



AOTA Critically Appraised Papers Series

Evidence Exchange

**A product of the American Occupational Therapy Association's Evidence-Based Literature Review Project*

CRITICALLY APPRAISED PAPER (CAP)

FOCUSED QUESTION

What are the efficacy and clinical utility of Action Over Inertia, an occupational time-use intervention, for community-dwelling people with serious mental illness who experience barriers to occupational balance and engagement, by means of a randomized controlled pilot study?

Edgelow, M., & Krupa, T. (2011). Randomized controlled pilot study of an occupational time-use intervention for people with serious mental illness. *American Journal of Occupational Therapy*, 65, 267–276. <http://dx.doi.org/10.5014/ajot.2011.001313>

CLINICAL BOTTOM LINE:

Outcomes observed in this study indicate efficacy and clinical utility for the Action-Over-Inertia (AOI) intervention in the treatment of occupational imbalance/engagement for people with serious mental illness (SMI). The intervention represents one possibility for expanding evidence-based occupational therapy practice in this area.

However, limitations for this study include a small sample size, a high dropout rate, and a lack of follow-up testing. The small sample size and high dropout rate makes it difficult to find differences between groups, and the lack of follow-up testing makes it difficult to generalize results and long-term effects of the intervention.

Further research is needed with a larger sample size to increase statistical power, a longer treatment phase to allow for greater change in scores between groups, and an added follow-up test to acquire additional data to explore the intervention's long-term efficacy. It is also suggested to test the use of the AOI intervention in settings that are not part of the Assertive Community Treatment (ACT) model and to use in a group format to potentially promote increased behavior change through interpersonal support and motivation between participants.

RESEARCH OBJECTIVE(S)

To assess the efficacy and clinical utility of a new occupational time-use intervention, AOI, designed to improve occupational balance and engagement among community-dwelling people with SMI.

DESIGN TYPE AND LEVEL OF EVIDENCE:

Prospective, multisite, pretest–posttest randomized controlled group design
Level I evidence

Limitations (appropriateness of study design):

Was the study design type appropriate for the knowledge level about this topic? *Circle yes or no, and if no, explain.*

YES ~~NO~~

Past studies have linked occupation and health, helping to define occupational balance and engagement. Past studies have also linked time use to people with SMI, but occupational therapy intervention focusing specifically on occupational balance and time use with this population has been limited. A pilot study design seems adequate as a starting point to expand on this area for occupational therapy.

SAMPLE SELECTION

How were subjects selected to participate?

This study used a purposive sample selection. People with SMI participating in an ACT team and living in Bellville, Kingston, or Ottawa, Canada, were recruited through occupational therapists from urban centers in those cities. Each therapist recruited 3–6 clients from their ACT teams.

Inclusion Criteria

Community-dwelling people with SMI, participating in an ACT team, experiencing profound occupational disengagement.

Exclusion Criteria

Those not meeting the inclusion criteria.

SAMPLE CHARACTERISTICS

N = 24

% Dropouts

#/ (%) Male

#/ (%) Female

Ethnicity

Disease/disability diagnosis

Check appropriate group:

<20/study group	20–50/study group	51–100/study group	101–149/study group	150–200/study group
	✓			

INTERVENTION(S) AND CONTROL GROUPS

Add groups if necessary

Group 1: Treatment Group

Brief Description	Participants received both standard individualized ACT care (24-hour multidisciplinary services in the areas of psychiatry, social work, nursing, substance abuse, occupational therapy, and vocational rehabilitation within the comfort of the clients' home and community) and AOI intervention (treatment program that has as its goal to reconnect clients with meaningful activity to promote health and well-being and is presented to each individual in a workbook format).
Setting	Community: participant's living environment.
Who Delivered?	ACT team occupational therapist (1 of 5 trained).
Frequency?	Once per week (length of session not reported).
Duration?	12 weeks.

Group 2: Control Group

Brief Description	Participants only received standard individualized ACT care (24-hour multidisciplinary services in the areas of psychiatry, social work, nursing, substance abuse, occupational therapy, and vocational rehabilitation within the comfort of the clients' home and community).
Setting	Community: participant's living environment.
Who Delivered?	ACT team occupational therapist.
Frequency?	Standard ACT care frequency not reported.
Duration?	12 weeks.

Intervention Biases: Circle yes or no and explain, if needed.

Contamination

YES NO

Occurs in participant's natural environment. No interaction between participants.

Co-intervention

YES NO

Unclear: Literature review suggests potential for influence from medication on *anhedonia* (lack of pleasure in activities usually found enjoyable). However, study does not exclude people taking medication.

Timing

YES NO

YES. The length of intervention (12 weeks) was not long enough to yield observable differences in scores.

Site

YES NO

Individual living environments were not controlled.

