part, by compensating for the detrimental effects of cognitive impairments and symptoms at work. With respect to symptoms, McGurk and Mueser hypothesize that positive and not negative symptoms are effectively compensated for by SE services.

At the discretion of the vocational specialist, compensatory strategies for symptoms, cognitive deficits, and problematic behaviors at work implemented, modified or discarded in favor of alternative strategies. Interventions may involve accommodations in the work place, environmental aids, or direct job coaching.

The purpose of this study was to identify clinical and background characteristics associated with work outcome in schizophrenia that may predict intensity of on-site vocational specialist support. Findings may help clarify features of schizophrenia that are most relevant to rehabilitation processes.

We hypothesized predictive relationships between individual participant characteristics and intensity of on-site support. We also hypothesized an inverse relationship of average weekly work hours to intensity of job support, based on the observation that participants with more severe work difficulties often choose to work fewer hours. If true, we hypothesized that participants who worked fewer hours per week would differ significantly from clients who worked more hours per week on those variables associated with support intensity.

Methods

2.1. Subjects

Seventy-seven clinically stable outpatients with SCID (Spitzer et al. 1997) determined diagnoses of schizophrenia or schizoaffective disorder were recruited from an urban community mental health center for a study of vocational and cognitive rehabilitation. Exclusion criteria included history of traumatic brain injury, developmental disability, neurological disease, or active substance abuse. Three people who signed consent forms were excluded prior to randomization: two for substance abuse relapse, one for a newly diagnosed seizure disorder. Four other participants withdrew voluntarily. An additional participant classified as a missing person by the police was excluded from analyses. The final sample comprised sixty-nine participants.

2.2. Instruments

A neuropsychological test battery was administered at intake that included the WAIS III (Wechsler, 1997a), WMS (Wechsler, 1997b), HVL (Brandt, 1991), Verbal Fluency (Benton & Hamsher, 1976), WCST (Heaton et al., 1993), trail making (Reitan, 1992), Tower of London (Colorado Assessments Tests, 1999) and CPT (Loong, 1991). A factor analysis employed for purposes of data reduction yielded a four-factor solution consistent with Bell et al. (2001). Items with the highest loadings on each factor were organized into groupings representing neuropsychological constructs (Table 2). Z-score transformations using sample statistics were performed on the component variables of each grouping, and these were averaged to create a single composite score representing each grouping and its underlying neuropsychological construct. These four composite scores were subsequently utilized in multiple regression analyses.

Symptoms were assessed using the Positive and Negative Syndrome scale (PANSS; Kay et al., 1987), the Scale for the Assessment of Negative Symptoms (SANS; Andreason, 1984a), and the Scale for the Assessment of Positive symptoms (SAPS; Andreason, 1984b). We reasoned that predictive relationships could be more meaningfully interpreted using the range of clinical phenomena represented by the five component model of the PANSS (Bell et al., 1994) as an alternative to the rationally derived categories of positive, negative, and general symptoms. The five components are Positive, Negative, Cognitive, Hostility, and Emotional Discomfort (Table 3).

Demographic variables were obtained at intake from participant interviews, clinician interviews, and medical chart reviews (Table 1). These variables included employment history, lifetime severity of illness, and level of education, which were selected as potential predictors of vocational support intensity over the 12-month active intervention. Participant work history at intake is provided in Table 2. No participants were actively working at the time of enrollment in the study.

2.3 Outcome measure

Work hours were based on payroll records and were verified weekly. Vocational specialists submitted weekly reports of support hours provided to each participant. On-site support intensity was derived using the same method as McGurk et al. (2003), with hours of on-site work support by the vocational specialist in ratio to the total number of hours the participant worked. Excluded were hours of vocational assistance in job search, job development, or other forms of indirect support. Mean percentage of coach hours/work hours was 23% (SD=18%) for all participants at the end of one year.

