

# The Daily Activity Report: A novel measure of functional outcome for serious mental illness

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## Methodological Question:

Are there better ways to assess real-world functional outcomes in short term clinical trials for patients with schizophrenia?

## Introduction

The assessment of real-world functional outcomes in clinical trials for medications targeting negative symptoms and cognitive impairment is extremely important.

Assessment of "real world" functional outcome is complicated by a host of factors including

- locating individuals who can accurately report on the person's daily activities
- limitations in the memory and insight of patient
- disincentives to work
- living environments that often limit opportunities to engage in independent living skills

Existing measures of daily activity

- NSA-16 item 12
- Time Budget Measure (Jolley, et al 2005; 2006) which asks the patient to recall all activities for all hours during the preceding week and then rates each 4 hour block on a productivity measure.

We tested the psychometric properties of the Daily Activity Report (DAR), a novel assessment of productive daily activity.

## Materials and Methods

Design: We administered the DAR and additional assessments of functional outcome, functional capacity, cognition and symptomatology to 50 individuals with schizophrenia at two time points, one month apart and 25 healthy controls.

Measures:

The DAILY ACTIVITY REPORT (DAR): Records a person's daily activity for seven consecutive days based upon phone calls made three times a day. The DAR was developed based upon a thorough review of the literature and focus groups with patients and caregivers (REF). See Table 1.

Negative Symptom Assessment (NSA-16)  
Positive and Negative Syndrome Scale (PANSS)  
Schizophrenia Outcomes Functioning Interview (SOFI)  
Social and Occupational Functioning Scale (SOFAS)  
Brief Cognitive Assessment (BCA)  
UCSD Performance-Based Skills Assessment (UPSA-B)