Use of different therapists to provide intervention

YES NO

Even though all occupational therapists were trained by the primary investigator (Edgelow), more than 1 therapist provided intervention to participants.

MEASURES AND OUTCOMES

Complete for each relevant measure when answering the evidence-based question:

Name of measure, what outcome was measured, whether the measure is reliable and valid (as reported in article--yes/no/NR [not reported]), and how frequently the measure was used.

“Yesterday diaries”/24-hour time diaries (outcome measured: time use/occupational balance). Time-use information was collected; changes in the balance of activity and rest were measured, as were changes in time spent in self-care, productivity, and leisure. 24-hour time diaries are divided into hourly sections over a 2-day period.

Reliability--Not reported.

Validity--Not reported.

Frequency--Time use measured pre- and post-intervention.

Name of measure, what outcome was measured, whether the measure is reliable and valid (as reported in article--yes/no/NR [not reported]), and how frequently the measure was used.

Profiles of Occupational Engagement for People With Schizophrenia (POES) (outcome measured: occupational engagement).

Reliability--Interrater reliability (.5-.82).

Validity--Internal consistency (.95-.97), content validity.

Frequency--Occupational engagement measured pre- and post-intervention.

Name of measure, what outcome was measured, whether the measure is reliable and valid (as reported in article--yes/no/NR [not reported]), and how frequently the measure was used.

Pilot study designed questionnaires intended to evaluate both therapist and participant feedback on the use of the AOI intervention for people with SMI. They were categorized into logistics, learning, personal changes, and other comments for analysis (outcome measure: clinical utility).

Reliability--Not reported.

Validity--Not reported.

Frequency--Clinical utility measured at post-intervention only.

Short-term and long-term effects for all measures--Insufficient funds did not allow for follow-up testing; therefore, long-term effects were not considered.

Measurement Biases

Were the evaluators blind to treatment status? *Circle yes or no, and if no, explain.*

YES NO

For time use, occupational therapists who were providing treatment visited participants after the 24-hour period to record time use, to ensure correct recording. However, the therapists were aware of client group allocation, which posed risk for bias.

Recall or memory bias. *Circle yes or no, and if yes, explain.*

YES NO

Time use/occupational balance were measured with “yesterday diaries,” which required the participants to recall and self-report events from the past 24 hours.

Others (list and explain):

Not applicable

RESULTS

List results of outcomes relevant to answering the focused question

Include statistical significance where appropriate ($p < 0.05$)

Include effect size if reported

Occupational balance increased in time spent in general activity ($p = .05$); treatment group participants spent an average of 47 minutes more in engaged activity, as opposed to sleep.

Effect size: $d = .86$ between both groups in sleep category. Considered a large effect when looking at difference in time spent sleeping between both groups.

Occupational engagement: No significant statistical difference between control and treatment groups. Indicated low power or sensitivity for POES to detect differences between groups.

Clinical utility: All treatment participants expressed positive feedback about AOI and would recommend it to others with mental illness. Therapists administering AOI stated that a longer timeframe for intervention might work better for some clients. Also indicated satisfaction with AOI’s organization and structure and found the education section helpful. All stated that AOI would be used with other clients with occupational imbalance/disengagement.

Was this study adequately powered (large enough to show a difference)? *Circle yes or no, and if no, explain.*

YES NO

The small sample size yielded a low statistical power (exact score not reported), which made the difference in scores difficult to detect.

Were appropriate analytic methods used? *Circle yes or no, and if no, explain.*

YES NO

The SPSS was used to perform all statistical analyses.
Fisher’s Exact Test: To compare differences between categorical variables for demographical information between treatment groups and ACT teams.
Mann–Whitney test: To compare differences *between treatment groups* in demographic information interval variables, occupational engagement, and occupational balance outcomes at baseline and posttest.
Kruskal–Wallis test: To compare differences *between ACT teams* in demographic information interval variables, occupational engagement, and occupational balance outcomes at baseline and posttest.
Gutman split-half correlation coefficients: Calculated to ascertain the level of correlation of time spent across different categories of time use, for occupational balance outcome.

Were statistics appropriately reported (in written or table format)? *Circle yes or no, and if no, explain.*

YES NO

Four tables were used to organize and illustrate numerical demographic characteristics, categorical demographic characteristics, occupational balance outcomes, and occupational engagement outcomes.

CONCLUSIONS

State the authors’ conclusions that are applicable to answering the evidence-based question.

This study indicates that the AOI intervention may be effective for increasing occupational balance and engagement in people with SMI. Study yielded positive outcomes for its clinical utility. Study calls for further study on AOI intervention with a longer treatment time period and a follow-up period to further explore its effectiveness and clinical utility.

This work is based on the evidence-based literature review completed by Daniela Iglesias, 4th-Year Occupational Therapy Student, Maryville University of St. Louis.

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