2.4 Procedure

Participants were recruited from an urban community mental health center for participation in an NIMH funded RCT investigating the treatment efficacy of SE services augmented by neurocognitive enhancement therapy. Research psychologists performed interviews and assessments after obtaining written informed consent, approved by IRB at the Yale University School of Medicine. Participants received SE services based on the Individual Placement and Support model. Vocational specialists were employed by local vocational agencies and trained in the IPS model.

Participants typically worked at entry-level service positions such as restaurant dishwasher, food server, or warehouse stockperson. Participants received at least minimum wage and usually worked less than 20 hours per week. During the 12 month active period of the intervention, mean hours worked for all participants was 307.10 (SD= 272.14). Mean hours of on-site support was 49.62 (SD=42.13). Our participants held an average of 1.5 jobs (SD=.67) and worked an average of 28.72 weeks (SD=16.56) at each job.

2.5 Intervention

Participants were randomized to receive standard SE services, or SE services augmented by computerized cognitive training. Modifications to IPS procedures (used in both conditions) included weekly work groups led by research psychologists, and the use of transitional funds to facilitate rapid job placement.

Job specialists determined when transitional funds, provided by the State of Connecticut, were necessary to help a client get to work quickly. Transitional funds were used when employers were willing to hire a participant if the client demonstrated adequate job performance. These jobs were in competitive settings where participants performed the same jobs as their non-mentally ill co-workers, the only difference being the payment source during the transitional

period. In all other respects these jobs are consistent with competitive employment outcome defined by the US Department of Labor and the SE literature in that these jobs 1) paid minimum wage or higher; 2) were in a mainstream, socially integrated setting; 3) were not set aside for mental health consumers; and 4) were not set aside or contracted with a social service agency (Razzano et al., 2005). This modified IPS program received a score of 62 out of 75 (83%) on the IPS fidelity scale when rated by three independent raters (Gary Bond Ph.D., Personal communication). This rating falls in the “fair” range of IPS fidelity.

2.6 Statistical Analyses

Statistical analyses were performed using SPSS 13.0 for Windows. Prior to analyses, data were screened for violations of normality and homogeneity of variance. Transformations were performed where necessary using Blom normalization procedures in SPSS.

In order to first examine the relationship of work participation to intensity of support, mean hours of work per week were computed for each participant, excluding weeks during which the client did not work (when no on-site support could take place). The resulting distribution was correlated with mean ratings of vocational support, calculated as the total hours of on-site vocational specialist contact with a client in ratio to total client work hours over a 52-week period. Quartile division of the distribution of mean weekly work hours was used to create four groups spanning 2.3 to 40 hours of work per week. One-way analysis of variance was used to compare these groups on intensity of vocational support (Table 4).

To examine the relationship of clinical variables to support intensity, separate stepwise multiple regressions were performed predicting to vocational support intensity during the twelve-month active intervention. Six regression models were constructed using neuropsychological composite scores, symptom ratings, and participant background characteristics at intake (Table 5). Significant models were subjected to secondary analyses to identify individual variables most responsible for explained variance (Table 6).

3.0 Results

Weekly work hours were inversely correlated with intensity of vocational support ($r = -.55$, $p < .000$). ANOVA results comparing work participation quartiles on intensity of vocational specialist support were significant ($F(3,65) = 11.28$, $p < .000$). Post Hoc comparisons show that the upper 50% averaging 10 to 40 hours of work per week received significantly lower proportions of direct coaching from the job specialist than the lowest quartile averaging between 2 and 5 hours of work per week. The upper range of vocational support ratios reaches 100% job coaching for this lower quartile of weekly work hours only (Table 4).