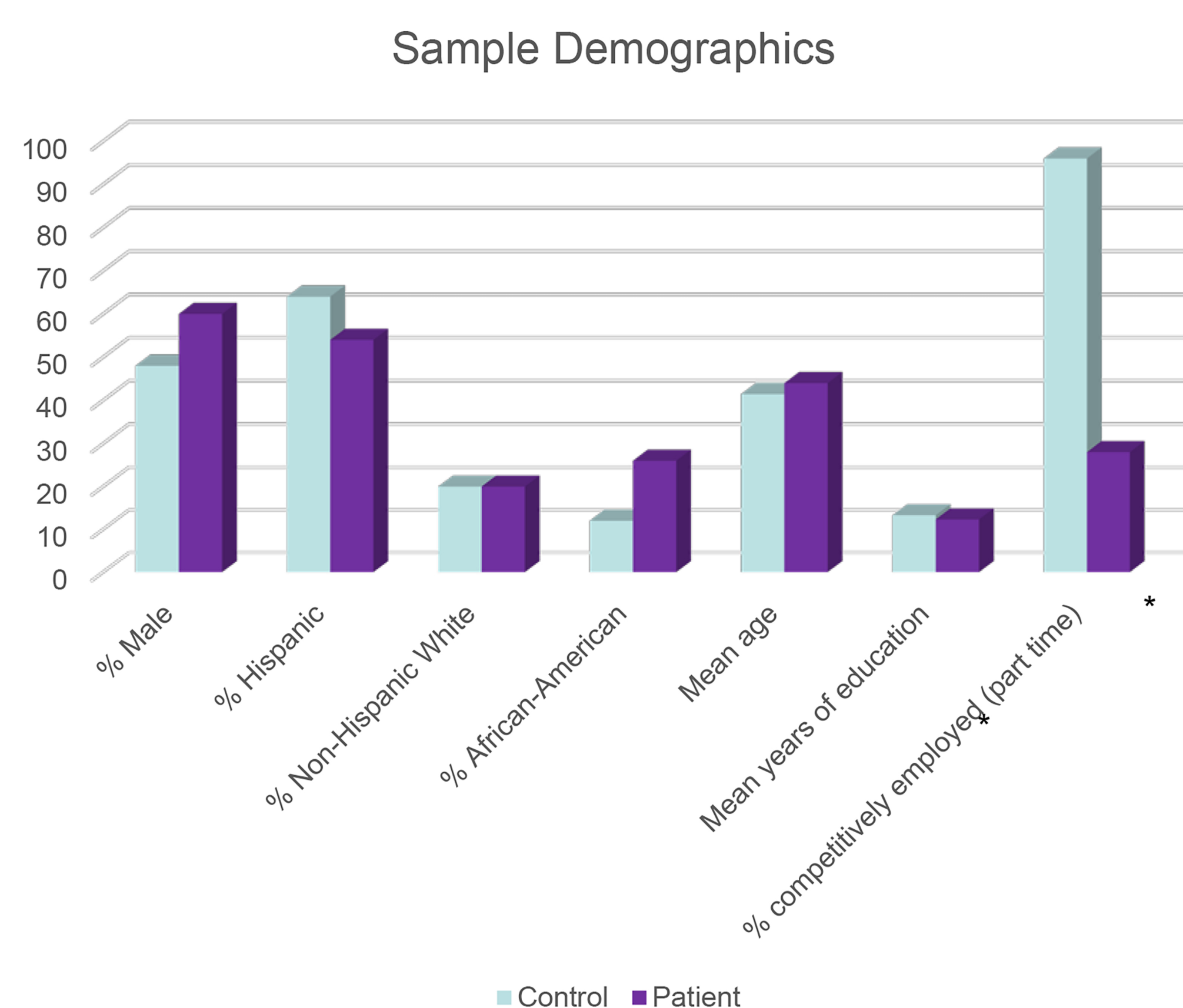


Table 1: Daily Activity Report Example Scoring

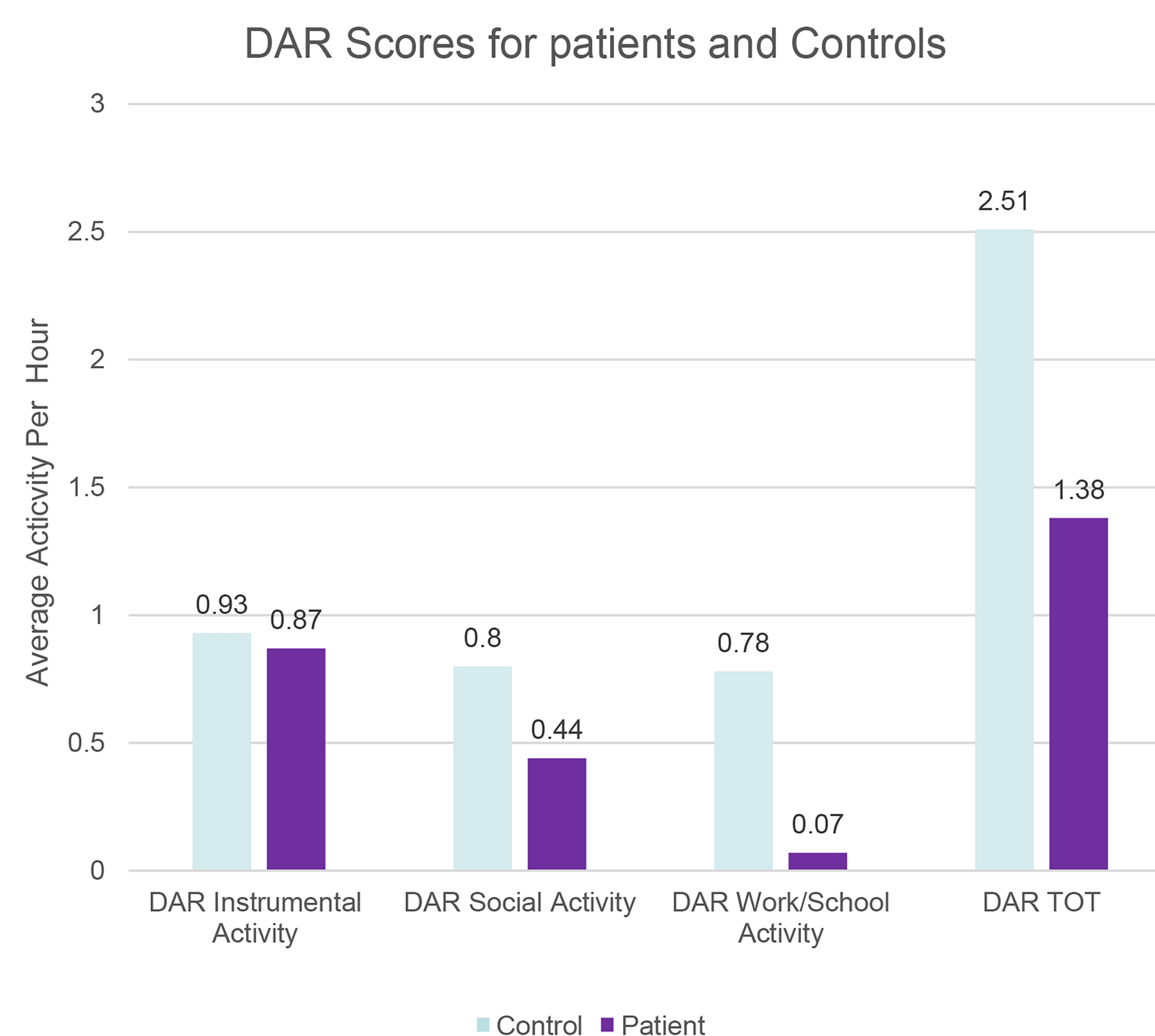
Domain	Example behaviors	Score
Independent Living	Lying in Bed or sleeping; pacing	0
	Low activity (Sitting, watching TV, eating, riding as a passenger in a car)	1
	Basic activities of daily living (showering, dressing, taking medication)	2
	Simple household chores (cleaning, dishes, laundry, pet care, preparing simple foods)	2
Work or school	Participating in treatment (attending a treatment program, doctor's appointment, self-help group)	3
	Difficult chores or errands (taking care of children, paying bills painting the house, cooking a large meal, grocery shopping, mowing, vacuuming)	3
	Exercise (walking, running, biking)	3
	Leisure activities (hobbies, crafts, personal email video games)	3
Social	Asleep	0
	Job search, registering or applying for school, GED classes,	1
	Volunteer job, odd jobs, sheltered work, job interview, Meeting with school advisors/financial aid	2
	Paid employment, College or technical classes or homework for these	3
Social	Alone or Asleep	0
	With another person or people but not talking or doing anything together (e.g. others in the room, no interaction)	1
	Talking or doing an activity with one other person, interacting by phone, or social media	2
	Talking or doing an activity with more than one other person	3

