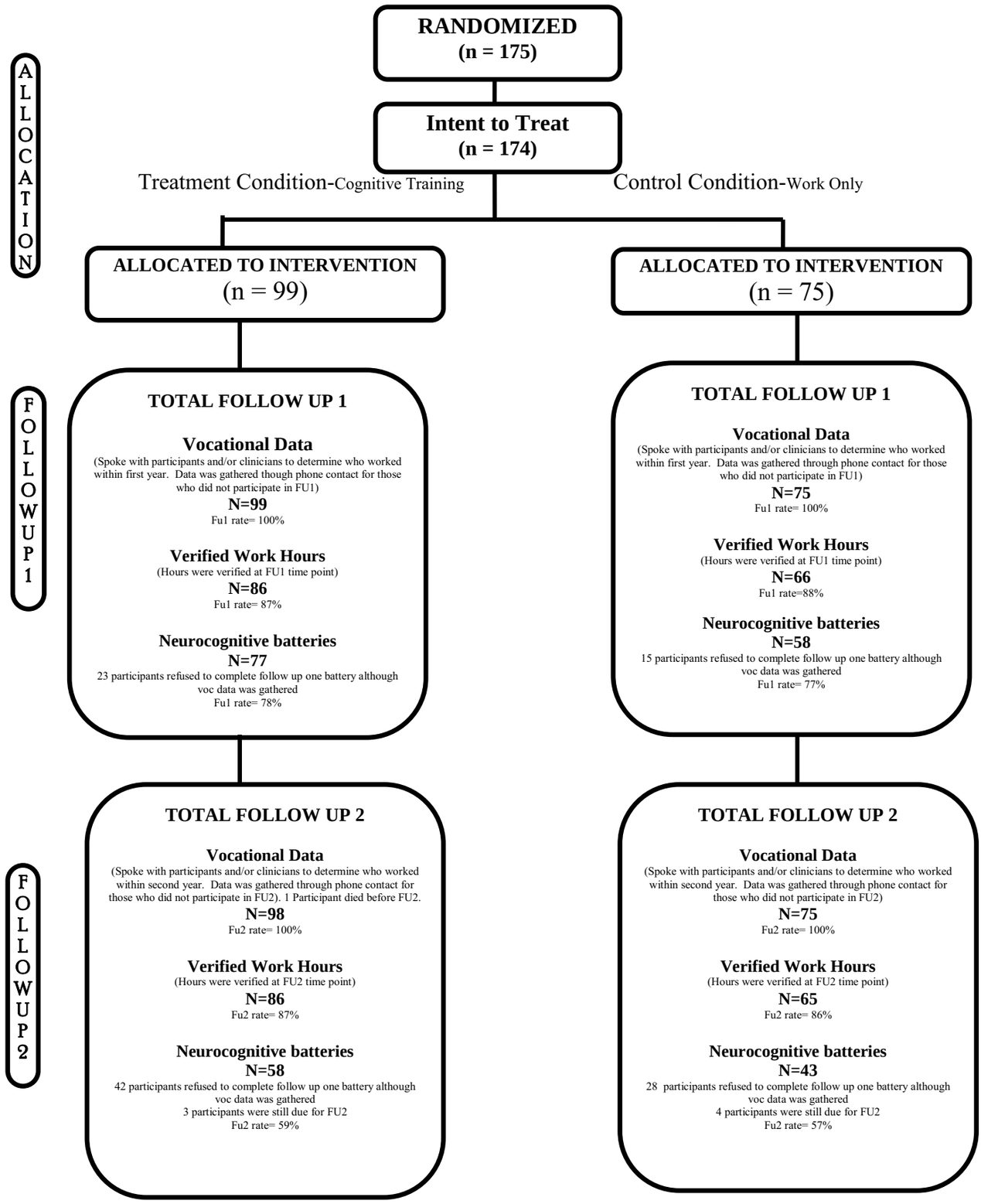
Consort Diagram showing flow of participants through each stage of
***Cognitive Training and Enhanced Supported Employment: A Randomized Study***




Note: FU1= Follow up 1; FU2= Follow up 2.

Supplementary Information on Methods, Procedures, and Discussion

*Participants:* This is a secondary analysis of data collected for the original and continuation study to test the moderator role of baseline community functioning and to explore possible mechanism of CR effects. We plan to publish another report that will provide more detailed findings on cognitive and vocational outcomes from the continuation study.