Regression models predicting support intensity from neuropsychological composite scores, educational/vocational history, and hospitalization history were not significant. The regression model utilizing PANSS component scores was significant ($F(2,66) = 6.82$, $p < .01$, $R^2 = .17$). Significant predictors in the model were the cognitive component ($t(1,67) = 2.72$, $p < .01$, $Beta = .31$) and the emotional discomfort component ($t(1,67) = 2.08$, $p < .05$, $Beta = .24$). The regression model utilizing SANS subscales was significant ($F(1,67) = 5.27$, $p < .05$, $R^2 = .07$), with the attention subscale emerging as the only significant predictor ($t(1,67) = 2.29$, $p < .05$, $Beta = .27$). The regression model utilizing SAPS subscales was also significant ($F(1,67) = 3.98$, $p < .05$, $R^2 = .07$), with the bizarre behavior subscale emerging as the only significant predictor ($t(1,67) = 1.99$, $p < .05$, $Beta = .24$).

Secondary analyses regressing the individual PANSS cognitive component symptoms against support hours were significant ($F(1,67) = 4.41$, $p < .05$, $R^2 = .06$) with poor attention emerging as the sole predictor in the model ($t(1,67) = 2.12$, $p < .05$, $Beta = .21$). The PANSS emotional

discomfort component symptoms were significant ($F(1,67)=7.97$, $p<.01$, $R^2=.11$) with the active avoidance item emerging as the sole predictor ($t(1,67)=2.82$, $p<.01$, $Beta=.33$). The SANS attention subscale items were significant ($F(1,67)=9.15$, $p<.005$, $R^2=.12$) with social inattention emerging as the sole predictor in the model ($t(1,67)=3.02$, $p<.005$, $Beta=.35$). The SAPS bizarre behavior subscale was significant ($F(1,67)=4.40$, $p<.05$, $R^2=.06$) with agitated/aggressive behavior emerging as the sole predictor ($t(1,67)=2.09$, $p<.05$, $Beta=.25$).

A final regression model was constructed using SANS social inattention, PANSS poor attention and active avoidance, and SAPS agitated/aggressive behavior. The model was significant ($F(2,66)=9.79$, $p<.0001$, $R^2=.23$), with SANS social inattention ($t(1,67)=3.24$, $p<.005$, $Beta=.35$), and PANSS active avoidance ($t(1,67)=3.05$, $p<.005$, $Beta=.33$), predicting 12 and 11 percent of the variance respectively in support intensity. As an additional check on the results, one-way ANOVA comparing work participation quartiles on these symptoms showed a significant effect for SANS social inattention ($F(3,65)=3.66$, $p<.05$) and PANSS active avoidance ($F(3,65)=4.61$, $p<.01$). Post-Hoc comparisons showed that the two lower quartiles of the distribution of weekly work hours had significantly higher levels of active avoidance than the highest quartile. The lowest quartile also showed significantly higher levels of social inattention than the two highest quartiles.

4.0 Discussion

As hypothesized, weekly work hours were inversely correlated with intensity of vocational support in this study. Participants who averaged between 2 and 5 hours of work per week required up to 26% more on-site support than those averaging ten or more hours of work per week. Roughly 50% percent of our sample averaged 10 hours per week, consistent with the percentage of workers achieving a 40 hours per month level of employment reported by Razzano et al., (2005) as a criteria for successful employment outcome.

While research has shown variables such as educational and vocational history, lifetime severity of illness and neuropsychological test scores at intake to be related to vocational outcome, they failed to predict intensity of vocational specialist support in this study. However, symptom clusters of the PANSS, SANS and SAPS were associated with support intensity. Interview ratings of cognitive deficit, emotional discomfort, inattentiveness or bizarre behavior at intake modestly predicted between 7 and 12 percent of the variance in on-site specialist support.

Second level analyses isolated the individual symptoms of social inattention, poor overall attention, active social avoidance and agitated/aggressive behavior from PANSS, SANS, and SAPS as predictive of support intensity. Further reduction showed that two symptoms, active social avoidance and social inattention, accounted for 23 percent of the variance. Participants who worked fewer than ten hours per week over the course of one year, and who had significantly higher mean percentages of job coaching also had significantly higher ratings of active social avoidance and social inattention at intake. Thus, a profile emerges of the high intensity client as a socially avoidant or socially inattentive individual who requires the accommodation of a limited work schedule.