## Results

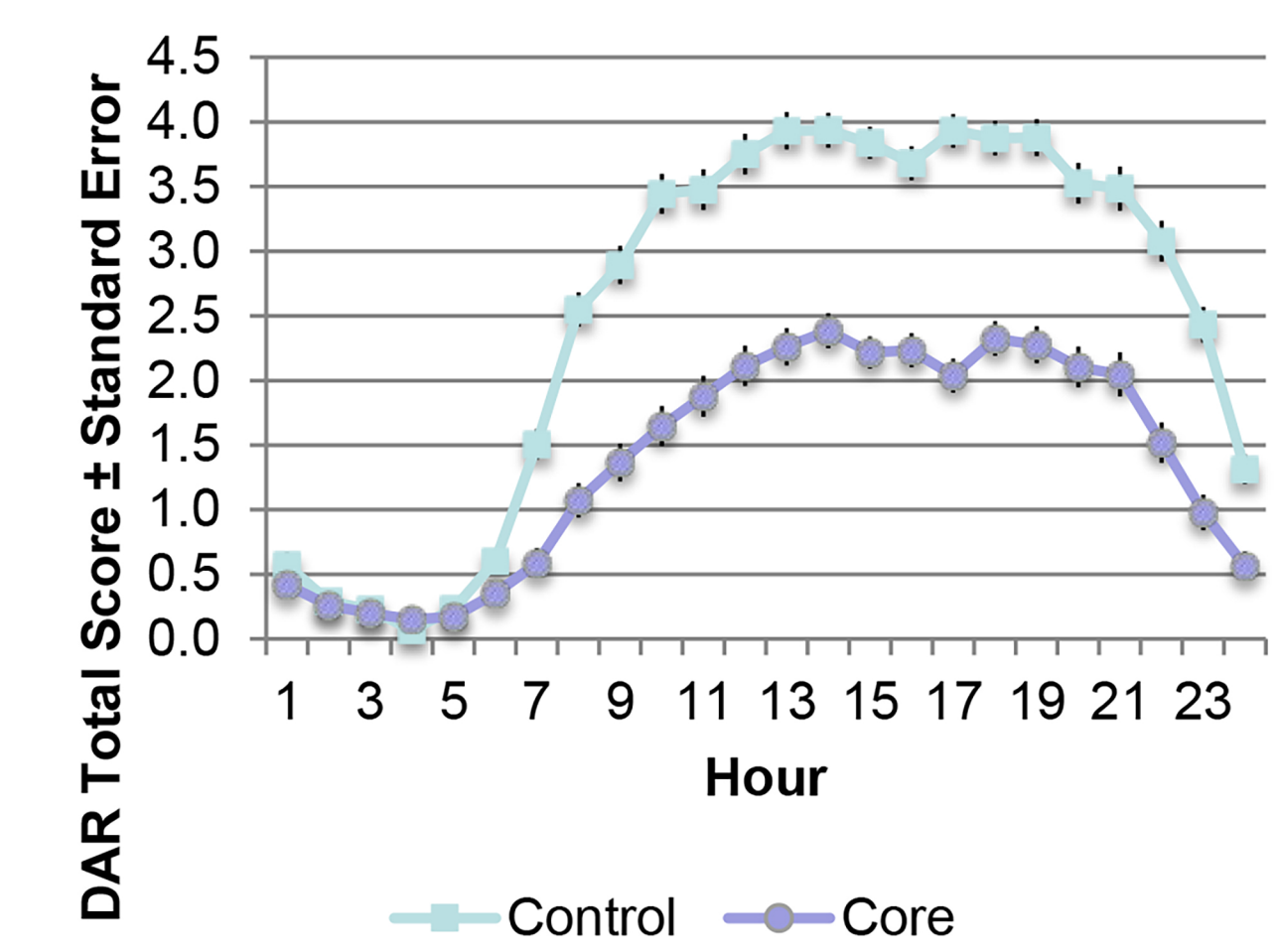
Internal Consistency and Test Retest Reliability of the DAR

	Independent Living Activities	Social Activities	Work/School Activities	DAR total
Internal Consistency	.81***	.93***	.94***	.97***
Test-retest Reliability (1 month)	.46**	.75***	.48**	.67***