*Instruments:* Community functioning was measured using the Quality of Life Scale (QLS; (18)). The QLS is a 21-item scale based on a semi-structured interview to measure the following four major areas of community functioning: (1) intrapsychic foundations, (2) interpersonal relations, (3) instrumental role (i.e., role of worker, student, or housekeeper/parent), and (4) common objects and activities (i.e., active participation in the community). Raters were two doctoral level psychologists who had been trained by our group during a previous study and who achieved good to excellent interrater reliability on the subscales and excellent interrater reliability for the QLS total score (ICC, r =.91). QLS total score was the value used to determine community function level in the current study.

Symptoms were assessed using the Positive and Negative Syndrome Scale (PANSS; (23). Inter-rater reliability for our research staff (trained using standardized PANSS tapes and certified through our VA/Yale PANSS training program) was in the excellent range (ICC = .88 -. 98). A five component model based on factor analysis of the PANSS (24) is used 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 1).

*Intervention:*

*SE+CR Condition:* In the original study, adaptive training for CR was achieved by staff making daily adjustments of task difficulty, while in the continuation study adaptive training was built into the software programs. Thus, tasks were neither too boring nor too challenging, and the intervention was adjusted to each participant's pattern of cognitive strengths and weaknesses.

*Treatment Integrity of the SE condition:* Apart from the deliberate modification of using transitional funds in the original study, the vocational program was committed to adhering to the principles of the IPS model. This modified IPS program received a score of 62 out of 75 (83%; "Fair" rating) on the IPS fidelity scale when rated by three independent raters including Gary Bond Ph.D. (personal communication), who interviewed the program staff and vocational specialists. The rating was lowered primarily by the use of transitional funds and by the fact that job specialists were not members of the primary treatment teams. In the continuation study, the transitional funds were no longer an issue, the vocational specialists were more integrated and the fidelity rating rose to the "Good" range. Following the guidelines of supported employment, job specialists and participants developed a work plan collaboratively, with participants'

interests, preferences and experience taken into consideration. IPS services were continued throughout the 24 months of participation. Typical jobs were entry-level service positions such as washing dishes at a restaurant, serving meals in a retirement home, and processing clothes in a department store. Vocational specialists were supervised weekly by their own program directors, and the research staff met with them at least once a week to review their activity.

The PI met weekly with research staff members, who were doctoral level clinical psychologists, to review group activities, and the PI occasionally attended the groups. Attendance was carefully monitored. Those in the SE condition had a mean of 26.6±15.6 work support groups and a mean of 21.9±14.7 life-style groups for a combined mean of 48.6±28.8 groups for the year. In the continuation study, only 1 group per week was offered and the mean attendance was 10.87±19.82 for the year. These rates were compared with those of the SE+CR condition (see below).

*Treatment Integrity of the SE+CR condition:* The cognitive training curriculum was standardized and because it was computer based, the exercises themselves were the same for all participants. Staff was vigilant to participant's engagement in the activity. If a participant began to fall asleep or appeared to be responding randomly, staff would intervene. In that way, quality of the training was preserved. We deliberately encouraged a high level of training intensity and duration, even though we were concerned that it might conflict with work hours. We did so because CR is based upon models of neuroplasticity that call for intense and repetitive practice in order to remediate impaired neurocognitive functioning. Participants averaged 113.75±94 hours of cognitive training. In the continuation study, participants had an average of 100.84±66.65 hours of cognitive training.

The PI met weekly with research staff to review group activities and occasionally observed the groups. The group principles and procedures had been developed and manualized by the PI in an earlier study (1), and staff from the earlier study were among those in the current study. Adherence to these procedures was reinforced weekly. Attendance was also recorded. In the original study participants had a mean of 28.1±14.8 work support group sessions and a mean of 20.9±14.8 social information processing sessions for a combined mean of 49.0± 26.5 for the year. The continuation study offered only one group per week, and average attendance was 18.90±18.56 for the year. Conditions did not differ significantly on number of groups attended in the original study or the continuation study.

*Discussion:* Since all participants were unemployed at baseline, employment at baseline was not a factor in whether an individual was characterized as higher or lower community functioning. The use of median split was determined a priori and had been used in our previous report (7).

*Limitations:* We have a clear moderator effect, and some possible mechanisms to explain the effects of CR**.** Amount of CR training and improvement in neurocognition and intrinsic motivation had significant effects and decreased negative symptoms may have played some role. Still most of the variance in employment remains unexplained by these mechanisms. Further research is needed to replicate these findings and to explore other contributors to the effects of CR on vocational outcomes.