In our sample, poor social attention or active avoidance in interpersonal contexts appeared to elicit support from the vocational specialist, rather than attention deficits measured by neuropsychological testing. This is an interesting finding because it suggests that specialists from local vocational agencies trained in the IPS model responded to social deficits in the workplace with more on-site contact.

We speculate that supervisors may assume that a socially inattentive client is demonstrating overall inattention, disinterest, or lack of enthusiasm for a job. The failure to engage socially

may be offensive to coworkers who misinterpret it as rudeness or “attitude.” If inadvertently offended, co-workers may respond with hostility or avoidance themselves, further isolating the client and escalating the problem. At extremes, the job specialist may need to be continually present to prevent the socially avoidant client from walking off the job or from failing to report to work.

In contrast, clients who engage others socially may be perceived as more likeable. They may solicit assistance from co-workers more readily when other job-related difficulties arise. Therefore, for clients who seek and maintain social interactions, natural supports are engaged, reducing the need for individual coaching by the vocational specialist. Clients who fail to attend socially or who actively avoid social interaction cannot take advantage of these natural supports, thereby necessitating specialist contact as the only compensatory alternative.

The literature suggests that cognitive impairments affect task performance and efficiency, and these deficits may be partially compensated by coaching and/or natural supports. However, social avoidance or social inattention may reduce the likelihood that natural supports will be engaged. Without such support, clients will work fewer hours and require more intensive job coaching.

Limitations of the current study include the nature of the sample and the interventions. A diagnosis of schizophrenia is associated with less work activity and higher levels of negative symptoms than other psychiatric populations at work (Razzano et al. 2005), though this does not explain why only socially avoidant behaviors predicted specialist support in a sample that also exhibited comparable levels of positive symptoms, cognitive impairments and poor work history. Also, our study was limited to on-site support, and excluded indirect support activities that could be influenced by different client characteristics. Our work services fidelity ratings were negatively impacted by two deviations from the IPS model. First, the project operated in a community mental health center with no mechanism for integration of vocational specialists with the clinical teams. The second was our use of transitional funds, which allowed the possibility that more severely impaired clients gained access to employment, and subsequently required more intensive coaching to sustain work. However, this would not explain why only social variables predicted the intensity of on-site support. The issue of sample size and multiple comparisons is a concern because exploratory regressions were conducted to clarify the results of the initial six analyses. However, the final regression model was significant within conservative Bonferroni correction estimates when all regressions were taken into consideration. Analyses comparing groups based on weekly work hours quartiles on hours of on-site support in ratio to total work hours were subject to issues of collinearity, but were retained as having utility in characterizing clients who received high vs. low intensity support services in terms of symptoms later identified as predictive in regression analyses.

Pending replication with comparable diagnostic samples, future research into specific intervention strategies that facilitate social interaction at work may be useful in helping socially avoidant clients engage natural supports in the workplace.

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Table 1

Participant Characteristics n=69

[[[]]]	[[[n]]]	[[[%]]]
[[Gender]]	[[[]]]	[[[]]]
[[Male]]	[[37]]	[[54]]
[[Female]]	[[32]]	[[46]]
[[Ethnicity]]	[[[]]]	[[[]]]
[[African American]]	[[34]]	[[49]]
[[Caucasian]]	[[31]]	[[45]]
[[Hispanic]]	[[2]]	[[3]]
[[Asian]]	[[2]]	[[3]]
[[Schizophrenia Subtype]]	[[[]]]	[[[]]]
[[Paranoid]]	[[35]]	[[51]]
[[Undifferentiated]]	[[5]]	[[7]]
[[Disorganized]]	[[4]]	[[6]]
[[Residual]]	[[3]]	[[4]]
[[Schizoaffective]]	[[22]]	[[32]]
[[Medications]]	[[[]]]	[[[]]]
[[Atypical]]	[[41]]	[[60]]
[[Conventional]]	[[14]]	[[20]]
[[Both]]	[[14]]	[[20]]
[[[]]]	[[MEAN]]	[[SD]]
[[Age]]	[[39.70]]	[[9.48]]
[[Education]]	[[12.69]]	[[2.19]]
[[WAIS IQ]]	[[87.80]]	[[16.7]]
[[Age 1st hospitalization]]	[[23.21]]	[[8.69]]
[[Lifetime # hospitalizations]]	[[8.78]]	[[8.60]]