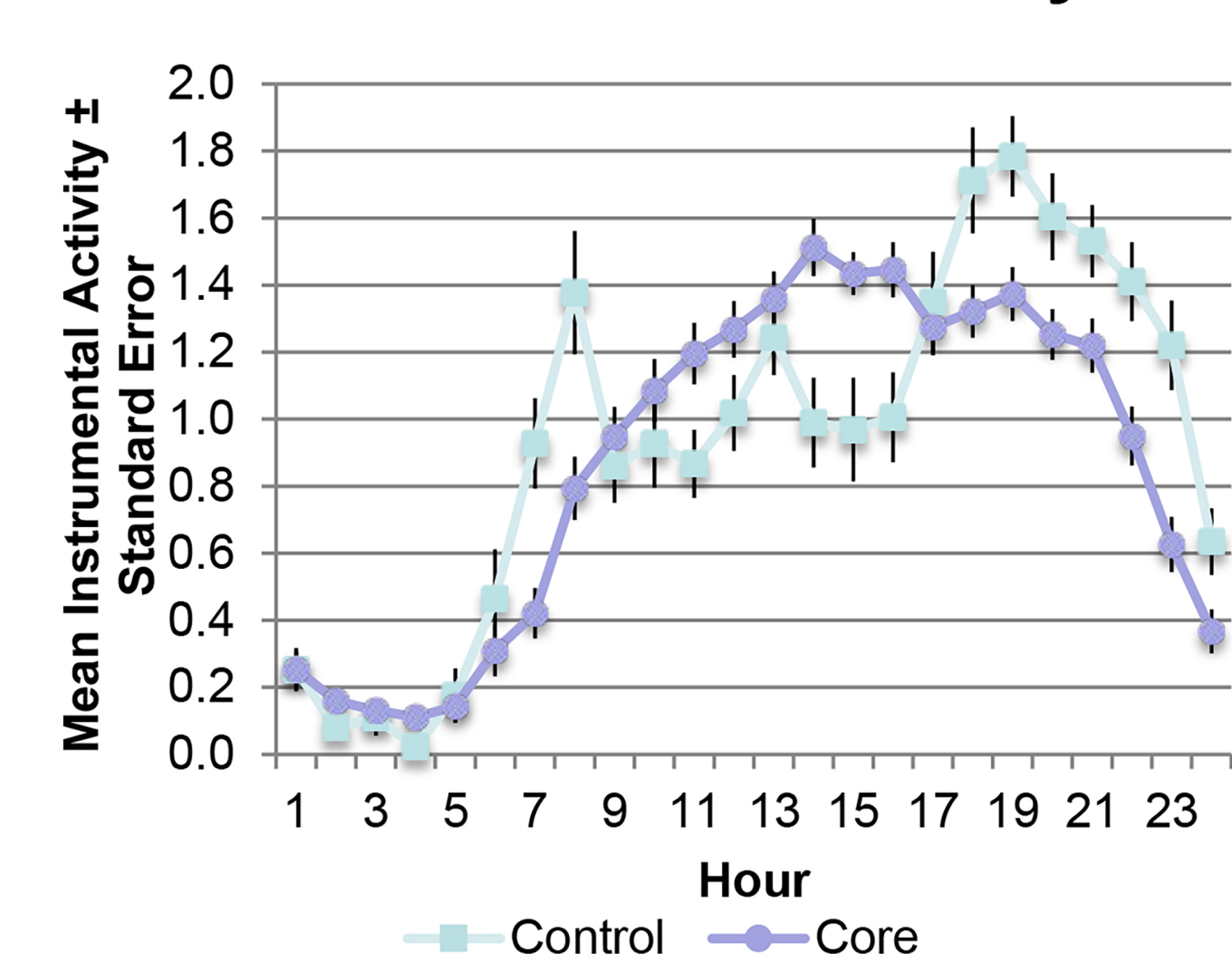
items not significantly intercorrelated  
Internal Consistency: Random Split Half Method and Linear Combination for Total  
Test Retest Reliability: Pearson Correlation Coefficient  
\*\* p<.001  
\*\*\* p<.0001



## DAR Total Score



## DAR Instrumental Activity



DAR scores for instrumental activity did not differ by group. However, as you can see, controls did the same amount of instrumental activity before work, during lunch and after work as patients did the entire day

## Convergent and Discriminant Validity of the DAR

	DAR Independent Living	DAR Social Activity	DAR Work/School Activity	DAR TOT
SOFAS	.24	.15	.54***	.39*
SOFI total	.28*	-.01	.41**	.27+
NSA total	-.26+	-.17	-.46***	-.39**
NSA Social Domain	-.30*	-.24+	-.43**	-.44**
NSA Motivation	-.28*	-.13	-.45**	-.37**
NSA activity item	-.22	-.11	-.72***	-.40**
PANSS Negative	-.25+	-.30*	-.31*	-.41**
PANSS Positive	-.08	-.07	-.27+	
BCA	.17	.01	.26+	.17
UPSA-B	.33*	-.01	.33*	.25+

## Conclusion

- The study provides preliminary support for the reliability and validity of the DAR.
- The DAR is now being set up for smart phone administration.
- The smart phone version should be further investigated as a way to access productive activity in studies of negative symptoms.

## References

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