Table 2

Participant Work Experience at Intake n=69

[[[]]]	[[[n]]]	[[[%]]]
[[[]]]	[[[]]]	[[[]]]
[[Work Experienced]] *	[[[]]]	[[[]]]
[[Yes]]	[[33]]	[[47.8]]
[[No]]	[[36]]	[[52.2]]
# Full Time Jobs Held For One Year or More	[[[]]]	[[[]]]
No Full time Employment	[[36]]	[[52.2]]
[[One Job]]	[[21]]	[[30.4]]
[[Two Jobs]]	[[6]]	[[8.7]]
Three or More Jobs	[[6]]	[[8.7]]
Longest Full Time Job (Years)	[[[]]]	[[[]]]
No Full Time Employment	[[36]]	[[52.2]]
[[One year]]	[[10]]	[[14.5]]
Two to Four Years	[[12]]	[[17.4]]
Five to Ten Years	[[7]]	[[10.1]]
[[> Ten Years]]	[[4]]	[[5.8]]
# Years since last full time Employment	[[[]]]	[[[]]]
No Full Time Employment	[[36]]	[[52.2]]
[[One Year]]	[[5]]	[[7.2]]
[[Two Years]]	[[2]]	[[2.8]]
[[Three Years]]	[[4]]	[[5.8]]
Six to Ten Years	[[4]]	[[5.8]]
Eleven to Fifteen Years	[[8]]	[[11.6]]
Sixteen to Twenty Years	[[6]]	[[8.7]]
[[> Twenty Years]]	[[4]]	[[5.8]]

* Held at least one FT job for minimum of one year continuously.

Table 3
Neuropsychological Testing and Symptom Variables n=69

[[[]]]	[[Mean]]	[[SD]]
[[Executive Function (WCST)]]	[[[]]]	[[[]]]
[[Errors]]	[[78.77]]	[[19.75]]
[[Perseverative Responses]]	[[81.38]]	[[20.78]]
[[Perseverative Errors]]	[[80.83]]	[[20.67]]
[[% Conceptual level]]	[[79.48]]	[[19.89]]
[[Categories Complete]]	[[2.93]]	[[2.46]]
Thought Disorder / Social Cognition	[[[]]]	[[[]]]
[[BLERT total Score]]	[[13.81]]	[[4.91]]
[[Hinting Task]]	[[15.77]]	[[3.53]]
[[Gorhams Bizarre]]	[[2.10]]	[[3.57]]
WMS Logical Memory I	[[7.17]]	[[3.28]]
WMS Logical memory II	[[8.30]]	[[3.25]]
[[Working Memory]]	[[[]]]	[[[]]]
[[Wais Digit Span]]	[[8.51]]	[[2.65]]
Wais Letter / Number Sequencing	[[7.67]]	[[3.07]]
Visual and Verbal Memory	[[[]]]	[[[]]]
[[HVL Total Trials]]	[[18.86]]	[[5.79]]
HVLT 30 minute recall	[[6.32]]	[[2.86]]
HVLT Learning (Trial 3 minus trial 1)	[[2.56]]	[[2.03]]
WMS Visual Reproduction 1	[[6.81]]	[[3.79]]
WMS Visual Reproduction 2.	[[8.48]]	[[2.93]]
[[PANSS]]	[[[]]]	[[[]]]
[[Positive]]	[[17.38]]	[[4.66]]
[[Negative]]	[[20.26]]	[[6.86]]
[[Cognitive]]	[[18.97]]	[[4.95]]
[[Emotional Discomfort]]	[[11.23]]	[[3.24]]
[[Hostility]]	[[8.33]]	[[2.89]]
[[SANS]]	[[[]]]	[[[]]]
[[Flattening]]	[[10.79]]	[[6.77]]
[[Alogia]]	[[3.92]]	[[4.17]]
[[Avolition / Apathy]]	[[7.63]]	[[3.23]]
[[Anhedonia / Asociality]]	[[11.75]]	[[4.00]]
[[Attention]]	[[3.24]]	[[2.64]]
[[SAPS]]	[[[]]]	[[[]]]
[[Hallucinations]]	[[8.36]]	[[6.76]]
[[Delusions]]	[[15.59]]	[[9.98]]
[[Bizarre Behavior]]	[[3.10]]	[[2.91]]
[[Thought Disorder]]	[[7.50]]	[[7.64]]

Table 4
Quartile Distribution of Mean Weekly Work Hours and Support Intensity n=69

[[Quartile]]	[[Weekly Work Hours]]		[[Support Intensity]]		
	[[Mean]]	[[SD]]	[[Range]]	[[Maximum]]	[[Mean]]
	[[N]]				[[SD]]
Q1 ^a	[[17]]	[[4.2]]	[[2.3 - 5.6]]	[[100%]]	[[38%]]
Q2 ^b	[[17]]	[[7.3]]	[[5.7 - 9.9]]	[[51%]]	[[28%]]
Q3 ^c	[[18]]	[[11.2]]	[[10.0 - 13.2]]	[[35%]]	[[15%]]
Q4 ^d	[[17]]	[[18.3]]	[[13.5 - 40.0]]	[[22%]]	[[12%]]
					[[23%]]
					[[15%]]
					[[9%]]
					[[6%]]

Social Inattention a>c, a>d, p<.05
Active Social Avoidance a>d, p<.05 / b>d, p<.005

Table 5
Initial Regressions Predicting to Support Intensity n=69

[[Neuropsychological Composites]]
[[Executive Function]] Thought Disorder/ Social Cognition
[[Working Memory]] Visual and Verbal memory
[[PANSS]] ***
[[Positive]]
[[Negative]]
Cognitive
[[Emotional Discomfort]] *
[[Hostility]]
[[SANS]] *
[[Flattening]]
[[Alogia]]
[[Avolition / Apathy]]
[[Anhedonia / Asociality]]
Attention
[[SAPS]] *
[[Hallucinations]]
[[Delusions]]
[[Bizarre Behavior]] *
[[Thought Disorder]]
Educational / Vocational Background
Wais Full Scale IQ
[[Years of Education]]
[[Age at Intake]]
Longest lasting job (months)
Jobs lasting 1 year or more
[[Hospitalization Hx.]]
Psych ER visits past year
Times Hospitalized Last Year
Days Hospitalized Last Year
[[Age 1st Hospitalization]]
Lifetime # of Hospitalizations
* p<.05
** p<.01
*** p<.005

Table 6
Secondary Regressions Predicting to Support Intensity n=69

[[PANSS Cognitive Cluster]] *	
Difficulty in Abstract Thinking	
[[Conceptual Disorganization]]	
[[Stereotyped Thinking]]	
[[Tension]]	
[[Mannerisms]]	
[[Poor Attention]] *	
[[Poor Insight]]	
PANSS Emotional Discomfort Cluster **	
[[Anxiety]]	
[[Depression]]	
[[Guilt Feelings]]	
[[Active Social Avoidance]] **	
[[SANS Attention]] ***	
[[Social Inattentiveness]] ***	
Attentiveness during Mental Status Testing	
[[SAPS Bizarre Behavior]] *	
[[Clothing and Appearance]]	
Social and sexual behavior	
Aggressive and Agitated behavior *	
Repetitive or stereotyped behavior	
[[Final Regression Model]] ****	
[[Poor Attention]]	
[[Active Social Avoidance]] ***	
[[Social Inattentiveness]] ***	
Aggressive and Agitated behavior	
* p<.05	
** p<.01	
*** p<.005	
**** p<.0001	